

NANOMETRICS INC
Form S-4/A
June 12, 2006
Table of Contents

As Filed with the Securities and Exchange Commission on June 9, 2006

Reg. No. 333-133033

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

AMENDMENT NO. 2
TO
FORM S-4
REGISTRATION STATEMENT

Under

The Securities Act of 1933

NANOMETRICS INCORPORATED

(Exact name of registrant as specified in its charter)

California
(State or other jurisdiction of
incorporation or organization)

3829
(Primary Standard Industrial
Classification Code Number)
1550 Buckeye Drive

94-2276314
(I.R.S. Employer
Identification Number)

Milpitas, California 95035

Edgar Filing: NANOMETRICS INC - Form S-4/A

(408) 435-9600

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Douglas J. McCutcheon

Chief Financial Officer

Nanometrics Incorporated

1550 Buckeye Drive

Milpitas, California 95035

(408) 435-9600

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Aaron J. Alter, Esq.

Julia Reigel, Esq.

Troy Foster, Esq.

Wilson Sonsini Goodrich & Rosati

Professional Corporation

650 Page Mill Road

Palo Alto, California 94304

(650) 493-9300

Neil Nathanson, Esq.

Gwyneth E. McAlpine, Esq.

Perkins Coie LLP

1120 NW Couch Street

Tenth Floor

Portland, Oregon 97209

(503) 727-2091

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effectiveness of this registration statement and the satisfaction or waiver of all other conditions under the merger agreement, as amended, described herein.

If the securities being registered on this form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, check the following box. "

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. "

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment that specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this joint proxy statement/prospectus is not complete and may be changed. Registrant may not sell these securities until the registration statement filed with the Securities and Exchange Commission, of which this document is a part, is declared effective. This joint proxy statement/prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer, solicitation or sale is not permitted or would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. Any representation to the contrary is a criminal offense.

Subject to Completion

June 9, 2006

JOINT PROXY STATEMENT/PROSPECTUS

MERGER PROPOSED YOUR VOTE IS VERY IMPORTANT

The boards of directors of Nanometrics Incorporated and Accent Optical Technologies, Inc. have unanimously approved the merger of Alloy Merger Corporation, a wholly owned subsidiary of Nanometrics, with and into Accent Optical pursuant to the terms and conditions of an agreement and plan of merger and reorganization, dated as of January 25, 2006, by and among Nanometrics, Alloy Merger Corporation, Accent Optical and Sanford S. Wadler, as Stockholder Agent, as amended. The maximum number of shares that Nanometrics would issue in connection with the merger and reserve for issuance upon the exercise of assumed options is approximately 5,212,286 shares of common stock, assuming that the average closing price of Nanometrics common stock for the 10 trading days ending the two consecutive trading days prior to the consummation of the merger is \$15.63, which would result in the Accent Optical stockholders holding approximately 27% of the fully diluted shares of Nanometrics common stock immediately after the merger, and Nanometrics shareholders holding approximately 73% of the fully diluted shares of Nanometrics common stock immediately after the merger. The actual number of Nanometrics shares to be issued in the merger depends on several factors. See the sections of the attached joint proxy statement/prospectus captioned *Summary Overview of Merger Agreement and Related Agreements*, *Merger Consideration* beginning on page 12 and *The Merger Agreement Treatment of Securities* beginning on page 86 for a description of how the final number of shares will be determined. Nanometrics common stock trades on the Nasdaq National Market under the symbol NANO.

Nanometrics and Accent Optical cannot complete the merger unless Nanometrics shareholders approve the issuance of shares of Nanometrics common stock in the merger and Accent Optical stockholders approve and adopt the merger agreement, as amended, and the merger and approve certain other matters described in the joint proxy statement/prospectus including the escrow agreement and the appointment of a stockholder agent. These matters, among others, are included in the proposals to be voted on at the special meetings of the Nanometrics shareholders and Accent Optical stockholders, to be held on [], 2006, as more fully described in this joint proxy statement/prospectus, which also includes more information about Nanometrics, Accent Optical and the merger. **You are encouraged to carefully read this joint proxy statement/prospectus in its entirety, including the section entitled Risk Factors beginning on page 30 before voting on the matters set forth in the attached joint proxy statement/prospectus.**

The Nanometrics board of directors unanimously recommends that Nanometrics shareholders vote FOR Nanometrics proposal to approve the issuance of shares of Nanometrics common stock in the merger.

The Accent Optical board of directors unanimously recommends that the Accent Optical stockholders vote FOR Accent Optical's proposal to approve and adopt the merger agreement, as amended, and approve the merger, as well as the other matters set forth in the joint proxy statement/prospectus for their consideration.

Your vote is very important. Whether or not you plan to attend your company's meeting, please take the time to vote by completing and mailing to us the enclosed proxy card or, if the option is available to you, by granting your proxy electronically over the internet or by telephone. If your shares are held in street name, you must instruct the record holder of your shares in order to vote.

Sincerely,

Edgar Filing: NANOMETRICS INC - Form S-4/A

John D. Heaton
President and Chief Executive Officer
Nanometrics Incorporated

Bruce C. Rhine
Chairman and Chief Executive Officer
Accent Optical Technologies, Inc.

None of the Securities and Exchange Commission, any state securities regulator or any regulatory authority has approved or disapproved of these transactions or the securities to be issued under this joint proxy statement/prospectus or determined if the disclosure in this joint proxy statement/prospectus is accurate or adequate. Any representation to the contrary is a criminal offense.

This joint proxy statement/prospectus is dated [], 2006, and is being mailed to shareholders of Nanometrics and stockholders of Accent Optical on or about [] [], 2006.

Table of Contents

ADDITIONAL INFORMATION

This joint proxy statement/prospectus incorporates by reference important business and financial information about Nanometrics from documents that are not included in or delivered with this joint proxy statement/prospectus but which Nanometrics has previously filed with the Securities and Exchange Commission (the "SEC"). For a more detailed description of the information incorporated by reference into this joint proxy statement/prospectus and how you may obtain it, see the section of this joint proxy statement/prospectus entitled *Additional Information Where You Can Find More Information* beginning on page 166.

You can obtain any of the documents incorporated by reference into this joint proxy statement/prospectus from Nanometrics at www.nanometrics.com/investors or from the SEC, through its website at www.sec.gov. Documents incorporated by reference are available from Nanometrics and Accent Optical without charge, excluding any exhibits to those documents. Nanometrics shareholders and Accent Optical stockholders may request a copy of such documents by contacting either Nanometrics or Accent Optical, as appropriate, at:

Nanometrics Incorporated
1550 Buckeye Drive
Milpitas, California 95035
Attn: Investor Relations

Accent Optical Technologies, Inc.
1320 SE Armour Drive, Suite B2
Bend, Oregon 97702
Attn: Chief Executive Officer

In addition, you may obtain copies of the information relating to Nanometrics, without charge, by sending an e-mail to investors@nanometrics.com or by calling Nanometrics at (408) 435-9600 or, Nanometrics proxy solicitors, The Altman Group, at (800) 884-4969 or (201) 806-7300.

We are not incorporating the contents of the websites of the SEC, Nanometrics, Accent Optical or any other person into this document. We are only providing the information about how you can obtain certain documents that are incorporated by reference into this joint proxy statement/prospectus at these websites for your convenience.

In order for you to receive timely delivery of the documents in advance of the special meetings, Nanometrics or Accent Optical, as applicable, must receive your request no later than [], 2006, five business days before the special meetings.

Table of Contents

NANOMETRICS INCORPORATED

NOTICE OF SPECIAL MEETING OF SHAREHOLDERS

TO THE SHAREHOLDERS OF NANOMETRICS INCORPORATED:

NOTICE IS HEREBY GIVEN that the special meeting of shareholders of Nanometrics Incorporated, a California corporation (Nanometrics), will be held on [], 2006 at 10:00 a.m., local time, at the principal offices of Nanometrics located at 1550 Buckeye Drive, Milpitas, California 95035. At the special meeting, Nanometrics shareholders will consider and vote upon the following:

1. The issuance of shares of Nanometrics common stock in connection with the merger of Alloy Merger Corporation, a wholly owned subsidiary of Nanometrics, with and into Accent Optical Technologies, Inc. pursuant to an Agreement and Plan of Merger and Reorganization, dated as of January 25, 2006, by and among Nanometrics, Alloy Merger Corporation, Accent Optical Technologies, Inc., and Sanford S. Wadler, as Stockholder Agent, as amended; and
2. Such other business as may properly come before the special meeting or any postponements or adjournments thereof.

The foregoing items of business are more fully described in the joint proxy statement/prospectus accompanying this notice of special meeting of shareholders.

Only Nanometrics shareholders of record at the close of business on May 24, 2006 are entitled to notice of and to vote at the special meeting and any postponements or adjournments thereof.

All Nanometrics shareholders are cordially invited to attend the special meeting in person. However, to ensure representation at the special meeting, Nanometrics shareholders are urged to mark, sign, date and return the enclosed proxy card as promptly as possible in the postage-prepaid envelope enclosed for that purpose. Any Nanometrics shareholder attending the special meeting may vote in person even if such shareholder previously returned a proxy card for the special meeting.

BY ORDER OF THE BOARD OF DIRECTORS,

Vincent J. Coates
Chairman of the Board of Directors and Secretary

Milpitas, California

[], 2006

A FORM OF PROXY IS ENCLOSED. TO ASSURE THAT YOUR SHARES WILL BE VOTED AT THE MEETING, PLEASE COMPLETE AND SIGN THE ENCLOSED PROXY AND RETURN IT PROMPTLY IN THE ACCOMPANYING ENVELOPE. THE GIVING OF A PROXY WILL NOT AFFECT YOUR RIGHT TO VOTE IN PERSON IF YOU ATTEND THE MEETING. THE PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED BY THE SHAREHOLDER ON THE PROXY. IF NO CHOICE IS SPECIFIED, THE PROXY WILL BE VOTED FOR PROPOSAL 1, AND AS THE PROXYHOLDER(S) DETERMINE IN THEIR DISCRETION ON ANY OTHER ISSUES THAT COME BEFORE THE MEETING.

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD , 2006

NOTICE IS HEREBY GIVEN that a Special Meeting of the Stockholders of Accent Optical Technologies, Inc., a Delaware corporation (Accent Optical), will be held on , 2006, at the principal offices of Accent Optical located at 1320 SE Armour Drive, Suite B2, Bend, Oregon 97702, at 9:00 a.m., local time, to:

1. Approve and adopt the Agreement and Plan of Merger and Reorganization, dated as of January 25, 2006, by and among Nanometrics Incorporated (Nanometrics), Alloy Merger Corporation, a wholly owned subsidiary of Nanometrics, Accent Optical Technologies, Inc., and Sanford S. Wadler, as Stockholder Agent, as amended; approve the merger of Alloy Merger Corporation with and into Accent Optical; approve the appointment of Mr. Wadler as Stockholder Agent; and approve the escrow agreement entered into in connection with the merger;
2. Approve payments to certain executive officers of Accent Optical in connection with the merger, in amounts set forth and as more fully described in the joint proxy statement/prospectus accompanying this notice of special meeting; and
3. Transact such other business as may properly come before the meeting or any adjournment or adjournments thereof.

Only stockholders of record at the close of business on , 2006, will be entitled to notice of and to vote at the Special Meeting of Stockholders or any adjournments thereof.

BY ORDER OF THE BOARD OF DIRECTORS

Bruce C. Rhine
Chairman

, 2006

A FORM OF PROXY IS ENCLOSED. TO ASSURE THAT YOUR SHARES WILL BE VOTED AT THE MEETING, PLEASE COMPLETE AND SIGN THE ENCLOSED PROXY AND RETURN IT PROMPTLY IN THE ACCOMPANYING ENVELOPE. THE GIVING OF A PROXY WILL NOT AFFECT YOUR RIGHT TO VOTE IN PERSON IF YOU ATTEND THE MEETING. THE PROXY WHEN PROPERLY EXECUTED WILL BE VOTED IN THE MANNER DIRECTED BY THE STOCKHOLDER ON THE PROXY. IF NO CHOICE IS SPECIFIED, THE PROXY WILL BE VOTED FOR PROPOSALS 1 AND 2, AND AS THE PROXYHOLDER(S) DETERMINE IN THEIR DISCRETION ON ANY OTHER ISSUES THAT COME BEFORE THE MEETING.

Table of Contents

TABLE OF CONTENTS

	Page
<u>Questions and Answers About the Merger</u>	1
<u>Summary</u>	12
<u>The Companies</u>	12
<u>Nanometrics Incorporated</u>	12
<u>Alloy Merger Corporation</u>	12
<u>Accent Optical Technologies</u>	12
<u>Overview of Merger Agreement and Related Agreements</u>	13
<u>The Merger Agreement</u>	13
<u>Merger Consideration</u>	13
<u>Allocation of Merger Consideration among Accent Optical Stockholders</u>	14
<u>Treatment of Accent Optical Stock Options</u>	15
<u>Non-Solicitation Restrictions</u>	16
<u>Conditions to Completion of Merger</u>	16
<u>Termination Rights and Fees</u>	17
<u>Accounting Treatment of the Merger</u>	17
<u>Voting Agreements</u>	17
<u>Nanometrics Voting Agreements</u>	17
<u>Accent Optical Voting Agreements</u>	18
<u>Escrow Agreement</u>	18
<u>Employment and Severance Agreements</u>	19
<u>Employment Agreement</u>	19
<u>Executive Officer Retention and Severance Arrangements</u>	19
<u>Proposal Two Payments to Executives</u>	19
<u>Opinion of Nanometrics Financial Advisor</u>	20
<u>Opinion of Accent Optical's Financial Advisor</u>	20
<u>Interests of Certain Directors, Officers and Affiliates of Accent Optical</u>	20
<u>Material U.S. Federal Income Tax Consequences of the Merger</u>	21
<u>Ability to Sell Nanometrics Common Stock</u>	21
<u>Listing of Nanometrics Common Stock</u>	21
<u>Restrictions on Sales of Certain Shares of Nanometrics Common Stock Received in the Merger</u>	21
<u>Regulatory Approval</u>	22
<u>Appraisal Rights</u>	22
<u>Comparison of Shareholder Rights</u>	22
<u>Summary Selected Historical Financial Data</u>	23
<u>Nanometrics</u>	23
<u>Accent Optical</u>	24
<u>Selected Unaudited Pro Forma Condensed Combined Financial Data</u>	26
<u>Comparative Per Share Information</u>	27
<u>Comparative Per Share Market Price Data</u>	28
<u>Recent Developments</u>	29
<u>Risk Factors</u>	30
<u>Risks Relating to the Merger</u>	30
<u>Risks Related to the Combined Company after the Merger</u>	33
<u>Risks Related to Nanometrics Business</u>	40
<u>Risks Related to Accent Optical's Business</u>	43
<u>Cautionary Statement Concerning Forward-Looking Statements</u>	46
<u>The Nanometrics Special Meeting</u>	47
<u>General</u>	47

Table of Contents

	Page
<u>Date, Time, and Place</u>	47
<u>Purpose; Other Matters</u>	47
<u>Recommendation of the Nanometrics Board of Directors</u>	47
<u>Record Date; Outstanding Shares; Voting Rights</u>	47
<u>Admission to the Special Meeting</u>	48
<u>Quorum and Vote Required</u>	48
<u>Voting Agreements</u>	48
<u>Voting</u>	48
<u>General</u>	48
<u>Voting by Proxy</u>	49
<u>Changing Your Vote</u>	49
<u>Abstentions and Broker Non-Votes</u>	49
<u>Proxy Solicitation</u>	50
<u>Postponements and Adjournments</u>	50
<u>Assistance</u>	50
<u>The Accent Optical Special Meeting</u>	51
<u>General</u>	51
<u>Date, Time, and Place</u>	51
<u>Purpose; Other Matters</u>	51
<u>Recommendation of the Accent Optical Board of Directors</u>	51
<u>Record Date; Outstanding Shares; Voting Rights</u>	52
<u>Admission to the Special Meeting</u>	52
<u>Quorum and Vote Required</u>	52
<u>Voting Agreements</u>	53
<u>Voting</u>	53
<u>General</u>	53
<u>Voting by Proxy</u>	53
<u>Changing Your Vote</u>	53
<u>Abstentions</u>	54
<u>Proxy Solicitation</u>	54
<u>Postponements and Adjournments</u>	54
<u>Assistance</u>	54
<u>Proposal One The Merger</u>	55
<u>Background of the Merger</u>	55
<u>Joint Reasons of Nanometrics and Accent Optical for the Merger</u>	60
<u>Nanometrics Reasons for the Merger</u>	61
<u>Accent Optical s Reasons for the Merger</u>	63
<u>Recommendation of the Nanometrics Board of Directors</u>	64
<u>Recommendation of the Accent Optical Board of Directors</u>	65
<u>Opinion of Nanometrics Financial Advisor</u>	65
<u>Opinion of Accent Optical s Financial Advisor</u>	70
<u>Interests of Nanometrics Directors and Executive Officers in the Merger</u>	76
<u>Nanometrics Board of Directors and Executive Officers after the Merger</u>	76
<u>Directors and Officers Insurance</u>	76
<u>Interests of Accent Optical Directors and Executive Officers in the Merger</u>	76
<u>Nanometrics Board of Directors after the Merger</u>	76
<u>Employment Agreement with Nanometrics</u>	77
<u>Executive Officer Retention and Severance Arrangements</u>	77
<u>Executive Officer Option Grants</u>	78
<u>Indemnification; Directors and Officers Insurance</u>	79
<u>Payments to Bio-Rad Corporation</u>	79

Table of Contents

	Page
<u>Stock and Options of Directors and Executive Officers</u>	79
<u>Material United States Federal Income Tax Consequences of the Merger</u>	80
<u>Accounting Treatment of the Merger</u>	82
<u>Regulatory Matters Relating to the Merger</u>	82
<u>Dissenters' or Appraisal Rights in Connection with the Merger</u>	82
<u>Appraisal Rights for the Accent Optical Stockholders</u>	82
<u>Listing of Nanometrics Common Stock</u>	84
<u>Restrictions on Sales of Certain Shares of Nanometrics Common Stock Received in the Merger; Shareholder Agreements with Nanometrics</u>	85
<u>The Merger Agreement</u>	86
<u>Structure of the Merger</u>	86
<u>Closing and Effective Time of the Merger</u>	86
<u>Treatment of Securities</u>	86
<u>Fractional Shares</u>	88
<u>Treatment of Accent Optical Stock Options and Stock Plan</u>	88
<u>Exchange Fund; Exchange of Stock Certificates</u>	89
<u>Distributions with Respect to Unexchanged Shares</u>	89
<u>Termination of Exchange Fund; No Liability</u>	90
<u>Lost, Stolen or Destroyed Certificates</u>	90
<u>Representations and Warranties</u>	90
<u>Conduct of Business Before Completion of the Merger</u>	91
<u>Accent Optical Prohibited from Soliciting Other Offers</u>	93
<u>Obligations of the Nanometrics Board of Directors and the Accent Optical Boards of Directors with Respect to their Recommendation and Holding a Meeting</u>	94
<u>Public Announcements</u>	94
<u>Indemnification and Insurance</u>	95
<u>Reasonable Best Efforts to Complete the Merger</u>	95
<u>Conditions to Obligations to Complete the Merger</u>	96
<u>Material Adverse Effect</u>	97
<u>Termination; Termination Fees and Expenses</u>	98
<u>Termination</u>	98
<u>Termination Fees and Expenses</u>	99
<u>Expenses Generally</u>	99
<u>The Voting Agreements</u>	99
<u>The Shareholder Agreements</u>	101
<u>Employment Agreement</u>	102
<u>Escrow Agreement</u>	102
<u>Unaudited Pro Forma Condensed Combined Financial Statements</u>	104
<u>Unaudited Pro Forma Condensed Combined Balance Sheet as of April 1, 2006</u>	106
<u>Unaudited Pro Forma Condensed Combined Statement of Operations for the Year Ended December 31, 2005</u>	107
<u>Unaudited Pro Forma Condensed Combined Statement of Operations for the Three Months Ended April 1, 2006</u>	108
<u>The Nanometrics Business</u>	117
<u>The Accent Optical Business</u>	119
<u>Industry Overview</u>	119
<u>The Semiconductor Device Manufacturing Process</u>	119
<u>Process Control and Metrology</u>	120
<u>Lattice Engineering</u>	120
<u>Accent Optical's Solutions</u>	121
<u>Photolithography Process Control and Metrology Solutions</u>	121

Table of Contents

	Page
<u>Lattice Engineering Metrology Solutions</u>	122
<u>Accent Optical's Products</u>	123
<u>Photolithography Process Control and Metrology Systems</u>	123
<u>Lattice Engineering Metrology Systems</u>	123
<u>Accent Optical Customers</u>	124
<u>Sales, Marketing and Service</u>	124
<u>Manufacturing</u>	125
<u>Accent Optical Competition</u>	125
<u>Accent Optical Research and Development</u>	125
<u>Intellectual Property and Other Proprietary Rights</u>	126
<u>Employees</u>	126
<u>Facilities</u>	126
<u>Accent Optical Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	127
<u>Overview</u>	127
<u>Results of Operations</u>	129
<u>Consolidated Statements of Operations</u>	131
<u>Quarters ended April 1, 2006 and April 2, 2005</u>	132
<u>Years Ended December 31, 2005 and 2004</u>	132
<u>Years Ended December 31, 2004 and 2003</u>	133
<u>Quarterly Results of Operations</u>	135
<u>Liquidity and Capital Resources</u>	136
<u>Off-Balance Sheet Arrangements</u>	138
<u>Critical Accounting Policies and Estimates</u>	138
<u>Qualitative and Quantitative Disclosures About Market Risks</u>	141
<u>Recently Issued Accounting Pronouncements</u>	141
<u>Legal Proceedings</u>	142
<u>Nanometrics' Principal Shareholders</u>	143
<u>Accent Optical's Principal Stockholders</u>	144
<u>Description of Nanometrics Capital Stock</u>	146
<u>General</u>	146
<u>Common Stock</u>	146
<u>Transfer Agent</u>	146
<u>Comparison of Rights of Holders</u>	147
<u>Size of Board of Directors</u>	147
<u>Cumulative Voting</u>	147
<u>Removal of Directors</u>	147
<u>Vacancies on the Board of Directors</u>	148
<u>Loans to Officers and Employees</u>	148
<u>Power to Call Special Shareholders' Meeting</u>	149
<u>Indemnification and Limitation of Liability</u>	149
<u>Inspection of Shareholders' List</u>	149
<u>Dividends and Repurchases of Shares</u>	150
<u>Shareholder Approval of Mergers and Other Business Combinations</u>	150
<u>Amendment of the Articles or Certificate of Incorporation</u>	151
<u>Amendment of Bylaws</u>	152
<u>Shareholder Consent in Lieu of Meeting</u>	152
<u>Dissenters' Rights</u>	153
<u>Dissolution</u>	153
<u>Antitakeover Legislation</u>	154
<u>Interested Director Transactions</u>	154

Table of Contents

	Page
<u>Derivative Suits</u>	155
<u>Fair Price Provisions</u>	155
<u>Management</u>	156
<u>Executive Officers of Nanometrics following the Merger</u>	156
<u>Compensation/Stock Option Committee Interlocks and Insider Participation</u>	157
<u>Compensation of Directors</u>	157
<u>Compensation of Executive Officers</u>	158
<u>Summary Compensation Table</u>	158
<u>Stock Options Granted in the Fiscal Year Ended December 31, 2005</u>	159
<u>Option Grants in Last Fiscal Year</u>	159
<u>Aggregated Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values</u>	160
<u>Employment Contracts and Termination of Employment and Change-in-Control Arrangements</u>	160
<u>Proposal Two Payments to Executives</u>	161
<u>Background</u>	161
<u>Description of Potential Parachute Payments</u>	162
<u>Payments Subject To Accent Optical Stockholder Approval</u>	164
<u>Vote Required</u>	165
<u>Additional Information</u>	166
<u>Shareholder Proposals</u>	166
<u>Nanometrics</u>	166
<u>Accent Optical</u>	166
<u>Legal Matters</u>	166
<u>Experts</u>	166
<u>Where You Can Find More Information</u>	167
<u>Index to Consolidated Financial Statements</u>	F-1
Annexes	

Annex A	<u>Agreement and Plan of Merger and Reorganization</u>
Annex B-1	<u>Form of Nanometrics Shareholder Voting Agreement</u>
Annex B-2	<u>Form of Accent Optical Stockholder Voting Agreement</u>
Annex C	<u>Opinion of Cowen & Co., LLC (formerly SG Cowen & Co., LLC)</u>
Annex D	<u>Opinion of Merrill Lynch, Pierce, Fenner & Smith Incorporated</u>
Annex E-1	<u>Form of Shareholder Agreement</u>
Annex E-2	<u>Form of Shareholder Agreement</u>
Annex F	<u>Escrow Agreement</u>
Annex G-1	<u>B. Rhine Employment Agreement</u>
Annex G-2	<u>B. Crawford Employment Agreement</u>
Annex G-3	<u>R. Langrill Employment Agreement</u>
Annex H	<u>Section 262 of the Delaware General Corporation Law</u>

Table of Contents

QUESTIONS AND ANSWERS ABOUT THE MERGER

The following are some questions that shareholders of Nanometrics Incorporated and stockholders of Accent Optical Technologies, Inc. may have regarding the matters being considered at the special meeting of the Nanometrics shareholders and the special meeting of the Accent Optical stockholders, as well as brief answers to those questions. Nanometrics and Accent Optical urge you to read the remainder of this joint proxy statement/prospectus carefully and in its entirety because the information below does not provide all of the information that might be important to you.

Q: What are the material terms of the proposed transaction? (See page 86)

A: The respective boards of directors of Nanometrics and Accent Optical have unanimously approved the merger of a wholly owned subsidiary of Nanometrics, Alloy Merger Corporation, with and into Accent Optical in accordance with the terms and conditions of an agreement and plan of merger and reorganization, dated as of January 25, 2006, between Nanometrics, Accent Optical, Alloy Merger Corporation and Sanford S. Wadler as Stockholder Agent, as amended. A summary term sheet describing the material terms of the proposed transaction follows.

Summary of Terms

Nanometrics wholly-owned subsidiary, Alloy Merger Corporation, will merge with and into Accent Optical resulting in Accent Optical becoming a wholly owned subsidiary of Nanometrics.

Nanometrics will issue approximately 4,900,000 shares of its common stock to the holders of Accent Optical capital stock and the holders of certain Accent Optical stock options.

Nanometrics will also issue (or reserve for issuance) an additional number of shares of its common stock equal to the quotient of (i) the aggregate exercise price of all Accent Optical stock options that are assumed pursuant to the merger agreement (other than options issued on or after January 23, 2006), divided by (ii) the average closing price of Nanometrics common stock for the ten trading days ending two days prior to the closing of the merger, which price is referred to herein as the Average Closing Price. See page 88 for more information regarding the treatment of Accent Optical stock options in the merger.

Nanometrics will assume all Accent Optical stock options that are in-the-money or that were granted on or after January 23, 2006.

Current Nanometrics shareholders and Accent Optical stockholders are expected to hold 73% and 27%, respectively, of the combined company following the merger. See page 87 for more information regarding the expected composition of the stockholders of the combined company following the merger.

Accent Optical has agreed to indemnify Nanometrics for losses suffered by Nanometrics as a result of breaches by Accent Optical of its representations and warranties in the merger agreement. See page 102 for more information regarding Accent Optical's indemnification obligations.

Nanometrics will withhold approximately 490,000 of the shares of its common stock to be distributed to the Accent Optical stockholders at the closing and will place such shares in an escrow account to compensate Nanometrics if it is entitled to indemnification under the merger agreement. Based on the average closing price of Nanometrics common stock for the ten trading days ended on June 6, 2006, which was \$10.84, the 490,000 shares of Nanometrics common stock are valued at \$5,311,600. See page 102 for more information regarding the escrow arrangement.

Edgar Filing: NANOMETRICS INC - Form S-4/A

The Chief Executive Officer of Accent Optical, who is also one of its directors, has accepted an offer to join Nanometrics as an executive officer and director following the merger.

Table of Contents

Certain other executive officers of Accent Optical may receive severance payments in connection with the proposed transaction.

Certain stockholders of Accent Optical, who hold more than the requisite majorities of each class of Accent Optical capital stock needed to approve the merger, entered into voting agreements concurrently with the execution of the merger agreement, and agreed to vote their shares in favor of the merger.

Q: How many shares of Nanometrics common stock will be issued and reserved for issuance in the merger?

A: There are three components of the consideration that will be issued to Accent Optical stockholders and optionees in the merger: (i) the base consideration of 4,900,000 of Nanometrics common stock including shares reserved for in-the-money options issued prior to January 23, 2006; (ii) an additional number of shares of Nanometrics common stock with an aggregate value equal to the aggregate exercise price of all Accent Optical stock options assumed in the merger, which shares are referred to as the Option Adjustment Amount; and (iii) a number of shares of Nanometrics common stock that will be reserved for issuance upon exercise of certain Accent Optical stock options granted on or after January 23, 2006.

The Option Adjustment Amount and the number of shares of Nanometrics common stock required to be reserved for issuance upon exercise of stock options are each a function of the Average Closing Price. For example, if the Average Closing Price is \$15.63, then the Option Adjustment Amount and the number of shares of Nanometrics common stock reserved for issuance upon exercise of Accent Optical stock options granted on or after January 23, 2006, will be 148,738 and 163,548, respectively. At such price, the aggregate number of shares of Nanometrics common stock to be issued and reserved for issuance in connection with the merger will be at its maximum, 5,212,286.

If the Average Closing Price is higher than \$15.63, then the Option Adjustment Amount will consist of fewer shares of Nanometrics common stock. For example, at an Average Closing Price of \$16.00, the Option Adjustment Amount and the number of shares of Nanometrics common stock reserved for issuance upon exercise of Accent Optical stock options granted after January 23, 2006, will be 145,298 and 164,540, respectively. At such price, the number of shares of Nanometrics common stock to be issued and reserved for issuance in connection with the merger will be 5,209,838.

If the Average Closing Price is less than 15.63, then fewer Accent Optical shares will be assumed in the merger resulting in a lower Option Adjustment Amount and, consequently, fewer Nanometrics shares be issued and reserved for issuance in the merger. For example, at an Average Closing Price of \$15.00, the Option Adjustment Amount and the number of shares of Nanometrics common stock reserved for issuance upon exercise of Accent Optical stock options granted after January 23, 2006, will be 73,362 and 161,568, respectively. At such price, the aggregate number of shares of Nanometrics common stock to be issued and reserved for issuance in connection with the merger will be 5,134,930.

The average closing price for Nanometrics common stock during the ten trading days ending on June 6, 2006 was \$10.84, which, if it were the Average Closing Price, would result in an Option Adjustment Amount and number of shares of Nanometrics common stock reserved for issuance upon exercise of Accent Optical stock options granted after January 23, 2006 of 95,630 and 142,652, respectively. At such price, the aggregate number of shares of Nanometrics common stock to be issued and reserved for issuance in connection with the merger will be 5,138,282.

Table of Contents

Q: Why am I receiving this joint proxy statement/prospectus?

A: Nanometrics and Accent Optical cannot complete the merger unless the shareholders of Nanometrics approve the issuance of shares of Nanometrics common stock in the merger and the stockholders of Accent Optical adopt and approve the merger agreement, as amended, and approve the merger, as well as the escrow agreement and the appointment of the stockholder agent as set forth in the Accent Optical Notice of Special Meeting. In addition, Accent Optical is seeking stockholder approval for certain payments to its executive officers in connection with the merger.

The Nanometrics board of directors is soliciting the proxy of its shareholders to vote FOR Nanometrics proposal to approve the issuance of shares of Nanometrics common stock in the merger. The Accent Optical board of directors is soliciting the proxy of its stockholders to vote FOR Accent Optical's proposal to adopt and approve the merger agreement, as amended, and approve the merger, as well as the other matters set forth in the Accent Optical Notice of Special Meeting.

Members of Accent Optical's board of directors, officers and other investors holding 87% of Accent Optical's Common Stock and Preferred Stock, 89% of Accent Optical's Series A Preferred Stock, 65% of Accent Optical's Convertible Preferred Stock and 88% of Accent Optical's Common Stock have entered into voting agreements that obligate them to vote their shares to approve and adopt the merger agreement, as amended, approve the merger, approve the appointment of the stockholder agent and approve the escrow agreement. Nanometrics has waived the provisions of the voting agreements relating to the approval certain payments to Accent Optical's executive officers in connection with the merger. Accordingly, Accent Optical's stockholders are free to vote for or against the approval of such payments.

The board of directors of Accent Optical has also unanimously approved payments to certain executive officers, Bruce C. Rhine, its Chief Executive Officer, Bruce Crawford, its President and Chief Operating Officer and Reid Langrill, its Chief Financial Officer in connection with the merger. Because these payments could be deemed parachute payments under Section 280G of the Internal Revenue Code of 1986, as amended, (the Internal Revenue Code), which would result in adverse tax consequences to Accent Optical and the executives, Messrs. Rhine, Crawford and Langrill have agreed to waive their respective rights to these payments unless Accent Optical obtains the requisite stockholder approval to avoid the adverse tax consequences. Holders of more than 75% of Accent Optical Common Stock and Accent Optical Convertible Preferred Stock, voting together as a single class on an as-converted basis, not including shares owned or constructively owned by executive officers receiving payments in connection with the merger, must approve such payments in order to avoid the adverse tax consequences. Accordingly, Accent Optical is soliciting the proxy of its stockholders to vote FOR the proposal to approve the payments to these executive officers.

This joint proxy statement/prospectus describes Nanometrics, Accent Optical and the merger so that you may make an informed decision with respect to the matters under consideration. A copy of the merger agreement and the amendment thereto dated June 9, 2006 is attached to this joint proxy statement as Annex A.

Q: Why are Nanometrics and Accent Optical proposing to merge? (See page 60)

A: Nanometrics and Accent Optical believe that by combining their product lines and technologies, they can generate improved long-term operating and financial results, improving their competitive position in the industry. The boards of directors of Nanometrics and Accent Optical also believe that the merger of Nanometrics and Accent Optical will create one of the largest independent metrology companies in the semiconductor industry and allow the combined company to expand its market position in each of its primary stand-alone metrology segments after the merger. The merger is expected to create a strong platform for the combined company to deliver metrology systems to both new and existing customers. The Nanometrics and Accent Optical boards of

Table of Contents

directors believe that the merger will create an opportunity for the holders of both companies' capital stock to participate in the growth of the combined company after the merger.

Q: What are the risks of the merger?

A: The merger involves numerous risks and uncertainties, including, but not limited to, the following:

the expense, time and disruption of Nanometrics' business related to integrating the operations of Nanometrics and Accent Optical;

the anticipated benefits and synergies of the merger may not be realized;

the trading price of Nanometrics common stock may decline if the cost benefits of the merger are not realized; and

customers, distributors, resellers or others may delay or defer decisions concerning Nanometrics and/or Accent Optical during the pendency, or as a result, of the merger.

You are encouraged to read this joint proxy statement/prospectus carefully, including the section entitled "Risk Factors" beginning on page 30, for a discussion of risks associated with the merger, the combined company and the businesses of each of Nanometrics and Accent Optical.

Q: What will Accent Optical stockholders receive in the merger? (See page 86)

A: Accent Optical has three classes of capital stock outstanding. Each class of Accent Optical capital stock will receive a portion of the total merger consideration, which will consist solely of a specified number of shares of Nanometrics common stock and cash in lieu of fractional shares, if any. Each class of Accent Optical capital stock will be converted into Nanometrics common stock at a different exchange ratio in the merger.

Issuance of the merger consideration will be made to holders of Accent Optical Series A Preferred Stock and Convertible Preferred Stock (collectively, the "Accent Optical Preferred Stock") on a *pari passu* basis. If the value of the shares of Nanometrics common stock issuable in the merger is insufficient to provide \$1,000 of Nanometrics common stock for each share of Accent Optical Series A Preferred Stock and \$1.13 of Nanometrics common stock for each share of Accent Optical Convertible Preferred Stock, then the available merger consideration will be prorated, and holders of Accent Optical Common Stock and options will receive no consideration in the merger.

Q: Will Accent Optical's stockholders receive the full amount of their preferences and accrued dividends as set forth on Accent Optical's certificate of incorporation? (See page 86)

A: No. The holders of Series A Preferred Stock will receive Nanometrics common stock valued at \$1,000 for each share of Series A Preferred Stock, which is the amount that such stockholders originally paid for their Series A Preferred Stock. The holders of Series A Preferred Stock will forego the 13.5% cumulative dividend that Accent Optical has been accruing since 2000 (which dividends totaled approximately \$1,027 per share as of December 31, 2005).

The holders of Convertible Preferred Stock will receive Nanometrics common stock valued at \$1.13 for each share of Convertible Preferred Stock, which is approximately 55% of the \$2.05 liquidation preference on such shares. In addition, the holders of Convertible Preferred Stock will forego the 8% cumulative dividend that Accent Optical has been accruing since such shares were issued (which dividends totaled approximately \$0.83 per share as of December 31, 2005).

Table of Contents

Similarly, Bio-Rad Laboratories, Inc. (Bio-Rad), in addition to its rights as a holder of Accent Optical Common Stock, had a contractual right to receive a \$13 million change of control payment from Accent Optical as a result of the change of control contemplated by the merger agreement. The provision governing this change of control payment is contained in the agreement between Bio-Rad and Accent Optical pursuant to which Accent Optical purchased the assets of the former Semiconductor Measurements Division of Bio-Rad (the Bio-Rad SMD). Bio-Rad has agreed that, if the merger is consummated, it will forego all but \$2.5 million of the change of control payment to which it otherwise would have been entitled.

The allocation of the consideration was structured so that the merger would provide benefit to all Accent Optical stockholders, and to provide incentive for the holders of Accent Optical Common Stock to approve the merger. If the merger and merger agreement, as amended, are approved by the necessary vote of the Accent Optical stockholders, the allocation of the merger consideration set forth in the merger agreement will supersede the rights of stockholders to the preferences and accrued dividends described in Accent Optical 's certificate of incorporation.

Q: What is the escrow and how does it work?

A: Upon completion of the merger, Nanometrics will withhold approximately 490,000 shares of Nanometrics common stock from the shares to be distributed to the Accent Optical stockholders at closing of the merger and deposit those shares into an escrow account. The size of escrow was arrived at after negotiations between Accent Optical and Nanometrics and was determined as a percentage of the overall transaction size. These escrowed shares will be available to compensate Nanometrics if it is entitled to indemnification under the merger agreement, as amended. Additionally, upon closing of the merger, Nanometrics will have an immediate claim on the escrow account for a number of shares equal to the Accent Optical transaction costs that exceed \$4.2 million, which excess is currently anticipated to be approximately \$950,000, divided by the Average Closing Price. Any portion of the remaining escrowed amount that, within 12 months following the completion of the merger, has not been withdrawn or earmarked to satisfy a claim for loss by Nanometrics, will be distributed to the Accent Optical stockholders promptly (but in no event more than 20 days), after expiration of the 12-month escrow period. The value of the escrowed shares will fluctuate with the market price of Nanometrics ' common stock. Based upon the Average Closing Price on June 6, 2006, the value of the shares in escrow would be equal to \$5,311,600.

Q: What will holders of options to purchase Accent Optical Common Stock receive in the merger? (See page 88)

A: At the closing of the merger, Nanometrics will assume each outstanding option to acquire shares of Accent Optical Common Stock that is in-the-money or that was granted on or after January 23, 2006, regardless of whether such option is in-the-money. An option will be in-the-money if the per share exercise price for the option is less than the value of Nanometrics common stock that the holder of one share of Accent Optical Common Stock would be entitled to receive in the merger.

Each assumed option will be converted into an option to purchase the number of Nanometrics shares that would have been issuable in exchange for the number of Accent Optical shares subject to the assumed option, had such shares been outstanding at the closing of the merger. The exercise price of such assumed options will be adjusted such that the aggregate exercise price for the option remains constant.

Q: Do the Accent Optical stockholders have obligations relating to Accent Optical 's transaction expenses? (See page 99)

A: The merger agreement, as amended, provides that Accent Optical stockholders will indemnify Nanometrics with respect to any transaction expenses of Accent Optical in excess of \$4.2 million. Transaction

Table of Contents

expenses are broadly defined within the merger agreement to include the \$2.5 million fee owed to Bio-Rad, as well as fees owed to Accent Optical's investment banker, lawyers and accountants. Accent Optical currently estimates its transaction expenses at \$5.15 million. Accordingly, upon closing of the merger, Nanometrics would have an immediate claim on the escrow in the amount of approximately \$950,000.

Q: What are the United States federal income tax consequences of the merger? (See page 80)

A: Nanometrics and Accent Optical each expect the merger to qualify as a reorganization pursuant to Section 368(a) of the Internal Revenue Code for U.S. federal income tax purposes. Assuming that the merger so qualifies, Accent Optical stockholders will not recognize gain or loss for United States federal income tax purposes as a result of the merger, other than gain or loss attributable to cash received by Accent Optical stockholders instead of fractional shares.

Q: When do Nanometrics and Accent Optical expect to complete the merger? (See page 95)

A: Nanometrics and Accent Optical are working to complete the merger as quickly as possible. Nanometrics and Accent Optical currently expect to complete the merger in the third quarter of 2006. Nanometrics and Accent Optical cannot predict the exact timing of the completion of the merger.

Q: What vote is required by Nanometrics shareholders to proceed with the merger? (See page 48)

A: Under the applicable rules of the Nasdaq Stock Market, Nanometrics cannot complete the merger unless the issuance of shares of Nanometrics common stock in the merger is approved by the affirmative vote of the holders of a majority of the shares of Nanometrics common stock represented and voting at the Nanometrics special meeting. Members of Nanometrics board of directors and officers holding approximately 30.9% of Nanometrics outstanding common stock as of January 25, 2006 have entered into voting agreements, which obligate them to approve the share issuance.

Q: How does the Nanometrics board of directors recommend that the Nanometrics shareholders vote on the share issuance? (See page 64)

A: The Nanometrics board of directors unanimously recommends that its shareholders vote FOR Nanometrics' proposal to approve the issuance of shares of Nanometrics common stock in the merger.

Q: Did the Nanometrics board of directors obtain a fairness opinion in connection with its determination to proceed with the merger? (See page 65)

A: Yes. On January 25, 2006, Cowen & Co., LLC, (formerly SG Cowen & Co., LLC) (Cowen) financial advisor to Nanometrics, provided to the Nanometrics board of directors its opinion, that, as of the date of such opinion, the consideration provided for in the merger agreement was fair, from a financial point of view, to Nanometrics. The full text of the Cowen opinion is attached to this joint proxy statement/prospectus as Annex C. Nanometrics encourages its shareholders to read this opinion carefully in its entirety for a description of the procedures followed, assumptions made, matters considered and limitations on the review undertaken. The Cowen opinion is directed to the Nanometrics board of directors and addresses only the fairness from a financial point of view of the consideration provided for in the merger agreement as of the date of the opinion. Nanometrics paid Cowen a fee upon the delivery of the Cowen fairness opinion.

Q: What vote is required by Accent Optical stockholders to proceed with the merger? (See page 52)

A: Holders of a majority of the outstanding shares of Accent Optical Common Stock and Convertible Preferred Stock, voting together on an as-converted basis, must approve the merger agreement, as amended, and

Table of Contents

the merger. In addition, a majority of each of the Accent Optical Series A Preferred Stock, the Accent Optical Convertible Preferred Stock and the Accent Optical Common Stock, voting as separate classes, must approve the merger.

Members of Accent Optical's board of directors, officers and other investors holding 87% of Accent Optical's Common Stock and Preferred Stock, 89% of Accent Optical's Series A Preferred Stock, 65% of Accent Optical's Convertible Preferred Stock and 88% of Accent Optical's Common Stock have entered into voting agreements that obligate them to vote their shares to approve and adopt the merger agreement, as amended, approve the merger, approve the appointment of the stockholder agent and approve the escrow agreement.

Q: How does the Accent Optical board of directors recommend that the Accent Optical stockholders vote on the matters set forth in the Accent Optical Notice of Special Meeting? (See page 51)

A: The Accent Optical board of directors unanimously recommends that the Accent Optical stockholders vote FOR Accent Optical's proposal to adopt and approve the merger agreement, as amended, approve the merger, approve the appointment of Mr. Wadler as Stockholder Agent, approve the escrow agreement and FOR Accent Optical's proposal to approve payments to certain executive officers.

Q: Did the Accent Optical board of directors obtain a fairness opinion in connection with its determination to proceed with the merger? (See page 70)

A: Yes. On January 24, 2006, Merrill Lynch, Pierce, Fenner & Smith Incorporated (Merrill Lynch), financial advisor to Accent Optical, provided to the Accent Optical board of directors its opinion, that, as of such date and based upon the assumptions made, matters considered and limits of such review, the aggregate consideration provided for in the merger agreement was fair, from a financial point of view, to the holders of Accent Optical capital stock. The full text of the Merrill Lynch opinion is attached to this joint proxy statement/prospectus as Annex D. Accent Optical encourages its stockholders to read this opinion carefully in its entirety for a description of the procedures followed, assumptions made, matters considered and limitations on the review undertaken. The Merrill Lynch opinion is addressed to the Accent Optical board of directors and addresses only the fairness, from a financial point of view, of the aggregate consideration provided for in the merger agreement as of January 24, 2006. Accent Optical will pay Merrill Lynch a customary fee for the Merrill Lynch fairness opinion upon the closing of the merger.

Q: Do any of the directors and executive officers of Accent Optical have any special interests in the merger? (See page 76)

A: Yes. In considering the recommendation of the board of directors of Accent Optical with respect to the adoption and approval of the merger agreement, as amended, approval of the merger and the other matters described in the Notice of Special Meeting of Accent Optical Stockholders, the stockholders of Accent Optical should be aware that members of the Accent Optical board of directors and Accent Optical executive officers have interests in the merger that may be different than, or in addition to, the interests of the Accent Optical stockholders generally. These interests include:

the appointment of Bruce C. Rhine, a director and the current Chief Executive Officer of Accent Optical, as a director and Chief Strategy Officer of Nanometrics following the merger, for which he will receive a base salary of \$250,000 per year, standard Nanometrics employee benefits and paid vacation;

an agreement between Accent Optical and Reid Langrill, its Chief Financial Officer, which provides for Mr. Langrill's continued employment at his regular salary with Accent Optical or its successors through the completion of the merger and up to 30 days thereafter; receipt of a severance payment, upon his termination, equal to the greater of either \$185,000 or the difference between \$500,000 and the value of Mr. Langrill's options that are in-the-money as of the completion of the merger, subject to withholding;

Table of Contents

and, following Mr. Langrill's termination as Chief Financial Officer of Accent Optical, for Mr. Langrill to provide consulting services to Nanometrics through March 15, 2007, subject to earlier termination, at a rate of \$105 per hour and reimbursement of expenses;

the potential receipt of severance benefits by Bruce Crawford, Accent Optical's President and Chief Operating Officer, if Accent Optical terminates Mr. Crawford's employment without good cause or Mr. Crawford terminates his employment for good reason during the five-year term of his employment agreement, including a lump-sum payment in the amount of his annual salary (currently \$213,000), continued group health or other group benefits as allowed under the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) for a period of 12 months with a potential gross-up for taxes arising and reimbursement of relocation expenses up to \$50,000;

the receipt of option grants in connection with the merger by Accent Optical officers, for an aggregate of 5,522,000 shares of Accent Optical Common Stock, which will be assumed by Nanometrics;

the acceleration of vesting of assumed options of officers and directors if their employment is terminated in connection with the merger (options to purchase 8,281,596 shares of Accent Optical Common Stock held by Accent Optical officers and directors are expected to be assumed, based on the Average Closing Price as of June 6, 2006, of which options to purchase 1,997,723 shares of Accent Optical Common Stock are unvested as of June 6, 2006);

the continued indemnification following the merger of the current Accent Optical directors and officers for acts or omissions occurring prior to the closing of the merger;

the receipt by Bio-Rad, a company affiliated with Accent Optical director David Schwartz, of approximately \$12.0 million as repayment of a loan and a contractual fee of \$2.5 million (related to the 2000 asset purchase from Bio-Rad to form Accent Optical), each in connection with the closing of the merger; and

the re-allocation of the merger consideration so that holders of Accent Optical Common Stock can receive more of the merger consideration than they originally would have been entitled to, which benefits the directors and officers who hold Accent Optical Common Stock.

The Accent Optical board of directors was aware of these interests and considered them, among other matters, in making its recommendation that Accent Optical stockholders approve the merger agreement, as amended, the merger and the related transactions and certain payment to executive officers.

Q: What vote is required by Accent Optical stockholders to approve the payments to certain Accent Optical executive officers? (See page 161)

A: Accent Optical stockholders are being asked to approve certain payments to executive officers, which will or may be made to such executive officers in connection with the merger, and which might otherwise be deemed "excess parachute payments" for purposes of Section 280G of the Internal Revenue Code and the Treasury Regulations promulgated thereunder (collectively, "Section 280G"). These payments consist of severance payments, option grants and the value of options that could be accelerated due to the executive officer's termination in connection with the merger. Excess parachute payments are not deductible as a business expense by a corporation, and subject the recipient of such payments to a 20% excise tax (in addition to applicable federal and state income and employment taxes), unless such payments are approved by more than 75% of the outstanding shares of Accent Optical's Convertible Preferred Stock and Common Stock, voting together as a single class on an as-converted basis, not including shares owned or constructively owned by executive officers whose payments in connection with the merger would otherwise be excess parachute payments.

Table of Contents

Q: What should the shareholders of Nanometrics and the stockholders of Accent Optical do now? (For Nanometrics Shareholders, see page 48; for Accent Optical Stockholders, see page 53)

A: After reading and considering the information contained in this joint proxy statement/prospectus carefully, Nanometrics shareholders and Accent Optical stockholders should then vote their respective shares of capital stock in accordance with the instructions in this joint proxy statement/prospectus.

Nanometrics and Accent Optical encourage their respective shareholders to vote as soon as possible so that there is a quorum present at the special meetings.

Q: How can Nanometrics shareholders vote or submit voting instructions? (See page 48)

A: Holders of record of shares of Nanometrics common stock may vote by proxy by completing, signing, dating and returning the enclosed proxy card for the special meeting and returning it in the enclosed pre-paid envelope or may vote in person at the Nanometrics special meeting.

Nanometrics common stock held through a broker, bank or other nominee (*i.e.*, in street name), may be voted by providing the record holder of the shares with instructions on how to vote such shares at the Nanometrics special meeting. The broker, bank or other nominee has delivered a voting instruction card with this joint proxy statement/prospectus that contains instructions on how to direct the record holder of the Nanometrics shares to vote at the Nanometrics special meeting. Shares of Nanometrics common stock held in street name, can only be voted in person by the shareholders thereof by obtaining a legal proxy from the record holder of such shares in order to attend the Nanometrics special meeting.

Regardless of whether a Nanometrics shareholder intends to attend the Nanometrics special meeting in person, the Nanometrics board of directors requests that all shareholders submit a proxy prior to the meeting.

Q: If my shares of Nanometrics common stock are held in street name, will my broker, bank, or nominee vote my shares for me on the merger proposal? (See page 48)

A: No. The broker, bank, or other nominee that holds your shares of Nanometrics common stock cannot vote your shares of Nanometrics common stock at the Nanometrics special meeting unless you provide them with instructions on how to vote your shares in accordance with the information and procedures they provided to you.

Q: Can Nanometrics shareholders change their vote after they have mailed their signed proxy or instruction form? (See page 49)

A: Yes. Record holders of Nanometrics common stock can change their vote at any time before their proxy is voted at the Nanometrics special meeting by:

delivering to the Nanometrics corporate secretary a signed notice of revocation;

submitting the Nanometrics proxy holders a new, later-dated proxy, which must be signed and delivered to the Nanometrics corporate secretary in advance of the vote at the Nanometrics special meeting; or

attending the Nanometrics special meeting and voting in person. Attendance alone, however, will not revoke a previously granted proxy.

If you hold your shares in street name and you have provided voting instructions to the broker, bank or other nominee that holds your shares of Nanometrics common stock for use at the Nanometrics special meeting, you must follow the instructions of your broker, bank or other nominee in order to change your vote or revoke your proxy for the Nanometrics special meeting.

Table of Contents

Q: How can Accent Optical stockholders vote or submit voting instructions? (See page 53)

A: Holders of record of shares of Accent Optical capital stock, may vote in person or by proxy at the Accent Optical special meeting. Accent Optical stockholders electing to vote by proxy must complete, sign, date and return the enclosed proxy card for the special meeting and returning it in the enclosed pre-paid envelope. Regardless of whether an Accent Optical stockholder intends to attend the Accent Optical special meeting, the Accent Optical board of directors requests that all stockholders submit a proxy prior to the meeting.

Q: Can Accent Optical stockholders change their vote after they have mailed their signed proxy? (See page 53)

A: Yes. Record holders of Accent Optical capital stock can change their vote at any time before their proxy is voted at the Accent Optical special meeting by:

delivering to the Accent Optical corporate secretary a signed notice of revocation;

submitting to the Accent Optical proxy holders a new, later-dated proxy, which must be signed and delivered to the Accent Optical corporate secretary in advance of the vote at the Accent Optical special meeting; or

attending the Accent Optical special meeting and voting in person. Attendance alone, however, will not revoke a previously granted proxy.

Q: Should Accent Optical stockholders send in their stock certificates now? (See page 89)

A: No. Accent Optical stockholders should not send in their stock certificates now. They will receive specific instructions from the exchange agent after the merger has been completed on how to exchange their stock certificates.

Q: Will the shareholders of Nanometrics and the stockholders of Accent Optical have dissenters or appraisal rights in connection with the merger? (See page 82)

A: Under applicable law, Nanometrics shareholders will not have dissenters or appraisal rights in connection with the merger.

Accent Optical stockholders are entitled to appraisal rights in connection with the merger under the Delaware General Corporation Law if such stockholders meet certain conditions. Failure to vote against the merger in and of itself will not constitute a waiver of appraisal rights. However, a vote in favor of the merger will constitute a waiver of appraisal rights. Furthermore, a vote against the merger in and of itself will not be deemed to satisfy any notice requirements under state law with respect to appraisal rights. Please see Dissenters or Appraisal Rights in Connection with the Merger, beginning on page 81 and Annex H for more information.

Q: Whom should I call with questions? (See page 167)

A: If Nanometrics shareholders have any questions about the merger or any other matters described in this joint proxy statement/prospectus, or need to obtain additional copies of this joint proxy statement/prospectus or a proxy card for the Nanometrics special meeting, they should contact:

Nanometrics Incorporated

1550 Buckeye Drive

Milpitas, California 95035

Attention: Investor Relations

Tel: (408) 435-9600

Table of Contents

If Accent Optical stockholders have any questions about the merger or any other matters described in this joint proxy statement/prospectus, or need to obtain additional copies of this joint proxy statement/prospectus or a proxy card for the Accent Optical special meeting, they should contact:

Accent Optical Technologies, Inc.

1320 SE Armour Drive, Suite B2

Bend, Oregon 97702

Attention: Chief Executive Officer

Facsimile No.: (541) 318-1966

Telephone No.: (541) 322-2500

If any Nanometrics shareholder or Accent Optical stockholder has any questions about how to submit their proxy, the enclosed proxy cards, or voting instructions, or needs to request additional copies of this joint proxy statement/prospectus, such persons should contact Nanometrics proxy solicitors, The Altman Group, Inc. at 1200 Wall Street West, 3rd Floor, Lyndhurst, NJ 07071, or call them at (800) 884-4969.

Table of Contents

SUMMARY

*The following is a summary of information contained in this joint proxy statement/prospectus. This summary may not contain all of the information that may be important to you. You are encouraged to read the entire joint proxy statement/prospectus carefully. In addition, you are encouraged to read the information incorporated by reference into this joint proxy statement/prospectus, which includes important business and financial information about Nanometrics that has been filed with the SEC. You may obtain the information incorporated by reference into this joint proxy statement/prospectus without charge by following the instructions in the section of this joint proxy statement/prospectus entitled *Additional Information Where You Can Find More Information* beginning on page 167.*

The Companies

Nanometrics Incorporated (See page 117)

1550 Buckeye Drive

Milpitas, California 95035

(408) 435-9600

Nanometrics is a leader in the design, manufacture, and marketing of high-performance process control metrology systems used in the manufacture of semiconductors and integrated circuits. Nanometrics' metrology systems (i) measure various thin film properties, critical circuit dimensions and layer-to-layer circuit alignment (overlay) and (ii) inspect for surface defects during various steps of the manufacturing process, enabling semiconductor and integrated circuit manufacturers to improve yields, increase productivity and lower their manufacturing costs. The relative alignment of sequentially patterned thin film layers is critical to device production.

Nanometrics has been a pioneer and innovator in the field of metrology for nearly three decades. It has been selling metrology systems since 1977 and has an extensive installed base with industry leading customers worldwide.

Alloy Merger Corporation

Alloy Merger Corporation is an acquisition subsidiary that Nanometrics formed solely to effect the merger. Alloy Merger Corporation has not conducted any other business.

Accent Optical Technologies, Inc. (See page 119)

1320 SE Armour Drive, Suite B2

Bend, Oregon 97702

(541) 322-2500

Accent Optical designs, manufactures, sells and services a broad suite of process control and metrology systems used by manufacturers of semiconductor wafers and compound and silicon semiconductor devices for the advanced computing, communications and consumer electronics markets. Its systems measure optical, electrical and material properties, including the structural composition of compound and silicon semiconductor devices and wafers, the amount of impurities or contaminants in semiconductor devices, electron mobility and the wavelength and intensity of light emitted by light emitting diodes (LEDs) and laser diodes. Its systems also measure the degree of alignment and dimensions of semiconductor device features. Customers use Accent Optical's process control and metrology systems to lower their costs by enhancing their manufacturing efficiency and increasing their production yields, and to improve their product performance and quality. Accent Optical sells its systems globally to leading semiconductor device and wafer manufacturers.

Table of Contents

Overview of Merger Agreement and Related Agreements

The Merger Agreement (See page 86)

On January 25, 2006, Nanometrics, Alloy Merger Corporation, Accent Optical and, solely with respect to Article IX, Sanford S. Wadler entered into the merger agreement. On June 9, 2006, the parties entered into an amendment to the merger agreement for the purpose of extending the date by which the merger is required to be completed before either Nanometrics or Accent Optical can terminate the agreement and to provide for Nanometrics to fund an additional \$1,611,238 in working capital loans to Accent Optical to satisfy an interest payment due to Bio-Rad on July 9, 2006. Pursuant to the terms and subject to the conditions set forth in the merger agreement, as amended, Alloy Merger Corporation will merge with and into Accent Optical, and Accent Optical will continue as the surviving corporation in the merger as a wholly owned subsidiary of Nanometrics. The merger agreement and the amendment are attached to this joint proxy statement/prospectus as Annex A. You are encouraged to read the merger agreement, as amended, carefully and in its entirety because it is the legal document that governs the merger.

Merger Consideration (See page 86)

Upon completion of the merger, shares of outstanding Accent Optical capital stock and in-the-money options to acquire Accent Optical Common Stock (as well as all Accent Optical stock options granted on or after January 23, 2006 regardless of their exercise price) will be converted into the right to receive Nanometrics common stock and options to acquire Nanometrics common stock. The total number of shares of Nanometrics common stock that will be issued in the merger will be: (i) 4,900,000, plus (ii) a number of shares equal to the aggregate exercise price of the outstanding in-the-money Accent Optical stock options prior to closing (other than options granted after January 23, 2006), divided by the Average Closing Price, plus (iii) shares of Nanometrics common stock issuable upon exercise of the Accent Optical stock options granted on or after January 23, 2006 (at the same conversion ratio as the Accent Optical in-the-money options). Of the total shares issued to Accent Optical stockholders at closing, Nanometrics will deposit approximately 490,000 shares of common stock into an escrow account that will be available to compensate Nanometrics if it is entitled to indemnification under the merger agreement. Based upon the Average Closing Price of Nanometrics common stock as of June 6, 2006, the value of the 490,000 escrow shares is \$5,311,600. Upon closing, Nanometrics will have an immediate claim on the escrow for a number of shares equal to (x) the Accent Optical transaction costs that exceed \$4.2 million, which excess is currently estimated to be approximately \$950,000, divided by (y) the Average Closing Price.

The maximum number of shares of common stock Nanometrics would issue and reserve for issuance upon the exercise of assumed options is approximately 5,212,286 shares, assuming that the Average Closing Price is equal to \$15.63, which would result in the Accent Optical stockholders holding approximately 27% of the fully diluted shares of Nanometrics common stock immediately after the merger, and the Nanometrics shareholders holding approximately 73% of the fully diluted shares of Nanometrics common stock immediately after the merger. For comparison purposes, the Average Closing Price for the 10 trading days ending on June 6, 2006 was \$10.84 per share, which would have resulted in the issuance, or reservation for issuance upon the exercise of assumed options, of approximately 5,138,282 shares of Nanometrics common stock had the merger closed two days following June 6, 2006.

Nanometrics will not issue fractional shares of its common stock in the merger. As a result, each Accent Optical stockholder will receive cash in lieu of any fractional share of Nanometrics common stock the stockholder would otherwise be entitled to receive in the merger.

Table of Contents*Allocation of Merger Consideration among Accent Optical Stockholders (See page 86)*

Accent Optical has three classes of capital stock outstanding. Each class of Accent Optical capital stock will receive a portion of the total merger consideration, which will consist solely of a specified number of shares of Nanometrics common stock and cash in lieu of fractional shares, if any. Each class of Accent Optical capital stock will be converted into Nanometrics common stock at a different exchange ratio in the merger. The following table shows the calculation of the per share exchange ratios for each class of Accent Optical capital stock subject to the escrow:

Class	Per Share Exchange Ratio	Estimate if	Estimated Value
		Average Closing Price is	
Series A Preferred	\$1,000.00 / Average Closing Price	\$10.84 92.250923	Per Share \$ 1,000.00
Convertible Preferred Stock	\$1.13 / Average Closing Price	0.1042	\$ 1.13
Common Stock	((4,900,000 shares (as adjusted for additional shares issued for in-the-money options) minus shares issued to Accent Optical Series A Preferred Stock minus shares issued to Accent Optical Convertible Preferred Stock)) divided by (total outstanding Accent Optical Common Stock plus in-the-money options (other than options issued on or after January 23, 2006))	0.02233	\$ 0.2421

The amounts receivable by the holders of Accent Optical Series A Preferred Stock and Convertible Preferred Stock are less than the preferences and accrued dividends payable to such holders under Accent Optical's certificate of incorporation. The allocation of consideration was structured so that the merger would provide benefit to all Accent Optical stockholders and to provide incentive for the holders of Accent Optical Common Stock to approve the merger.

Because the final exchange ratios are based on the Average Closing Price for the ten days ending two days prior to closing, they cannot be determined until immediately prior to the closing date of the merger.

Issuance of the merger consideration will be made to holders of Accent Optical Series A Preferred Stock and Convertible Preferred Stock (collectively, the Accent Optical Preferred Stock) on a *pari passu* basis. If the value of the shares of Nanometrics common stock issuable in the merger is insufficient to provide \$1,000 of Nanometrics common stock for each share of Series A Preferred Stock and \$1.13 of Nanometrics common stock for each share of Convertible Preferred Stock, then the available merger consideration will be prorated, and holders of Accent Optical Common Stock and options will receive no consideration in the merger.

Table of Contents

The following table shows the approximate dollar value that will be received for one share of Accent Optical Common Stock, one share of Series A Preferred Stock and one share of Convertible Preferred Stock based on varying average closing prices for Nanometrics stock. The amounts shown take into account the reduction in the purchase price resulting from the amount that Accent Optical transaction expenses exceed the limit provided for in the merger agreement of \$4.2 million. Transaction expenses are currently expected to be approximately \$5.15 million resulting in an immediate claim against the escrow of \$950,000.

Average Closing Price	Value Received for One		
	Share of Accent Optical	Share of Accent Optical Series A Preferred	Share of Accent Optical Convertible Preferred
	Common Stock	Stock	Stock
\$ 3.00	\$ 0.000	\$ 753.629	\$ 0.851
\$ 5.00	\$ 0.037	\$ 1,000.000	\$ 1.130
\$ 7.00	\$ 0.105	\$ 1,000.000	\$ 1.130
\$ 9.00	\$ 0.174	\$ 1,000.000	\$ 1.130
\$11.00	\$ 0.241	\$ 1,000.000	\$ 1.130
\$13.00	\$ 0.307	\$ 1,000.000	\$ 1.130
\$15.00	\$ 0.373	\$ 1,000.000	\$ 1.130
\$17.00	\$ 0.438	\$ 1,000.000	\$ 1.130
\$19.00	\$ 0.503	\$ 1,000.000	\$ 1.130

Treatment of Accent Optical Stock Options (See page 88)

At the closing of the merger, Nanometrics will assume each outstanding option to acquire shares of Accent Optical Common Stock that is in-the-money or that was granted on or after January 23, 2006, regardless of whether such option is in-the-money. An option will be in-the-money if the per share exercise price for the option is less than the value of Nanometrics common stock that the holder of one share of Accent Optical Common Stock would be entitled to receive in the merger.

Each assumed option will be converted into an option to purchase the number of Nanometrics shares that would have been issuable in exchange for the number of Accent Optical shares subject to the assumed option, had such shares been outstanding at the closing of the merger. The exercise price of such assumed options will be adjusted such that the aggregate exercise price for the option remains constant.

In addition, if the employment or service relationship of the holder of any assumed options or Accent Optical Common Stock that is subject to vesting is terminated within six months following the completion of the merger, other than by Accent Optical or its successor for cause or by the holder without good reason, the vesting of the options or shares held by such holder will accelerate in full. Each assumed option will be subject to all other terms and conditions set forth in the applicable documents evidencing the option immediately prior to the closing of the merger.

As of June 6, 2006, options to purchase approximately 13,259,343 shares of Accent Optical Common Stock were outstanding and either in-the-money (based upon the Average Closing Price, had the merger closed two days following June 6, 2006), or granted on or after January 23, 2006.

Nanometrics has agreed to file, within 15 business days after completion of the merger, a registration statement on Form S-8 with the SEC covering shares of Nanometrics common stock issuable in connection with the assumed options. As a result, all shares of Nanometrics common stock issuable upon exercise of assumed options will be freely transferable as long as the registration statement remains effective.

Table of Contents

All Accent Optical options that are not in-the-money (and which were not granted on or after January 23, 2006) will be out-of-the-money at the closing of the merger and will terminate if not exercised prior to the closing. The options that are not assumed by Nanometrics will vest in full as of the closing date of the merger in full, pursuant to the terms of the Accent Optical stock incentive plan, immediately prior to their termination. As of June 6, 2006, options to purchase approximately 3,268,874 shares of Accent Optical Common Stock were outstanding and out-of-the-money (based upon the Average Closing Price, had the merger closed two days following June 6, 2006). If the Average Closing Price is equal to or greater than \$15.63, then all outstanding stock options of Accent Optical will be assumed in the merger.

Non-Solicitation Restrictions (See page 93)

The merger agreement, as amended, contains detailed provisions that prohibit Accent Optical and its subsidiaries, as well as its officers, directors and representatives, from taking any action to solicit or engage in discussions or negotiations with any person or group with respect to certain types of alternative acquisition proposals.

Conditions to Completion of Merger (See page 96)

Under the terms of the merger agreement, as amended, Nanometrics and Accent Optical are not required to complete the merger until the following conditions have been satisfied:

the registration statement filed with the Securities and Exchange Commission (the SEC) with respect to the shares of Nanometrics common stock to be issued in connection with the merger has been declared effective by the SEC;

the Nanometrics shareholders have approved the issuance of shares of Nanometrics common stock in the merger, and the Accent Optical stockholders have approved the merger agreement, as amended, and the merger as well as certain other items included in the Notice of the Accent Optical Special Meeting of Stockholders including the escrow agreement and appointment of the stockholder agent;

any applicable waiting periods have expired or the parties have received all clearances, consents and approvals necessary for completion of the merger under United States and foreign antitrust laws;

the absence of any legal restraints or prohibitions preventing the completion of the merger;

the authorization for listing on the Nasdaq National Market of the shares of Nanometrics common stock to be issued in the merger;

the delivery to each party of tax opinions of legal counsel to the effect that the merger will qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code;

the representations and warranties of each party contained in the merger agreement, as amended, are true and correct, except to the extent that breaches of these representations and warranties would not result in a material adverse effect on the representing party;

each party has performed or complied in all material respects with all agreements and covenants contained in the merger agreement at the completion of the merger; and

Edgar Filing: NANOMETRICS INC - Form S-4/A

the absence of events or developments since the date of the merger agreement that would reasonably be expected to have a material adverse effect with respect to either party.

Either Nanometrics or Accent Optical may waive the conditions to the performance of its respective obligations under the merger agreement, as amended, and complete the merger even though one or more of these conditions has not been met.

Table of Contents

Termination Rights and Fees (See page 98)

Under circumstances specified in the merger agreement, as amended, either Nanometrics or Accent Optical may terminate the merger agreement, as amended, subject to the limitations set forth in the merger agreement, if:

the Boards of Directors of both Nanometrics and Accent Optical mutually consent in writing;

the merger is not completed by July 31, 2006;

a non-appealable final order of a court or other action of any governmental authority has the effect of permanently prohibiting completion of the merger;

the required approval of the shareholders of Nanometrics and the stockholders of Accent Optical has not been obtained at their respective special meetings; or

the other party breaches its representations, warranties or covenants in the merger agreement, as amended, such that its conditions to completion of the merger regarding representations, warranties or covenants would not be satisfied.

If the merger is not completed under because the Nanometrics shareholders have not approved the issuance of Nanometrics common stock or the Accent Optical stockholders have not approved the matters set forth in the Notice of Special Meeting of Accent Optical Stockholders, then Nanometrics or Accent Optical, respectively, will be required to pay the other \$5 million, plus expenses.

Accounting Treatment of the Merger (See page 82)

Nanometrics will account for the merger as a purchase business combination under United States generally accepted accounting principles.

Voting Agreements

Nanometrics Voting Agreements (See page 99)

Each of the directors and officers of Nanometrics has entered into a voting agreement with Accent Optical, agreeing to vote all of his respective shares of Nanometrics common stock, including shares of Nanometrics common stock acquired after the date of the voting agreements, in favor of the Nanometrics proposal related to the merger, including approval of the merger agreement, as amended, and any action required to further the merger.

Each of these shareholders has also granted to Accent Optical an irrevocable proxy to vote the shares of Nanometrics common stock subject to the voting agreements in accordance with its terms. The voting agreements and irrevocable proxies terminate upon the earlier of the termination of the merger agreement, as amended, or the effective time of the merger.

At the close of business on January 25, 2006, the parties to the Nanometrics voting agreements and their affiliates owned and were entitled to vote 4,024,815 shares of Nanometrics common stock, collectively representing approximately 30.9% of the shares of Nanometrics common stock outstanding on that date. As of the record date for the Nanometrics special meeting, the parties to the Nanometrics voting agreement and their affiliates owned and were entitled to vote 4,046,141 shares of Nanometrics common stock, collectively representing approximately 31% of the shares of Nanometrics common stock outstanding on that date.

The voting agreements prohibit the signing shareholders from selling or disposing of any shares or options of Nanometrics common stock beneficially owned by the signing shareholders, unless the transferee agrees to be bound by the terms and conditions of the voting agreement. A form of the Nanometrics voting agreement is attached to this joint proxy statement/prospectus as Annex B-1.

Table of Contents

Accent Optical Voting Agreements (See page 100)

Certain Accent Optical directors, officers and their affiliated entities and certain other affiliates of Accent Optical have entered into a voting agreement with Nanometrics and Alloy Merger Corporation, agreeing to vote all of their respective shares of Accent Optical capital stock, including shares of Accent Optical capital stock acquired after the date of the voting agreements, in favor of the Accent Optical merger-related proposals including the adoption and approval of the merger agreement, as amended. Some of the voting agreements included certain conditions on the holder's obligation to vote the holder's shares related to the terms of the merger agreement, as amended.

Each of these stockholders has also granted to Nanometrics an irrevocable proxy to vote the shares of Accent Optical capital stock subject to the voting agreements in accordance with its terms. The voting agreements and irrevocable proxies terminate upon the earlier of the termination of the merger agreement, as amended, the closing of the merger or 12 months after the date of the agreement. The voting agreements originally contained the agreement of each of these stockholders to vote the holder's shares in favor of the approval of certain payments to Accent Optical executive officers pursuant to Section 280G of the Internal Revenue Code. Nanometrics and Alloy Merger Corporation subsequently waived this requirement.

At the close of business on January 25, 2006, and as of the record date for the Accent Optical special meeting, _____, these stockholders and their affiliates beneficially owned and were entitled to vote 124,193,172 shares of Accent Optical Common Stock, collectively representing approximately 87.9% of the shares of Accent Optical Common Stock outstanding on that date; 8,396.77 shares of Accent Optical Series A Preferred Stock, collectively representing approximately 88.9% of the shares of Accent Optical Series A Preferred Stock outstanding on that date; and 5,036,584 shares of Accent Optical Convertible Preferred Stock, collectively representing approximately 64.7% of the shares of Accent Optical Convertible Preferred Stock outstanding on that date.

The voting agreements prohibit the signing stockholders from selling or disposing of any shares or options of Accent Optical capital stock beneficially owned by the signing stockholders without the prior written consent of Nanometrics. A form of the Accent Optical voting agreement is attached to this joint proxy statement/prospectus as Annex B-2.

Escrow Agreement (See page 102)

Pursuant to the merger agreement, as amended, approximately 490,000 shares of Nanometrics common stock deliverable as consideration in the merger will be withheld and deposited with U.S. Stock Transfer Corporation to hold in an escrow fund in order to secure Accent Optical's and its former stockholders' performance of indemnification obligations under Article IX of the merger agreement, as amended.

Upon closing, Nanometrics will have an immediate claim on the escrow for a number of shares equal to the Accent Optical transaction costs that exceed \$4.2 million, which excess is currently anticipated to be approximately \$950,000, divided by the Average Closing Price. Based on the Average Closing Price for the ten trading days ending on June 6, 2006, \$10.84, the value of the shares to be placed in escrow would be \$5,311,600.

In connection with the execution of the merger agreement, Nanometrics, Alloy Merger Corporation, Sanford S. Wadler, as Stockholder Agent, and U.S. Stock Transfer, as Depositary Agent, entered into an escrow agreement setting forth additional terms and conditions relating to the operation of the escrow fund and the indemnification claim procedures. The full text of the escrow agreement is attached as Annex F.

Table of Contents

Employment and Severance Agreements

Employment Agreement (See page 102)

Bruce C. Rhine, Accent Optical's Chairman and Chief Executive Officer, has entered into an employment agreement with Nanometrics, pursuant to which Mr. Rhine will become the Chief Strategy Officer of Nanometrics following the merger. He will receive a base salary of \$250,000, standard Nanometrics employee benefits and paid vacation. In connection with his employment, Mr. Rhine has agreed to certain non-competition and non-solicitation provisions, described under *Agreements Related to the Merger Employment Agreement*.

Executive Officer Retention and Severance Arrangements (See page 77)

Reid Langrill. In connection with the merger, Accent Optical entered into an agreement with Reid Langrill, its Chief Financial Officer, which provides for Mr. Langrill's continued employment with Accent Optical or its successors through the completion of the merger and up to 30 days thereafter. During his period of employment, he will continue to earn his regular salary. Upon his termination, he will receive a severance payment equal to the greater of either \$185,000 or the difference between \$500,000 and the value of Mr. Langrill's options that are in-the-money as of the completion of the merger, subject to withholding. Following his termination, Mr. Langrill has agreed to provide consulting services to Nanometrics through March 31, 2007, subject to earlier termination, for an hourly rate and reimbursement of expenses.

Bruce Crawford. Accent Optical entered into an employment agreement with Bruce Crawford, upon commencement of his role as President and Chief Operating Officer, which provides for certain severance benefits if Accent Optical terminates Mr. Crawford's employment without good cause or Mr. Crawford terminates his employment for good reason during the five-year term of the agreement. Upon such termination, Mr. Crawford is entitled to receive a lump-sum payment of his annual salary (currently \$213,000), continued group health or other group benefits as allowed under the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) for a period of 12 months (with a potential gross-up for taxes arising from the provision of such benefits) and reimbursement of relocation expenses up to \$50,000. See *The Merger Interests of Accent Optical Directors and Executive Officers in the Merger Executive Officer Retention and Severance Arrangements*.

Proposal Two Payments to Executives (See page 161)

The merger will constitute a change in the ownership or effective control of Accent Optical for purposes of Section 280G. Pursuant to Section 280G, payments of compensation made to a disqualified individual that are contingent on a change in the ownership or effective control of a corporation and that exceed a threshold amount applicable to that particular disqualified individual may be characterized as excess parachute payments. Excess parachute payments are not deductible as a business expense by a corporation, and subject the recipient of such payments to a 20% excise tax (in addition to applicable federal and state income and employment taxes), unless such payments are approved by the requisite approval of the stockholders of the corporation.

Accent Optical has determined that Bruce C. Rhine, its Chairman and Chief Executive Officer, Bruce Crawford, its President and Chief Operating Officer, and Reid Langrill, its Chief Financial Officer, may be treated as disqualified individuals for purposes of Section 280G and that a portion of the potential parachute payments may be treated as excess parachute payments. The board of directors of Accent Optical has unanimously approved the potential excess parachute payments to Messrs. Rhine, Crawford and Langrill. These payments consist of severance payments, option grants and the value of options that could be accelerated due to the executive officer's termination in connection with the merger. All holders of shares of outstanding capital stock of Accent Optical as of [], 2006 (other than shares held directly or indirectly by Messrs. Rhine, Crawford and Langrill) are being asked to approve the potential parachute payments. Messrs. Rhine, Crawford and Langrill have agreed to waive that portion of their respective potential parachute payments in

Table of Contents

excess of the threshold that would cause such payments to be characterized as excess parachute payments in the event shareholder approval is not obtained. If approval is obtained by a vote of the Accent Optical stockholders holding more than 75% of the voting power of all outstanding capital stock of Accent Optical entitled to vote, then Messrs. Rhine, Crawford and Langrill will each be entitled to receive the full amount of their respective potential parachute payments estimated to be \$415,000, \$382,000 and \$395,000, respectively, at an average closing price of Nanometrics common stock of \$10.84. At an average closing price of Nanometrics common stock of \$10.84, only Mr. Langrill would have potential parachute payments exceeding the threshold and if shareholder approval is obtained, Mr. Langrill will be entitled to receive approximately \$49,000 which he would otherwise have forfeited in the absence of shareholder approval. No Accent Optical stockholder is obligated to vote in any manner with respect to the potential parachute payments, thus, approval of the potential parachute payments is not assured.

Opinion of Nanometrics Financial Advisor *(See page 65)*

Cowen delivered its opinion to the board of directors of Nanometrics that, as of January 25, 2006, the consideration to be paid in the merger was fair, from a financial point of view, to Nanometrics.

The full text of the Cowen opinion is attached hereto as Annex C. You are urged to read the opinion carefully in its entirety.

Opinion of Accent's Optical Financial Advisor *(See page 70)*

Merrill Lynch delivered its opinion to the board of directors of Accent Optical that, as of January 24, 2006, the aggregate consideration to be paid in the merger was fair, from a financial point of view, to the holders of Accent Optical capital stock.

The full text of the Merrill Lynch opinion is attached hereto as Annex D. You are urged to read the opinion carefully in its entirety.

Interests of Certain Directors, Officers and Affiliates of Accent Optical *(See page 76)*

Members of the Accent Optical board of directors and Accent Optical executive officers have interests in the merger that may be different than, or in addition to, the interests of Accent Optical stockholders generally. These interests include:

the appointment of Bruce C. Rhine, a director and the current Chief Executive Officer of Accent Optical, as a director and Chief Strategy Officer of Nanometrics following the merger, for which he will receive a base salary of \$250,000 per year, standard Nanometrics employee benefits and paid vacation;

an agreement between Accent Optical and Reid Langrill, its Chief Financial Officer, which provides for Mr. Langrill's continued employment at his regular salary with Accent Optical or its successors through the completion of the merger and up to 30 days thereafter; receipt of a severance payment, upon his termination, equal to the greater of either \$185,000 or the difference between \$500,000 and the value of Mr. Langrill's options that are in-the-money as of the completion of the merger, subject to withholding; and, following Mr. Langrill's termination as Chief Financial Officer of Accent Optical, for Mr. Langrill to provide consulting services to Nanometrics through March 15, 2007, subject to earlier termination, at a rate of \$105 per hour and reimbursement of expenses;

the potential receipt of severance benefits by Bruce Crawford, Accent Optical's President and Chief Operating Officer, if Accent Optical terminates Mr. Crawford's employment without good cause or Mr. Crawford terminates his employment for good reason during the five-year term of his employment agreement, including a lump-sum payment in the amount of his annual salary (currently \$213,000),

Table of Contents

continued group health or other group benefits as allowed under the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA) for a period of 12 months with a potential gross-up for taxes arising and reimbursement of relocation expenses up to \$50,000;

the receipt of option grants in connection with the merger by Accent Optical officers, for an aggregate of 5,522,000 shares of Accent Optical Common Stock, which will be assumed by Nanometrics;

the acceleration of vesting of assumed options of officers and directors if their employment is terminated in connection with the merger (options to purchase 8,281,596 shares of Accent Optical Common Stock held by Accent Optical officers and directors are expected to be assumed, based on the Average Closing Price as of June 6, 2006, of which options to purchase 1,997,723 shares of Accent Optical Common Stock are unvested as of June 6, 2006);

the continued indemnification following the merger of the current Accent Optical directors and officers for acts or omissions occurring prior to the closing of the merger;

the receipt by Bio-Rad, a company affiliated with Accent Optical director David Schwartz, of approximately \$12.0 million as repayment of a loan and a contractual fee of \$2.5 million (related to the 2000 asset purchase from Bio-Rad to form Accent Optical), each in connection with the closing of the merger; and

the re-allocation of the merger consideration so that holders of Accent Optical Common Stock can receive more of the merger consideration than they originally would have been entitled to, which benefits the directors and officers who hold Accent Optical Common Stock.

The Accent Optical board of directors was aware of these interests and considered them, among other matters, in making its recommendation that Accent Optical stockholders approve the merger agreement, as amended, the merger and the related transactions and certain payments to executive officers.

Material U.S. Federal Income Tax Consequences of the Merger

Nanometrics and Accent Optical each expect the merger to qualify as a reorganization pursuant to Section 368(a) of the Internal Revenue Code for U.S. federal income tax purposes. Assuming that the merger so qualifies, Accent Optical stockholders will not recognize gain or loss for United States federal income tax purposes as a result of the merger, other than gain or loss attributable to cash received by Accent Optical stockholders instead of fractional shares. It is a condition to the merger that each of Nanometrics and Accent Optical receive a legal opinion to the effect that the merger will constitute a reorganization within the meaning of Section 368(a) of the Internal Revenue Code. The tax consequences of the merger to Accent Optical stockholders may vary depending upon each such stockholder's situation. Each Accent Optical stockholder is urged to consult its own tax advisors with respect to the tax consequences of the merger. Please see *Material United States Federal Income Tax Consequences of the Merger*, beginning on page 80 for more information.

Ability to Sell Nanometrics Common Stock

Listing of Nanometrics Common Stock (See page 84)

Nanometrics will apply to have the shares of Nanometrics common stock to be issued in the merger to holders of Accent Optical capital stock approved for listing on the Nasdaq National Market.

Restrictions on Sales of Certain Shares of Nanometrics Common Stock Received in the Merger (See page 85)

The Nanometrics common shares that Accent Optical stockholders receive in the merger will be freely transferable, except that shares received by persons who are deemed to be affiliates of Accent Optical under SEC rules and regulations will be subject to certain resale restrictions.

Table of Contents

In addition, certain Accent Optical stockholders have executed shareholder agreements imposing restrictions on their disposition of shares of Nanometrics common stock received in connection with the merger. These restrictions continue for a period of 24 months following the merger for some of these stockholders or a period of 12 months following the merger for others.

Regulatory Approval *(See page 82)*

The merger is not subject to review by the Department of Justice and the FTC under the HSR Act. However, the Department of Justice, the FTC, or other United States or foreign governmental authorities could challenge or seek to block the merger under the antitrust laws, at any time, even after completion of the merger. Moreover, in some jurisdictions, a competitor, customer or other third party could initiate a private action under the antitrust laws challenging or seeking to enjoin the merger, either before or after it is completed.

Appraisal Rights *(See page 82)*

Nanometrics shareholders are not entitled to appraisal rights in connection with the merger. Accent Optical stockholders have the right under Delaware law to dissent from the adoption and approval of the merger agreement, as amended, to exercise appraisal rights and to receive payment in cash for the fair value of their shares of Accent Optical stock, determined in accordance with Delaware law.

Comparison of Shareholder Rights *(See page 147)*

Accent Optical stockholders receiving shares of Nanometrics common stock in the merger will have different rights once they become Nanometrics shareholders. These differences are described in detail under the heading *Comparison of Rights of Holders* on page 147.

Table of Contents**Summary Selected Historical Financial Data**

Nanometrics and Accent Optical are providing the following information to aid you in your analysis of the financial aspects of the merger.

Nanometrics

Nanometrics has derived the following historical information from its audited consolidated financial statements as of December 31, 2005, January 1, 2005, January 3, 2004, December 28, 2002 and December 29, 2001 and for each of the fiscal years then ended and from its unaudited consolidated financial statements as of April 1, 2006 and for each of the three month periods ended April 1, 2006 and April 2, 2005. The information is only a summary and should be read in conjunction with Nanometrics consolidated financial statements, accompanying notes and management's discussion and analysis of results of operations and financial condition incorporated by reference into this joint proxy statement/prospectus.

	Three Months Ended		Year Ended				
	April 1, 2006	April 2, 2005	December 31, 2005	January 1, 2005	January 3, 2004 ⁽²⁾	December 28, 2002	December 29, 2001 ⁽¹⁾
Consolidated Statement of Operations Data:							
Net revenues:							
Products	\$ 15,972	\$ 21,010	\$ 61,012	\$ 62,147	\$ 34,592	\$ 28,669	\$ 42,653
Service	2,996	2,340	9,531	7,784	7,010	6,054	4,931
Total net revenues	18,968	23,350	70,543	69,931	41,602	34,723	47,584
Costs and expenses:							
Cost of products	7,909	9,732	29,173	27,812	17,691	13,237	17,949
Cost of service	2,534	2,573	10,695	8,404	6,620	5,765	5,406
Research and development	2,528	3,179	12,533	12,827	13,399	13,765	10,760
Selling	3,102	3,143	10,945	11,748	11,496	10,862	9,523
General and administrative	4,550	1,998	11,882	5,137	4,689	5,104	4,177
Merger termination fee			(8,300)				
Asset impairment			2,232			1,077	
Total costs and expenses	20,623	20,625	69,160	65,928	53,895	49,810	47,815
Income (loss) from operations	(1,655)	2,725	1,383	4,003	(12,293)	(15,087)	(231)
Interest income	332	130	998	276	397	583	2,576
Interest expense	(13)	(18)	(73)	(110)	(96)	(94)	(86)
Other, net	35	(270)	(579)	(44)	385	100	(517)
Total other income (expense), net	354	(158)	346	122	686	589	1,973
Income (loss) before provision (benefit) for income taxes	(1,301)	2,567	1,729	4,125	(11,607)	(14,498)	1,742
Provision (benefit) for income taxes	21	83	218	426	5,860⁽³⁾	(6,230)	782
Net income (loss)⁽¹⁾	\$ (1,322)	\$ 2,484	\$ 1,511	\$ 3,699	\$ (17,467)	\$ (8,268)	\$ 960
Net income (loss) per share:							
Basic	\$ (0.10)	\$ 0.20	\$ 0.12	\$ 0.30	\$ (1.45)	\$ (0.70)	\$ 0.08
Diluted	\$ (0.10)	\$ 0.18	\$ 0.11	\$ 0.28	\$ (1.45)	\$ (0.70)	\$ 0.08
Shares used in per share computation:							
Basic	13,018	12,575	12,760	12,320	12,043	11,878	11,691
Diluted	13,018	13,455	13,471	13,364	12,043	11,878	12,161

Edgar Filing: NANOMETRICS INC - Form S-4/A

-
- (1) Nanometrics adopted Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets* (SFAS 142), effective January 1, 2002. Included in the net income for the year ended December 29, 2001 was \$68 for amortization of goodwill, net of tax.
 - (2) The fiscal year ended January 3, 2004 included 53 weeks, whereas the other periods presented include 52 weeks.
 - (3) The income tax provision for the fiscal year ended January 3, 2004 includes a charge of \$6,020 to record a valuation allowance against deferred income tax assets.

Table of Contents

	As of					
	December 31, April 1, 2006	December 31, 2005	January 1, 2005	January 3, 2004	December 28, 2002	December 29, 2001
Balance Sheet Data:						
Cash, cash equivalents and short term investments	\$ 33,915	\$ 45,394	\$ 33,868	\$ 29,892	\$ 36,866	\$ 47,227
Working capital	70,046	76,731	68,588	59,587	74,776	80,171
Total assets	138,048	136,300	133,769	121,740	134,688	142,355
Long-term liabilities including current portion	1,951	1,796	4,164	4,350	4,761	3,942
Total shareholders' equity	120,362	120,343	116,829	108,441	124,106	129,845

Accent Optical

Accent Optical has derived the following historical information from its audited consolidated financial statements as of December 31, 2005, 2004, 2003, 2002 and 2001 and for each of the fiscal years then ended and from its unaudited consolidated financial statements as of April 1, 2006 and for each of the three month periods ended April 1, 2006 and April 2, 2005. The information is only a summary and should be read in conjunction with Accent Optical's consolidated financial statements and accompanying notes and management's discussion and analysis of results of operations and financial condition included in this joint proxy statement/prospectus.

	Three Months Ended		Year Ended December 31,				
	April 1, 2006	April 2, 2005	2005	2004	2003	2002	2001
(in thousands, except per share amounts)							
Consolidated Statement of Operations Data:							
Total revenues							
Product	\$ 8,210	\$ 10,872	\$ 33,911	\$ 33,512	\$ 28,078	\$ 30,402	\$ 63,409
Services	1,855	1,694	7,963	8,529	9,477	7,774	6,583
Total revenues	10,065	12,566	41,874	42,041	37,555	38,176	69,992
Cost of revenues:							
Product	3,688	5,738	16,742	15,885	14,103	16,219	26,696
Services	1,251	1,206	5,453	5,282	4,698	4,057	4,599
Total cost of revenues	4,939	6,944	22,195	21,167	18,801	20,276	31,295
Gross profit	5,126	5,622	19,679	20,874	18,754	17,900	38,697
Research and development	1,918	2,199	8,233	7,341	7,035	6,217	7,509
Selling, general and administrative	3,876	3,545	14,052	15,091	15,672	15,579	23,665
Restructuring costs		5	16	40	126	274	145
Failed initial public offering costs				991			
Amortization of acquired intangibles and goodwill ⁽¹⁾	27	159	453	637	555	1,676	3,050
Impairment of acquired intangibles					156	2,500	3,951
Total operating expenses	5,821	5,908	22,754	24,100	23,544	26,246	38,320
Income (loss) from operations	(695)	(286)	(3,075)	(3,226)	(4,790)	(8,346)	377
Interest expense	(449)	(450)	(1,839)	(1,887)	(1,676)	(1,414)	(1,347)
Other income (expense)	(237)	(23)	(211)	418	(732)	(423)	(738)
Total other expense, net	(686)	(473)	(2,050)	(1,469)	(2,408)	(1,837)	(2,085)
Loss before provision (benefit) for income taxes	(1,381)	(759)	(5,125)	(4,695)	(7,198)	(10,183)	(1,708)
Provision (benefit) for income taxes	12	27	124	93	(166)	(894)	2,696
Net loss	(1,393)	(786)	(5,249)	(4,788)	(7,032)	(9,289)	(4,404)
Cumulative dividends on preferred stock	(904)	(875)	(3,549)	(3,378)	(3,022)	(2,880)	(2,684)

Edgar Filing: NANOMETRICS INC - Form S-4/A

Accretion of beneficial conversion feature	(864)						
Net loss attributable to common stockholders	\$ (2,297)	\$ (1,661)	\$ (8,798)	\$ (9,030)	\$ (10,054)	\$ (12,169)	\$ (7,088)
Net loss per share:							
Basic	\$ (0.02)	\$ (0.01)	\$ (0.06)	\$ (0.07)	\$ (0.08)	\$ (0.10)	\$ (0.06)
Diluted	\$ (0.02)	\$ (0.01)	\$ (0.06)	\$ (0.07)	\$ (0.08)	\$ (0.10)	\$ (0.06)
Weighted average common shares:							
Basic	141,176	141,163	140,928	131,433	126,219	120,289	116,774
Diluted	141,176	141,163	140,928	131,433	126,219	120,289	116,774

Table of Contents

¹ Amortization of goodwill is included in 2001. With the adoption of Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets*, effective January 1, 2002, goodwill is no longer amortized.

	April 1, 2006	2005	2004	As of December 31,		
				2003	2002	2001
Balance Sheet Data:						
Cash, cash equivalents and short-term investments	\$ 3,239	\$ 3,589	\$ 5,120	\$ 5,508	\$ 11,239	\$ 17,273
Working capital	9,723	10,097	15,547	16,641	20,026	24,329
Total assets	30,243	27,731	34,830	33,629	40,837	56,692
Long-term debt, less current portion	11,772	11,772	13,440	14,272	14,736	15,512
Accumulated deficit	(31,759)	(30,366)	(25,117)	(20,329)	(13,297)	(4,008)
Total stockholders' equity	1,960	2,600	8,096	7,474	13,237	21,354

Table of Contents**Selected Unaudited Pro Forma Condensed Combined Financial Data**

The following selected pro forma condensed combined financial data for the year ended December 31, 2005 and for the three months ended April 1, 2006 gives effect to Nanometrics' acquisition of Accent Optical as if it had occurred on January 2, 2005, the beginning of Nanometrics' fiscal year ended December 31, 2005. The selected pro forma condensed combined financial data as of April 1, 2006 gives effect to the Accent Optical merger as if it had occurred on April 1, 2006. The pro forma combined statements of operations for the year ended December 31, 2005 and the three months ended April 1, 2006 also give effect to Nanometrics' acquisition of Soluris, Inc. as if it had occurred on January 2, 2005. The pro forma adjustments are based upon available information and assumptions that Nanometrics believes are reasonable. The selected pro forma condensed combined financial data are presented for illustrative purposes only. The companies may have performed differently had they always been combined. Stockholders should not rely on this information as being indicative of the historical results that would have been achieved had the companies always been combined or the future results that the combined company would experience after the merger.

The pro forma adjustments are based upon certain assumptions and preliminary available information that Nanometrics believes are reasonable under the circumstances. This data is not intended to represent or be indicative of the consolidated results of operations or financial condition of Nanometrics that would have been reported had the merger been completed as of the dates presented, and should not be taken as representative of future consolidated results of operations or financial condition of Nanometrics. A final determination of fair values relating to the merger, which cannot be made prior to the completion of the merger, may differ materially from the preliminary estimates and will include management's final valuation of the fair value of assets acquired and liabilities assumed. This final valuation will be based on the actual net tangible and identifiable intangible assets of Accent Optical that exist as of the date of the completion of the merger, the final number of shares issued associated with the aggregate merger consideration and stock options assumed. The final valuation may change the allocations of the purchase price, which could affect the fair value assigned to the assets and liabilities and could result in a change to the unaudited pro forma condensed combined financial statements data. The pro forma adjustments are more fully described in the notes to the unaudited pro forma condensed combined financial statements found elsewhere in this document.

The selected pro forma condensed combined financial data (i) have been derived from and should be read in conjunction with the unaudited pro forma condensed combined financial statements and accompanying notes included in this joint proxy statement/prospectus as described under *Unaudited Pro Forma Condensed Combined Financial Statements* beginning on page 104, and (ii) should be read in conjunction with the consolidated financial statements of Nanometrics and Accent Optical and other information filed by Nanometrics with the SEC and incorporated by reference into this joint proxy statement/prospectus (in thousands, except per share amounts).

	Three Months Ended April 1,	Year Ended December 31,
	2006	2005
Income Statement Data:		
Net revenues	\$ 30,148	\$ 121,090
Loss from operations	\$ (3,172)	\$ (5,775)
Net loss	\$ (3,585)	\$ (7,818)
Net loss per share		
Basic	\$ (0.21)	\$ (0.46)
Diluted	\$ (0.21)	\$ (0.46)

Table of Contents

	Three Months Ended April 1, 2006	Year Ended December 31, 2005 As of April 1, 2006
Balance Sheet Data:		
Working capital		\$ 63,223
Total assets		\$ 237,928
Total long-term debt, including current portion		\$ 15,677
Stockholders' equity		\$ 187,301

Comparative Per Share Information

The following tables set forth historical per share information of Nanometrics, adjusted to give pro forma effect to the purchase of Soluris as if that transaction had occurred on January 2, 2005, and historical per share information of Accent Optical and unaudited pro forma condensed combined per share information after giving effect to the Accent Optical merger and the Soluris acquisition under the purchase method of accounting, based on an average price per share, for the period beginning two trading days before and ending two trading days after the merger was announced, of Nanometrics common stock of \$13.87. The unaudited pro forma combined financial data are not necessarily indicative of the financial position had the merger occurred on April 1, 2006, or operating results that would have been achieved had the merger been in effect as of January 2, 2005 and should not be construed as representative of future financial position or operating results. The unaudited pro forma condensed combined per share information is derived from, and should be read in conjunction with, the unaudited pro forma condensed combined financial statements and accompanying notes included in this joint proxy statement/prospectus as described under *Unaudited Pro Forma Condensed Combined Financial Statements* beginning on page 104. The historical per share information is derived from the audited financial statements as of and for the year ended December 31, 2005 for Nanometrics and Accent Optical and from the unaudited financial statements for the three months ended April 1, 2006 for Nanometrics and Accent Optical.

	Historical		Pro Forma	
	Pro Forma	Accent	Pro Forma	Optical
	Nanometrics	Optical	Combined (2)	Common Share (3)
Net loss per common share:				
Year ended December 31, 2005				
Basic	\$ (0.04)	\$ (0.06)	\$ (0.46)	\$ (0.01)
Diluted	\$ (0.04)	\$ (0.06)	\$ (0.46)	\$ (0.01)
Net loss per common share:				
Three months ended April 1, 2006				
Basic	\$ (0.15)	\$ (0.02)	\$ (0.21)	\$ (0.00)
Diluted	\$ (0.15)	\$ (0.02)	\$ (0.21)	\$ (0.00)
Weighted average shares used to compute net loss per common share (in thousands):				
Year ended December 31, 2005				
Basic	12,760	140,928	17,067	
Diluted	12,760	140,928	17,067	
Three months ended April 1, 2006				
Basic	13,018	141,176	17,325	

Edgar Filing: NANOMETRICS INC - Form S-4/A

Diluted	13,018	141,176	17,325	
Book value per common share:				
April 1, 2006	\$ 9.23	\$ (0.29) ⁽¹⁾	\$ 10.54	\$ 0.26
April 1, 2006 shares used in computing (in thousands):				
Book value	13,033	141,374	17,769	

Table of Contents

- (1) The historical Accent Optical book value per share was calculated by dividing total stockholders' equity as of April 1, 2006, less liquidation preferences of \$42,542,297 to the Series A Preferred shareholders and the Convertible Preferred shareholders, by total common shares outstanding.
- (2) The combined pro forma data includes the effect of the merger on the basis as described in the notes to the unaudited pro forma combined financial information included elsewhere in this document.
- (3) The Pro Forma Equivalent of One Accent Optical Common Share amount was determined by dividing the pro forma Nanometrics and Accent Optical combined company net loss and total stockholders' equity by the equivalent Accent Optical common shares outstanding. Equivalent Accent Optical common shares outstanding was determined by dividing the total shares outstanding of the pro forma combined company by the ratio of Nanometrics shares issued to Accent Optical common stockholders to total Nanometrics pro forma shares outstanding after closing.

The unaudited pro forma condensed combined financial statements have been prepared by Nanometrics and Accent Optical for illustrative purposes only and are not necessarily indicative of the condensed consolidated financial position or results of operations in future periods or the results that actually would have been realized had Nanometrics and Accent Optical been a combined company during the specified periods. The pro forma adjustments are based on the preliminary information available at the time of the preparation of this document. The unaudited pro forma condensed combined financial statements, including the notes thereto, should be read in conjunction with, Nanometrics' historical consolidated financial statements included in its Annual Report on Form 10-K for the year ended December 31, 2005 and Quarterly Report on Form 10-Q for the three months ended April 1, 2006, which are incorporated herein by reference, and Accent Optical's historical consolidated financial statements included elsewhere herein.

Comparative Per Share Market Price Data

Nanometrics common stock is quoted on the Nasdaq National Market and traded under the symbol NANO. The table below sets forth, for the periods indicated, the high and low sale prices per share of Nanometrics common stock. For current price information with respect to Nanometrics common stock, you are urged to consult publicly available sources. No assurance can be given as to future prices of, or markets for shares of Nanometrics common stock.

	Per Share of Nanometrics	
	High	Low
2006		
First Quarter	\$ 15.71	\$ 10.97
Second Quarter (through June 8, 2006)	14.98	9.71
2005		
First Quarter	\$ 16.39	\$ 11.07
Second Quarter	13.35	9.81
Third Quarter	12.88	10.85
Fourth Quarter	12.01	9.87
2004		
First Quarter	\$ 23.50	\$ 13.86
Second Quarter	18.94	10.60
Third Quarter	12.20	7.50
Fourth Quarter	17.72	11.14

Table of Contents

Recent Developments

Acquisition of Soluris, Inc. On March 15, 2006, Nanometrics acquired Soluris, Inc., an overlay metrology company headquartered in Concord, Massachusetts. Total consideration to purchase all the outstanding stock of Soluris was \$6.9 million in an all-cash transaction.

Acceleration of Working Capital Loan. Pursuant to the merger agreement, Nanometrics agreed to provide Accent Optical with a working capital loan in the aggregate amount of \$2,500,000, payable in two equal installments of \$1,250,000 pursuant to a form of unsecured, subordinated, convertible promissory note as more fully described in Section 6.17 of the merger agreement. Nanometrics' obligation to provide the working capital loan arises in the event that the merger between Nanometrics and Accent Optical has not yet been consummated as of April 30, 2006 or June 30, 2006 and the merger agreement has not been terminated prior to such date.

Accent Optical is entitled to make demand for payment of the first installment of the working capital loan on or after April 30, 2006 and is also entitled to make an additional demand for payment for the second installment of the working capital loan on or after June 30, 2006. On February 23, 2006, Nanometrics' Board of Directors unanimously approved the acceleration of the initial loan date to February 24, 2006. Accordingly, Nanometrics received Accent Optical's demand for payment of a portion of the first installment of the working capital loan on March 10, 2006 and Nanometrics and Accent Optical executed the Note with an outstanding principal amount of \$1,250,000. Nanometrics accelerated a portion of the loan, in the amount of \$750,000, and disbursed such amount to Accent Optical on March 13, 2006. Subsequent to April 1, 2006, Nanometrics advanced an additional \$1,750,000 to Accent Optical.

Sales Representative Agreements. On March 13, 2006, Nanometrics and Accent Optical entered into a sales representative agreement whereby Nanometrics agreed to provide Accent Optical with the ability to act as a sales representative for Accent Optical to sell Nanometrics products in Europe in advance of the closing of the merger.

Amendment to Merger Agreement. On June 9, 2006, Nanometrics and Accent Optical entered into an amendment to the merger agreement for the purpose of extending the date by which the merger is required to be completed before either Nanometrics or Accent Optical can terminate the merger agreement and to provide for Nanometrics to fund an additional \$1,611,238 in working capital loans to Accent Optical to satisfy an interest payment due to Bio-Rad on July 9, 2006.

Table of Contents

RISK FACTORS

You should carefully consider the risks described below before deciding how to vote your shares. The business, results of operations or financial condition of Nanometrics, Accent Optical and/or the combined company following the merger could be seriously harmed if any of these risks were to materialize. Nanometrics operates in a market environment that is difficult to predict and that involves significant risks, many of which are beyond Nanometrics' control. The trading price of shares of Nanometrics common stock may also decline due to the occurrence or perceived impact of any of these risks.

Risks Relating to the Merger

Nanometrics common stock received by Accent Optical stockholders in the merger will fluctuate in value.

Nanometrics will issue and reserve for issuance upon exercise of assumed stock options a maximum of approximately 5,212,286 shares of its common stock in connection with the merger. Because the market price of Nanometrics common stock may fluctuate, the value of the per share merger consideration and the number of shares to be received by the holders of Accent Optical Common Stock and assumed options will depend upon the market price of Nanometrics common stock at the time of the closing of the merger. Holders of Accent Optical Preferred Stock have a right to receive a fixed dollar value of merger consideration per share. Because the value of the Nanometrics common stock will be determined using the Average Closing Price, which will not be known until two days prior to the closing, the number of Nanometrics shares required to pay holders of Accent Optical Preferred Stock could exhaust the available shares. If such event occurred, the holders of Accent Optical Common Stock will receive no Nanometrics shares and holders of Accent Optical Preferred Stock will divide the available Nanometrics shares in proportion to the fixed preference amounts to which they were entitled.

In addition, because the Average Closing Price will not be known until two days prior to the closing, you may not know what the per share merger consideration would be if you hold Accent Optical Common Stock or assumed options when you vote on the matters set forth in this joint proxy statement/prospectus.

Accent Optical stockholders may not receive the consideration to be held in the escrow account, and even if they do receive the shares, the value of the escrowed shares may decline.

Upon completion of the merger, Nanometrics will deposit into an escrow account approximately 490,000 shares of Nanometrics common stock, to be withheld from the shares issued at closing to holders of outstanding shares of Accent Optical capital stock, which shares will be available for a one year period to compensate Nanometrics if it is entitled to indemnification for losses due to breaches of Accent Optical's representations and warranties or other matters specified in the merger agreement, as amended. In the event shares of Nanometrics common stock are withdrawn from the escrow to satisfy a claim, the number of shares will be determined on the basis of the fair market value of the shares at the time the claim is made. As a result, if the market price for Nanometrics common stock falls between closing and the filing of a claim, the former Accent Optical stockholders may be required to forego more shares to satisfy the claim. If the total amount of claims paid or pending at the first anniversary of the closing of the merger exceeds the market value of the escrowed shares, the former Accent Optical stockholders may not receive any of the escrowed shares.

The market value of the Nanometrics common stock deposited in the escrow account may fluctuate or decrease between the time of such deposit and the time at which any escrowed amount is distributed to the Accent Optical equity holders. Accent Optical equity holders will not be compensated for fluctuations in value of the Nanometrics stock.

Some of the directors and executive officers of Accent Optical have interests and arrangements that may have affected their decisions to support or approve the merger.

The interests of some of the directors and executive officers of Accent Optical in the merger and their participation in arrangements that are different from, or are in addition to, those of Accent Optical stockholders generally, may have affected their decision to support or approve the merger.

Table of Contents

As a result, some of the directors and executive officers of Accent Optical may be more likely to recommend the merger than if they did not have these interests. These interests are described in more detail in the section of this joint proxy statement/prospectus entitled *The Merger Interests of Accent Optical Directors and Executive Officers in the Merger* beginning on page 76.

Nanometrics and Accent Optical expect to incur significant costs in connection with the merger.

Nanometrics and Accent Optical estimate that they will incur direct transaction costs of \$6.7 million in connection with the merger. Certain of Nanometrics costs will be capitalized. Nanometrics will have an immediate claim against the escrow for the portion of Accent Optical's costs that exceeds \$4.2 million. Accent Optical currently estimates this claim at \$950,000. Nanometrics and Accent Optical believe that the combined company will also incur charges to operations, but cannot reasonably estimate those costs at this time, in the quarter in which the merger is completed to reflect the costs of integrating the two companies. There can be no assurance that the combined company will not incur additional material charges in subsequent quarters to reflect additional costs associated with the merger.

The stock price and businesses of Nanometrics and Accent Optical may be adversely affected if the merger is not completed, and, under certain circumstances, Nanometrics or Accent Optical may be required to pay a termination fee.

If the merger is not completed, the trading price of Nanometrics common stock may decline to the extent that the current market prices reflect an assumption that the merger will be completed. In addition, Nanometrics' and Accent Optical's businesses and operations may be harmed to the extent that customers, suppliers and others believe that the companies cannot effectively compete in the marketplace alone, or that uncertainty exists surrounding the future direction of the product and service offerings and strategy of the companies on a stand alone basis.

Nanometrics and Accent Optical will be required to pay significant costs incurred in connection with the merger, including legal, accounting and a portion of the financial advisory fees, regardless of whether the merger is completed.

In that regard, Nanometrics has agreed to make a working capital loan to Accent Optical in two disbursements of \$1.25 million each, the first on or after April 30, 2006 and the second on or after June 30, 2006. However, Nanometrics and Accent Optical have agreed to accelerate a portion of the disbursements. In connection with their agreement, Nanometrics issued a \$750,000 loan to Accent Optical on March 13, 2006 and another in the amount of \$1,750,000 after the end of the first quarter. Additionally, Nanometrics has agreed to provide an additional \$1,611,238 loan to Accent Optical to satisfy an interest payment that Accent Optical must make to Bio-Rad on July 9, 2006.

In the event the merger is not completed, the working capital loans may continue as a debt obligation of Accent Optical or may be converted to Accent Optical Common Stock if certain events occur. In the event that the merger does not occur, Nanometrics may not receive repayment of the loans in a timely manner, if at all.

If either Nanometrics or Accent Optical fails to obtain shareholder approval of the matters set forth in this joint proxy statement/prospectus, it may be required to pay the other party a termination fee equal to \$5 million, plus any applicable costs, expenses and interest pursuant to the merger agreement, as amended.

Nanometrics and Accent Optical must continue to retain and motivate executives and key employees and recruit new employees, and failure to do so could seriously harm the combined company.

In order to be successful, each of Nanometrics and Accent Optical must continue to retain and motivate executives and other key employees and recruit new employees before the merger is completed. Employees of Nanometrics or Accent Optical may experience uncertainty about their future roles until or after strategies with regard to Nanometrics after the merger are announced or executed. These potential distractions related to the merger may adversely affect each company's ability to attract, motivate and retain executives and key employees

Table of Contents

and keep such executives and key employees focused on strategic corporate goals. Any failure by Nanometrics or Accent Optical to retain and motivate executives and key employees during the period prior to the completion of the merger could seriously harm their respective businesses or the business of the combined company after the closing of the merger.

The combined company will need to retain and motivate key executives and employees after the merger in order to be successful. Uncertainty during the integration period after closing will pose retention challenges for the combined company after the closing. Failure to address these challenges could result in undesirable attrition, which would likely harm the combined company's business.

The announcement of the merger may cause customers, distributors, resellers and others to delay or defer decisions concerning purchases from Nanometrics and Accent Optical, which may harm their or the combined company's results of operations.

Because the merger is subject to several closing conditions, uncertainty exists regarding whether and when the merger will be completed. In addition, customers, distributors, resellers and others may be uncertain about the combined company's plans for each of Nanometrics' and Accent Optical's products. This uncertainty may cause customers, distributors, resellers and others to delay or defer purchasing decisions, or elect to switch to other suppliers, which could negatively affect the businesses and results of operations of Nanometrics, Accent Optical or the combined company. Prospective customers might also be reluctant to purchase the combined company's products after the merger due to uncertainty about the direction of its products and its willingness to support and service existing products. Customers, distributors, resellers and others may also seek to change existing agreements with Nanometrics or Accent Optical as a result of the merger. These and other actions by customers, distributors, resellers and others could negatively affect the businesses and results of operations of Nanometrics and/or Accent Optical.

Provisions of the merger agreement, as amended, may discourage other companies from entering into a merger or other business combination with Accent Optical that might otherwise benefit its stockholders.

The merger agreement, as amended, prohibits Accent Optical and its affiliates from soliciting or encouraging any discussions regarding a proposal to enter into a merger or business combination with a party other than Nanometrics and requires Accent Optical to seek the approval of the matters set forth in this joint proxy statement/prospectus from its stockholders. In addition, officers, directors and certain stockholders of Accent Optical and their respective affiliates have entered into voting agreements with Nanometrics pursuant to which those persons have agreed to vote their shares of Accent Optical capital stock in favor of the matters set forth in this joint proxy statement/prospectus. As a result of these provisions, a third party may be discouraged from making a proposal to acquire Accent Optical on terms that its stockholders may consider more favorable unless the merger agreement, as amended, between Accent Optical and Nanometrics is first terminated, or at all.

The merger may be completed even though Nanometrics or Accent Optical suffers a material adverse change.

In general, either party can refuse to complete the merger if the other party suffers from a material adverse change between January 25, 2006, the date of the signing of the merger agreement, and the closing of the merger. However, certain types of changes would not prevent the merger from going forward, even if the change would have a material adverse effect on Nanometrics or Accent Optical including:

changes in the market price or trading volume of Nanometrics common stock;

changes, circumstances or conditions affecting the economy as a whole or the industries in which Nanometrics and Accent Optical operate if those changes, circumstances or conditions do not disproportionately affect either or both parties;

any effects resulting primarily from the pendency of the merger or restrictions imposed thereby;

Table of Contents

any litigation by Accent Optical stockholders or Nanometrics shareholders relating to the merger; and

the impact of Nanometrics' restatements of past financial statements as described in its Current Report on Form 8-K dated October 25, 2005, as amended.

Governmental authorities could seek to block or challenge the merger.

The merger is exempt from the pre-merger notification filing requirements of the Hart-Scott-Rodino Act. However, even after completion of the merger, governmental authorities could seek to block or challenge the merger, impose conditions or require asset divestitures as they deem necessary or desirable in the public interest. In addition, in some jurisdictions, a competitor, customer or other third party could initiate a private action under the antitrust laws challenging or seeking to enjoin the merger, before or after it is completed. Nanometrics and Accent Optical may not prevail in such action, and significant legal fees and costs may be incurred even if they are ultimately successful.

Challenges involved in integrating Accent Optical's operations may negatively impact Nanometrics efforts to remediate and improve its financial and managerial control and reporting systems and processes, including with respect to its internal control over financial reporting.

The combined company's ability to successfully offer its products and implement its business plan in a rapidly evolving market will require an effective planning and management process. The combined company will need to continue to improve its financial and managerial control and its reporting systems and procedures in order to manage its business effectively in the future.

Accent Optical has not been required to prepare a report on the effectiveness of its internal controls over financial reporting because it is not subject to the registration requirements of the Securities Exchange Act of 1934, as amended. Nanometrics did prepare such a report, which noted a material weakness in internal controls relating to its Japanese operations.

The merger will require significant integration efforts by management and, as such, may distract management or otherwise interfere with implementation of the Nanometrics' remediation plan. Additionally, unanticipated factors may hinder the effectiveness or delay the integration of Nanometrics' and Accent Optical's control systems and as such, there can be no assurances regarding the combined company's ability to remediate the material weakness in our internal controls over financial reporting. Unless the combined company is able to evolve its current capabilities with respect to control systems and procedures, its ability to file reports with the SEC in a timely manner may be adversely affected.

Accent Optical will need to obtain consents to the assignment of certain agreements it has with third parties as a result of the merger and if it cannot obtain these consents, Accent Optical and/or Nanometrics may lose the benefits of these relationships.

Accent Optical is currently attempting to obtain third-party consents for some agreements requiring consent upon a change of control. If Accent Optical is unable to do so, it may be forced to renegotiate these agreements or enter into new agreements with these various third parties. The agreements requiring consent include certain sales representative and distributor agreements, customer agreements, real property leases and license agreements. There can be no assurance that Accent Optical will be able to renegotiate or to negotiate new agreements on favorable terms, or at all.

Risks Related to the Combined Company after the Merger

Although Nanometrics and Accent Optical expect the merger to result in benefits to the combined company, those benefits may not be realized because of integration difficulties or other challenges.

Nanometrics and Accent Optical each have global operations that will need to be integrated successfully in order for Nanometrics to realize the benefits anticipated from the merger. Realizing these benefits will require

Table of Contents

the meshing of technology, operations and personnel of Nanometrics and Accent Optical into a single organization. Nanometrics and Accent Optical expect the integration to be a complex, time-consuming and expensive process that, even with proper planning and implementation, could cause significant disruption. The challenges that the combined company may face include, but are not limited to, the following:

consolidating operations, including rationalizing corporate information technology and administrative infrastructures;

coordinating sales and marketing efforts between the two companies;

overcoming any perceived adverse changes in business focus, including customers' concerns that the merger will result in erosion of customer service standards or business focus;

coordinating and harmonizing research and development activities to accelerate introduction of new products and technologies with reduced cost;

preserving customer, distribution, reseller, manufacturing, supplier, marketing and other important relationships of Nanometrics and Accent Optical and resolving any potential conflicts that may arise;

retaining key employees and maintaining employee morale;

addressing differences in the business cultures of Nanometrics and Accent Optical;

coordinating and combining operations, relationships and facilities outside of the United States, which may be subject to additional constraints imposed by geographic distance, local laws and regulations; and

creating a consolidated internal control over financial reporting structure so that the combined company and its independent auditors can report on the effectiveness of its internal controls over financial reporting.

Nanometrics may not successfully integrate the operations of Accent Optical in a timely manner, or at all. In addition, the combined company may not realize the anticipated benefits and synergies of the merger to the extent or when anticipated.

Even if the integration of Nanometrics' and Accent Optical's operations, products and personnel is successful, it may place a significant burden on the combined company's management resources. The diversion of management attention and any difficulties encountered in the transition and integration process could harm Nanometrics' business, financial condition and operating results.

Charges to earnings resulting from the application of the purchase method of accounting may adversely affect the market value of Nanometrics common stock following the merger.

In accordance with GAAP, Nanometrics will account for the merger using the purchase method of accounting, which may require an increase in intangible assets and inventory and a decrease in deferred revenues to their respective fair values. Further, a portion of the purchase price may be allocated to in-process research and development. These purchase accounting adjustments may result in material recurring and nonrecurring charges to earnings that could have a material adverse effect on the market value of the Nanometrics common stock following completion of the merger. Under the purchase method of accounting, Nanometrics will allocate the total estimated purchase price to Accent Optical's net tangible assets and amortizable intangible assets based on their fair values as of the date of completion of the merger, and record the excess of the purchase price over those fair values as goodwill. Nanometrics will incur amortization expense over the useful lives of amortizable intangible assets acquired in connection with the merger. In addition, to the extent the value of goodwill becomes impaired, Nanometrics may be required

Edgar Filing: NANOMETRICS INC - Form S-4/A

to incur material charges relating to the impairment of that asset. Further, Nanometrics may be impacted by nonrecurring charges related to reduced gross profit margins from the requirement to adjust Accent Optical's inventory and deferred revenues to fair value. These charges resulting from the application of purchase accounting could have a material impact on Nanometrics' results of operations.

Table of Contents

If the combined company fails to successfully develop and introduce new products and services after the merger, it will not be able to compete effectively and its ability to generate revenues will suffer.

Competition is intense in the markets in which Nanometrics and Accent Optical operates. The combined company's future success depends upon its ability to develop and introduce new products and services that customers choose to buy. Several of Nanometrics' and Accent Optical's competitors have greater financial, engineering, manufacturing, marketing and customer support resources than the combined company will have after the merger. As a result, the combined company's competitors may be able to respond more quickly to new or emerging trends by devoting greater resources to the development, promotion and sale of products, all of which could impair sales of the combined company's products. If the combined company is unsuccessful at developing and introducing new products and services that are appealing to its customers with acceptable prices and terms, the combined company will not be able to compete effectively and its ability to generate revenues will suffer.

As the combined company introduces new or enhanced products or integrates Accent Optical's or other new technology into its products, it will face risks relating to such transitions including, among other things, disruption in customers' ordering patterns, excessive levels of older product inventories, insufficient supplies of new products to meet customers' demand, possible product and technology defects arising from the integration of new technology, and a potentially different sales and support environment relating to any new technology. The combined company's failure to manage the transition to newer products or the integration of newer technology into its products could adversely affect its business' operating results and financial results.

If the combined company is unable to compete successfully against existing and future competitors on the basis of product offerings or price, the combined company could experience an erosion of market share and/or be required to reduce prices, which could result in reduced gross margins.

Nanometrics' and Accent Optical's operating results are subject to fluctuations and are inherently unpredictable; if the combined company fails to meet the expectations of securities analysts or investors, the combined company's stock price may decline significantly.

Nanometrics' and Accent Optical's operating results are difficult to predict and vary significantly from period to period. As a result, Nanometrics and Accent Optical believe that quarter-to-quarter comparisons of their respective operating results are not necessarily a good indication of what their or the combined company's future performance will be. In addition, future operating results may fluctuate significantly due to several factors, many of which are outside of its control and may not meet the management's expectations or those of securities analysts or investors. If this occurs, the price of the common stock will likely decrease. Factors that may cause fluctuations in the combined company's operating results include, but are not limited to, the following:

changes in customer demand and spending levels and limited visibility into customers' spending plans;

changes in general economic conditions and specific market conditions related to the semiconductor and microelectronic industries;

changes in customer preferences for the combined company's products and services;

competitive pricing pressures and new product introductions by the combined company's competitors;

inability or failure to respond to changing technology within the semiconductor and microelectronic industries;

seasonality of demand for the combined company's products and services;

variations in product costs or the mix of products sold;

Edgar Filing: NANOMETRICS INC - Form S-4/A

the expected high selling prices of the combined company's products which typically results in a long sales cycle and variations in the length of sales cycles;

product quality issues;

inability of third party manufacturers to produce quality products on time;

Table of Contents

failure to achieve targeted product cost reductions and operating expense reductions;

the timely introduction and market acceptance of new products and services;

excess inventory or insufficient inventory to meet demand; or

litigation.

Any of the foregoing factors, or any other factors discussed elsewhere herein, could have a material adverse effect on the business, results of operations and financial condition of Nanometrics.

The combined company will be dependent on its suppliers, some of which will likely be the sole source for certain components and elements of its technology, and the combined company's production or reputation could be seriously harmed if these suppliers were unable to timely meet its demand or technical requirements on a cost effective basis.

The combined company's products will contain components and subassemblies that are procured from a variety of suppliers. The cost, quality and availability of components will be essential to the successful production and sale of its products. Some components and subassemblies will likely come from sole or limited source suppliers. Alternative sources may not always be available or may be cost prohibitive. If suppliers were unable or unwilling to meet the combined company's needs for sole source components and if the combined company is unable to obtain an alternative source or if the price for an alternative source is prohibitive, the combined company's ability to maintain timely and cost-effective production of its products would be seriously harmed.

The combined company is expected to be dependent on contract manufacturers to manufacture many of the components and subassemblies for its products. Nanometrics and Accent Optical do not have long-term supply contracts with these manufacturers, and changes to those relationships, expected or unexpected, may result in delays or disruptions that could cause the combined company to lose revenue and damage its customer relationships.

The combined company is expected to be dependent on contract manufacturers (each of whom is typically a third party manufacturer for numerous companies) to manufacture many of the components and subassemblies for its products. Nanometrics has no long-term supply contracts with such manufacturers and if the combined company should fail to effectively manage its contract manufacturer relationships or if one or more of them should experience delays, disruptions or quality control problems in its manufacturing operations, the combined company's ability to ship products to its customers could be delayed which could adversely affect its business and financial results.

A limited number of Nanometrics' and Accent Optical's customers will continue to comprise a significant portion of the combined company's revenues and any decrease in revenue from these customers could have an adverse effect on the combined company.

Even though the combined company's customer base is expected to increase as a result of the merger, a large portion of the combined company's net revenues will likely continue to depend on sales to a limited number of customers. During 2005, sales to its top 10 customers accounted for 74.2% of Nanometrics' net revenues. During 2005, sales to Accent Optical's 10 largest customers accounted for 49.3% of its net revenues. Any downturn in the business of these customers or potential new customers could significantly decrease sales to those customers which, in turn, could adversely affect the combined company's net revenues and results of operations.

The cyclical nature of the semiconductor industry may adversely impact the combined company's operating results.

The semiconductor industry is highly cyclical and subject to rapid technological change. From time to time, the semiconductor industry has experienced significant economic downturns, including the recent downturn,

Table of Contents

characterized by diminished product demand, accelerated erosion of prices and excess production capacity. The industry also periodically experiences increased demand and production capacity constraints. Because the combined company's revenues will be dependent upon capital equipment spending by semiconductor manufacturers to increase their capacity or transition to a new process geometry, the combined company's operating results may vary significantly as a result of general conditions in the semiconductor industry.

Nanometrics' and Accent Optical's products are highly technical and if they contain undetected errors, the combined company's business could be adversely affected.

Nanometrics' and Accent Optical's products are highly technical and complex. Technically complex products such as those of Nanometrics and Accent Optical may contain undetected errors or defects, some of which may only be discovered after a product has been installed and used by customers. Any errors discovered in the products offered by the combined company after commercial release could result in loss of revenue or delay in revenue recognition, loss of customers and increased service and warranty cost, any of which could adversely affect the combined company's reputation, business and results of operations.

Third parties have claimed and may claim in the future that Nanometrics, Accent Optical or the combined company have infringed or are infringing their intellectual property which claims may result in the combined company incurring significant litigation or licensing expenses or being prevented from selling certain of its products if the claims are successful.

In the normal course of business, Nanometrics and Accent Optical have each received claims of infringement or otherwise become aware of potentially relevant patents or other intellectual property rights held by other parties. For example, Nanometrics announced on March 14, 2005 that it had received notice of a patent infringement lawsuit brought by Nova Measuring Instruments, Ltd. alleging infringement of United States Patent No. 6,752,689, or the '689 Patent. Also, in August 2005, Nanometrics was served with a complaint by KLA-Tencor Corporation alleging that certain of our products infringe two of KLA's patents, Patent No. 6,483,580 and Patent No. 6,590,656. In January 2006, KLA added Patent No. 6,611,330 to their claim. In March 2006, the court granted Nanometrics' motion to stay the proceedings pending a re-examination of the KLA patents by the U.S. Patent and Trademark Office.

Upon receipt of a claim or becoming aware of potentially relevant patents or other intellectual property rights, the combined company will evaluate the validity and applicability of its intellectual property rights, and determine in each case whether it must negotiate licenses or cross-licenses to incorporate or use the proprietary technologies in its products. Third parties may claim that Nanometrics, Accent Optical and/or the combined company or their customers are infringing or contributing to the infringement of their intellectual property rights, and the combined company may be found to infringe or contribute to the infringement of those intellectual property rights and require a license to use those rights. Nanometrics, Accent Optical and/or the combined company may be unaware of intellectual property rights of others that may cover some of their respective technology, products and services.

Any litigation regarding patents or other intellectual property could be costly and time consuming and could divert the attention of management and key personnel from the combined company's business operations. The complexity of the technology involved and the uncertainty of litigation generally increase the risks associated with intellectual property litigation. Moreover, patent litigation has increased recently due to the current uncertainty of the law and the increasing competition and overlap of product functionality in the markets served by Nanometrics and Accent Optical. Claims of intellectual property infringement might also require Nanometrics, Accent Optical and/or the combined company to enter into costly royalty or license agreements or to indemnify its customers. However, the combined company may not be able to obtain royalty or license agreements on terms acceptable to it or at all. The combined company also may be subject to significant damages or injunctions against development and sale of its products.

Table of Contents

If third parties infringe the intellectual property of the combined company or if the combined company is unable to secure and protect its intellectual property, the combined company may expend significant resources enforcing its rights or suffer competitive injury.

The success of the combined company will depend in large part on its proprietary technology and other intellectual property rights. Nanometrics and Accent Optical each rely on a combination of patents, copyrights, trademarks and trade secrets, confidentiality provisions and licensing arrangements to establish and protect their proprietary rights. If the combined company fails to protect or to enforce its intellectual property rights successfully, the combined company's competitive position could suffer, which could harm its operating results.

Nanometrics' and Accent Optical's pending patent and trademark applications for registration may not be allowed, or third parties may challenge the validity or scope of such patents or trademarks, including the patent or trademark applications or registrations. Even if the patent or trademark registrations are issued and maintained, these patents or trademarks may not be of adequate scope or benefit to the combined company or may be held invalid and unenforceable against third parties.

The combined company may be required to spend significant resources to monitor and police its intellectual property rights. Effective policing of the unauthorized use of the combined company's products or intellectual property is difficult and litigation may be necessary in the future to enforce its intellectual property rights. Intellectual property litigation is expensive and time-consuming, regardless of the merits of any claim, and could divert the attention of the combined company's management from operating the business. The combined company may not be able to detect infringement despite its efforts and may lose competitive position in the market before it does so. In addition, competitors may design around the combined company's technology or develop competing technologies.

Despite the efforts of Nanometrics and Accent Optical to protect their proprietary rights, existing laws, contractual provisions and remedies afford only limited protection. Intellectual property lawsuits are subject to inherent uncertainties due to, among other things, the complexity of the technical issues involved, and there can be no assurance that the combined company will be successful in asserting its intellectual property claims. Attempts may be made to copy or reverse engineer aspects of Nanometrics' and/or Accent Optical's products or to obtain and use information that is regarded as proprietary. Accordingly, there can be no assurance that the combined company will be able to protect its proprietary rights against unauthorized third-party copying or use. Infringement by others of such proprietary rights could materially harm the combined company's business.

Nanometrics and Accent Optical have international presences in countries whose laws may not provide protection of their intellectual property rights to the same extent as the laws of the United States, which may make it more difficult to protect the combined company's intellectual property.

Nanometrics and Accent Optical have both targeted countries with large populations and propensities for adopting new technologies as a part of their business plans. However, some of these countries do not have or vigorously enforce laws designed to prevent misappropriation of intellectual property or to deter others from developing similar, competing technologies or intellectual property that otherwise infringe upon existing proprietary technology. Effective protection of patents, copyrights, trademarks, trade secrets and other intellectual property may be unavailable or limited in some countries in which the combined company does business. As a result, the combined company may not be able to effectively prevent competitors in these regions from infringing its intellectual property rights, which would reduce the combined company's ability to compete in those regions and could negatively impact its business.

Nanometrics and Accent Optical are subject to litigation claims as part of their operations, and the combined company could suffer significant litigation expenses in defending these claims and could be subject to significant damages or remedies that would harm its business.

In the normal course of business, Nanometrics expects that the combined company (consistent with their experience) will occasionally receive general claims related to the conduct of their business and the performance

Table of Contents

of their products and services, as well as other litigation claims. Any litigation regarding these claims could be costly and time-consuming and could divert the attention of the combined company's management and key personnel from its business operations. The complexity of the technology involved and the uncertainty of litigation increase these risks. The combined company also may be subject to significant damages or equitable remedies regarding the development and sale of its products and the operation of its business.

Due to the global nature of the combined company's operations, economic or social conditions or changes in a particular country or region could adversely affect the combined company's sales or increase its costs and expenses, which could have a material adverse impact on its financial condition.

Nanometrics currently conducts significant sales and customer support operations directly and indirectly through its facilities, distributors and resellers outside of the United States. Accent Optical also maintains a substantial portion of its business and operations outside of the United States, with its primary manufacturing facility located in York, England. Both companies depend on the operations of contract manufacturers and suppliers that are located outside of the United States. During 2005, sales outside of the United States accounted for 66.7% of Nanometrics net revenues and 71.8% of Accent Optical's net revenues. Accordingly, the combined company's future results could be materially adversely affected by a variety of uncontrollable and changing factors including, among others,

political or social unrest or economic instability in a specific country or region;

military and terrorism risks;

trade protection measures and import or export licensing requirements;

changes in a specific country's or region's political or economic conditions, particularly in emerging markets;

changes in employment, environmental and other local laws applicable to the combined company's operations in foreign jurisdictions;

potentially negative consequences from changes in tax laws in the foreign jurisdiction or with respect to the tax treaty between the jurisdiction and the United States;

difficulty in managing widespread operations; and

difficulty in managing a geographically dispersed workforce.

Any or all of these factors could have a material adverse impact on the combined company's revenue, expenses and financial condition following completion of the merger.

Future acquisitions or investments that the combined company may make could disrupt its business and harm its financial condition and may dilute the ownership of Accent Optical stockholders.

Each of Nanometrics and Accent Optical has made, and the combined company may continue to make, acquisitions in order to enhance its business. For example, on March 15, 2006, Nanometrics announced that it had purchased Soluris. Acquisitions involve numerous risks, including problems combining the purchased operations, technologies or products, unanticipated costs, diversion of management's attention from its core businesses, adverse effects on existing business relationships with suppliers and customers, risks associated with entering markets in which the combined company has no or limited prior experience and potential loss of key employees. There can be no assurance that the combined company will be able to successfully integrate any businesses, products, technologies or personnel of Soluris or any other company that it might acquire in the future. The integration of businesses that each of Nanometrics and Accent Optical has acquired has been, and will

Edgar Filing: NANOMETRICS INC - Form S-4/A

continue to be, a complex, time-consuming and expensive process. Additionally, if the combined company fails to efficiently operate as a combined organization utilizing common information and communication systems, operating procedures, financial controls and human resources practices, its business and financial

Table of Contents

condition may be adversely affected. In the event of any such investments or acquisitions, the combined company could issue stock that would dilute its then current shareholders' percentage ownership, incur debt, assume liabilities, incur amortization expenses related to purchases of intangible assets, or incur large write-offs.

Risks Related to Nanometrics' Business

Cyclical nature of the semiconductor industry has led to substantial fluctuations in demand for Nanometrics systems, and this cyclical nature may, from time to time, continue to cause these fluctuations.

Nanometrics' operating results have varied significantly from period to period due to the cyclical nature of the semiconductor industry. The majority of Nanometrics' business depends upon the capital expenditures of semiconductor device and equipment manufacturers. These manufacturers' capital expenditures, in turn, depend upon the current and anticipated market demand for semiconductors and products using semiconductors. The semiconductor industry is cyclical and has historically experienced periodic downturns. These downturns have often resulted in substantial decreases in the demand for semiconductor manufacturing equipment, including metrology systems. Nanometrics has found that the resulting decrease in capital expenditures has typically been more pronounced than the downturn in semiconductor device industry revenues. Nanometrics expects the cyclical nature of the semiconductor industry, and therefore, its business, to continue in the foreseeable future. Recently, the semiconductor industry emerged from a sustained downturn. Should this trend reverse and the downturn resume, the Nanometrics business and results of operations would suffer.

Because Nanometrics derives a significant portion of its revenues from sales in Asia, Nanometrics' revenues and results of operations could be adversely affected by the instability of Asian economies.

Revenues from customers in Asian markets represented approximately 65.5%, 68.8% and 72.7% of Nanometrics' total net revenues in 2005, 2004 and 2003, respectively. Countries in the Asia Pacific region, including Japan, South Korea and Taiwan, each of which accounted for a significant portion of Nanometrics' business in Asia, experienced general economic weaknesses in 2002 and 2003, which adversely affected Nanometrics' revenues at that time. It is anticipated that Nanometrics will continue to rely upon customers in Asia for a majority of its revenues and any future weaknesses or instabilities in the economies of countries in Asia may continue to have a material adverse effect on Nanometrics' results of operations and financial condition.

Nanometrics depends on Applied Materials, Inc. and other OEM suppliers for sales of Nanometrics' integrated metrology systems, and the loss of Applied Materials or any other Nanometrics OEM suppliers as a customer could harm its business.

Nanometrics believes that sales of integrated metrology systems will continue to be an important source of its revenues. Sales of Nanometrics' integrated metrology systems depend upon the ability of Applied Materials, Inc. to sell semiconductor equipment products that include Nanometrics' metrology systems as components. If Applied Materials is unable to sell such products, or if Applied Materials chooses to focus its attention on products that do not integrate Nanometrics' systems, its business could suffer. If Nanometrics were to lose Applied Materials as a customer for any reason, its ability to realize sales from integrated metrology systems would be significantly diminished, which would harm its business.

Nanometrics' largest customers account for a substantial portion of its revenue, and its revenue would materially decline if one or more of these customers were to purchase significantly fewer of Nanometrics' systems or if they delayed or cancelled a large order.

Historically, a significant portion of Nanometrics' revenues in each quarter and each year has been derived from sales to a relatively small number of customers, and this trend is expected to continue. There are only a limited number of large companies operating in the semiconductor industry. Accordingly, Nanometrics expects that it will continue to depend on a small number of large customers for a significant portion of its revenues for

Table of Contents

the foreseeable future. If any of Nanometrics' key customers were to purchase significantly fewer systems, or if a large order were delayed or cancelled, Nanometrics' revenues could significantly decline. In 2005, sales to Applied Materials accounted for 20.6% and sales to Samsung Electronics Co. Ltd. accounted for 15.9% of Nanometrics' total net revenues, respectively. In 2004, sales to Applied Materials accounted for 21.4% and sales to Samsung accounted for 14.7% of Nanometrics' total net revenues, respectively. In 2003, sales to Applied Materials accounted for 15.4% and sales to Hynix Semiconductor, Inc. accounted for 12.0% of Nanometrics' total net revenues, respectively.

The success of Nanometrics' product development efforts depends on Nanometrics' ability to anticipate market trends and the price, performance and functionality requirements of semiconductor device manufacturers. In order to anticipate these trends and ensure that critical development projects proceed in a coordinated manner, Nanometrics must continue to collaborate closely with its customers. Nanometrics' relationships with its customers provides it with access to valuable information regarding industry trends, which enables Nanometrics to better plan its product development activities. If Nanometrics' current relationships with its large customers are impaired, or if it is unable to develop similar collaborative relationships with important customers in the future, Nanometrics' long-term ability to produce commercially successful systems could be adversely affected.

Nanometrics' current and potential competitors have significantly greater resources than it does, and increased competition could impair sales of Nanometrics' products.

Nanometrics operates in the highly competitive semiconductor industry and faces competition from a number of companies, many of which have greater financial, engineering, manufacturing, marketing and customer support resources than Nanometrics does. As a result, Nanometrics' competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which could impair sales of Nanometrics' products. Moreover, there has been merger and acquisition activity among Nanometrics' competitors and potential competitors. These transactions by competitors and potential competitors may provide them with a competitive advantage over Nanometrics by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs. Many of Nanometrics' customers and potential customers in the semiconductor industry are large companies that require global support and service for their metrology systems. Some of Nanometrics' larger or more geographically diverse competitors might be better equipped to provide this global support.

If any of Nanometrics' systems fail to meet or exceed internal quality specifications, Nanometrics typically will not ship them until such time as they have met such specifications. If Nanometrics experiences significant delays or is unable to ship its products to customers as a result of internal processes, or for any other reason, its business and reputation may suffer.

Nanometrics' products are complex and require technical expertise to design and manufacture properly. Various problems occasionally arise during the manufacturing process that may cause delays and/or impair product quality. Nanometrics must actively monitor its manufacturing processes to ensure that its products meet internal quality specifications. Any significant delays stemming from the failure of Nanometrics' products to meet or exceed internal quality specifications, or for any other reasons, would delay shipments. Shipment delays could harm Nanometrics' business and reputation in the industry.

If Nanometrics delivers systems with defects, its credibility will be harmed, revenue from, and market acceptance of, its systems will decrease and it could expend significant capital and resources as a result of such defects.

Notwithstanding its internal quality specifications, Nanometrics' systems have sometimes contained errors, defects and bugs when introduced. If Nanometrics delivers systems with errors, defects or bugs, its credibility and the market acceptance and sales of its systems would be harmed. Further, if Nanometrics' systems contain

Table of Contents

errors, defects or bugs, Nanometrics may be required to expend significant capital and resources to alleviate such problems. Defects could also lead to product liability as a result of product liability lawsuits against Nanometrics or against its customers. Nanometrics has agreed to indemnify its customers in some circumstances against liability arising from defects in Nanometrics systems. In the event of a successful product liability claim, Nanometrics could be obligated to pay damages significantly in excess of its product liability insurance limits.

Relatively small fluctuations in the sales volume of Nanometrics systems may cause its operating results to vary significantly each quarter.

During any quarter, a significant portion of Nanometrics revenue is derived from the sale of a relatively small number of systems. Nanometrics automated metrology systems range in price from approximately \$200,000 to over \$1,000,000 per system, integrated metrology systems range in price from approximately \$80,000 to \$400,000 per system and tabletop metrology systems range in price from approximately \$50,000 to \$200,000 per system. Accordingly, a small change in the number or mix of systems that Nanometrics sells could cause significant changes in its operating results.

Nanometrics depends on orders that are received and shipped in the same quarter, and therefore its results of operations may be subject to significant variability from quarter to quarter.

Nanometrics net sales in any given quarter depend upon a combination of orders received in that quarter for shipment in that quarter and shipments from backlog. Nanometrics backlog at the beginning of each quarter does not include all systems sales needed to achieve expected revenues for that quarter. Consequently, Nanometrics is dependent on obtaining orders for systems to be shipped in the same quarter that the order is received. Moreover, customers may reschedule shipments, and production difficulties could delay shipments. Accordingly, Nanometrics has limited visibility into future product shipments, and its results of operations may be subject to significant variability from quarter to quarter.

Because of the high cost of switching equipment vendors, it is sometimes difficult for Nanometrics to attract customers from its competitors even if the Nanometrics metrology systems are superior to those of its competitors.

Once a semiconductor customer has selected one vendor's metrology system, the customer generally relies upon that system and, to the extent possible, subsequent generations of the same vendor's system, for the life of the application. Once a vendor's metrology system has been installed, a customer must often make substantial technical modifications and may experience downtime in order to switch to another vendor's metrology system. Accordingly, unless Nanometrics systems offer performance or cost advantages that outweigh a customer's expense of switching to Nanometrics systems, it will be difficult for Nanometrics to achieve significant sales from that customer once it has selected another vendor's system for an application.

Nanometrics manufactures all of its systems at a limited number of facilities, and any prolonged disruption in the operations of those facilities could reduce its revenues.

Nanometrics produces all of its systems in its manufacturing facilities located in Milpitas, California and, to a lesser extent, through its subsidiaries in Japan and South Korea. Nanometrics manufacturing processes are highly complex and require sophisticated, costly equipment and specially designed facilities. As a result, any prolonged disruption in the operations of its manufacturing facilities, such as those resulting from a severe fire or earthquake, could seriously harm Nanometrics' ability to satisfy its customer order deadlines. A significant portion of Nanometrics' operations are located in Japan, Taiwan and South Korea, which may be subject to regional political and economic instability.

Table of Contents

Nanometrics customers may cease purchasing its systems at any time.

Nanometrics typically does not have long-term purchase commitments from its customers or a substantial noncancelable backlog. Therefore, generally:

Nanometrics customers are not obligated to purchase a specified number of its systems and can cancel purchase orders or return systems prior to payment;

Nanometrics customers are free to purchase systems from its competitors;

Nanometrics is exposed to competitive price pressure on each order; and

Nanometrics customers are not required to make minimum purchases.

As a result, Nanometrics sales and revenues over the long term will depend on its ability to provide its customers with the best systems and service. Depending on customers needs and competitive conditions in the marketplace, anticipated system orders may not materialize, and orders that do materialize may be cancelled or delayed. The lack of long-term purchase commitments from customers and a substantial noncancelable backlog may impede the Nanometrics ability to allocate its capacity efficiently and forecast its future revenues. In addition, because Nanometrics expense levels will be based in part on its expectations of future revenues, it may be unable to adjust costs in a timely manner to offset revenue shortfalls.

Risks Related to Accent Optical s Business

Accent Optical has experienced net losses during its limited history operating as an independent company.

From the inception of Accent Optical s business on April 6, 2000 through December 31, 2005, Accent Optical incurred cumulative net losses of \$30.4 million. While Accent Optical achieved net income in the period starting on the date of inception and ending December 31, 2000, it has subsequently incurred net losses each year and may continue to do so in the future. Further, to support its worldwide customer base, Accent Optical maintains significant operations around the world. Accent Optical s revenues may not be sufficient to cover the costs of sustaining these operations.

The factors that have most significantly affected Accent Optical s business in the past are the demand for semiconductor devices and the rate of capital spending by semiconductor device and wafer manufacturers, both of which adversely affected Accent Optical s operating results during a cyclical industry downturn in 2002 and 2003. Accent Optical s operating results have also been negatively affected by order patterns and competitive conditions, including, for example, a significant competitive loss at Accent Optical s then largest customer, Intel Corporation in 2002. Accent Optical expects these factors to continue to be among the most important factors affecting its operating results in the future.

Accent Optical s business plan is premised in part on growth in the market for lattice engineering metrology systems and its business will not be successful if this market does not develop as expected.

Accent Optical s business plan is premised in part on growth in the demand for advanced semiconductor devices such as compound semiconductors, high brightness LEDs (HBLEDs) and strained silicon devices and the adoption of technologies for manufacturing these devices that are compatible with its metrology systems. If the market for these advanced semiconductor devices fails to grow as expected or if the manufacturers if these advanced semiconductor devices adopt manufacturing technologies for which Accent Optical s metrology systems are not well suited, the demand Accent Optical anticipates for its lattice engineering metrology systems will not materialize.

Accent Optical s systems have long development cycles, and it may encounter numerous obstacles to successful commercialization.

As the semiconductor industry is characterized by rapid change, emerging standards and the introduction of new technologies, Accent Optical expects to spend a significant amount of time and resources to develop new

Table of Contents

systems and upgrades for its existing systems. In light of the long product development cycles inherent in Accent Optical's industry, it will make these expenditures well in advance of any revenues from the sale of new systems and upgrades. Accent Optical's ability to commercially introduce and successfully market any new system or upgrade is subject to a variety of challenges including problems associated with transitioning development prototypes to production, design defects and other challenges that could increase Accent Optical's costs and prevent or delay introduction of these systems or upgrades to the marketplace. If it is unable to introduce new systems or upgrades on a timely basis, or if it is unable to recover the research and development costs associated with such systems, Accent Optical's operating results and financial condition would be harmed.

The high cost of switching system vendors in Accent Optical's markets makes it difficult for us to win customers from its competitors even if its systems are superior.

Once a vendor's system has been installed in a production line application, a semiconductor device manufacturer must often make costly technical modifications, retrain personnel and suffer production downtime in order to switch to another vendor's system. To avoid these costs, semiconductor device manufacturers generally rely upon the system from the incumbent vendor and, to the extent possible, subsequent generations of the same vendor's system, for the life of the application. Accordingly, unless Accent Optical's systems offer performance or cost advantages that substantially outweigh the expense of switching to Accent Optical's systems, it will be difficult for us to achieve significant sales to a potential customer after it has selected another vendor's system.

The markets in which Accent Optical participates are intensely competitive, and if it is unable to compete effectively, its business would be harmed.

Accent Optical competes in the emerging market for lattice engineering metrology systems and the more mature market for photolithography process control and metrology systems. The market for lattice engineering metrology systems is highly fragmented. Competition typically consists of privately held companies or divisions of large, established companies such as Spectris plc and Thermo Electron Corporation. Accent Optical expects intense competition in this market to continue. Accent Optical's market share and operating results can fluctuate dramatically as a result of the introduction of new, competitive systems and the ability of competitors to secure patent and other intellectual property rights.

The market for photolithography process control and metrology systems is highly competitive with numerous large, established companies. Accent Optical's most significant competitors in this market are Hitachi, Ltd., KLA-Tencor Corporation, Nikon Instruments Inc., Thermo-Wave, Inc. and Timbre Technologies, Inc., a subsidiary of Tokyo Electron Limited (TEL). These companies have substantially superior distribution capabilities and larger research and development budgets than Accent Optical does and greater ability to offer bundled and integrated product offerings to customers. In addition, significant competition for Accent Optical's critical dimension systems has emerged from manufacturers of traditional reflectometers and ellipsometers, such as Rudolph Technologies, that have extended their technology by using new algorithms that enable their tools to perform critical dimension measurements.

Many of Accent Optical's existing and potential competitors in both the lattice engineering metrology and photolithography process control and metrology markets have greater name recognition, larger customer bases, more established customer relationships and greater financial, technical, manufacturing, marketing and other resources than Accent Optical does. As a result, they may be able to respond more quickly to new or emerging technologies and to changes in customer requirements, to devote greater resources to the development, promotion, sale and support of their products and to reduce prices to increase market share. They may also be able to drive industry standards or influence standard-setting bodies in order to limit Accent Optical's access to or exclude us from markets. If the research and development efforts of Accent Optical's competitors are more effective than Accent Optical's own, some or all of Accent Optical's systems and technologies may become non-competitive or obsolete. Potential customers may also decide for risk management reasons to purchase

Table of Contents

products from Accent Optical's larger competitors who have greater financial resources than it does. Moreover, there has been significant merger and acquisition activity among Accent Optical's existing and potential competitors. These combinations may provide Accent Optical's existing and potential competitors with an advantage over Accent Optical by enabling them to expand their product offerings and service capabilities to meet a broader range of customer needs.

Sales of Accent Optical's photolithography process control and metrology systems are subject to decline if the market adopts the competitive integrated metrology.

A significant portion of Accent Optical's revenues are derived from the sale of stand-alone overlay and critical dimension systems that are used to detect and diagnose problems in the photolithography process. Semiconductor device manufacturers may demand integration of these metrology systems with other semiconductor processing equipment to lower their costs. To provide integrated systems, Accent Optical would need to establish relationships with a small number of original equipment manufacturers (OEMs), that control a large portion of the semiconductor processing systems markets. Some of these OEMs are Accent Optical's competitors or may choose to work with its competitors to Accent Optical's exclusion. Furthermore, Accent Optical may not be able to timely or cost-effectively adapt its systems to be competitive in the market for integrated metrology tools. If Accent Optical is unable to compete effectively with integrated metrology systems, or if it is unable to establish relationships with OEMs on commercially satisfactory terms, its sales, operating results and financial condition would be harmed.

Sales to manufacturers of HBLEDs may be negatively impacted by lawsuits and intellectual property disputes.

Accent Optical's future success will depend in part on growth in the worldwide market for semiconductor devices such as HBLEDs. The HBLED market consists of a few large manufacturers, several of whom have asserted infringement of intellectual property rights against each other. This litigation, if it continues, may constrain market acceptance of HBLED products. Further, a resolution that requires manufacturers to pay royalties to intellectual property holders or that similarly increases costs for manufacturers, may result in investment decisions or pricing that delays or prevents market acceptance. Accent Optical supplies lattice engineering metrology systems to the manufacturers of HBLEDs and, to the extent that the sales growth of their products is limited, it would reduce the demand for Accent Optical's systems.

Accent Optical manufactures most of its systems at a single facility, and its results of operations would be harmed if manufacturing disruptions cause it to not meet customer requirements.

Accent Optical manufactures most of its systems in York, United Kingdom. Accent Optical's manufacturing operations could be disrupted as a result of a number of events, including power outages, fire, or other natural or man-made catastrophes. As part of its restructuring efforts in 2003, Accent Optical closed its operations in Randolph, Massachusetts, Waterloo, Canada and Albuquerque, New Mexico. The Randolph facility was primarily responsible for Accent Optical's fourier transform infrared scatterometers (FTIR) product line including engineering, product marketing, final test and qualification. Accent Optical has transferred all production, testing and qualification procedures to its primary manufacturing facility in York. The Waterloo facility was responsible for engineering, product marketing, final test and manufacturing of Accent Optical's Vektor and PLM 100 systems. Accent Optical has transferred all such activities to its facilities in the United Kingdom. The Albuquerque facility was responsible for engineering, product marketing, final test and qualification of Accent Optical's critical dimension scatterometers (CDS) product line, all of which have been transferred to its York and Bend, Oregon facilities. Accent Optical may experience difficulties meeting delivery deadlines and quality expectations during the transition period.

Table of Contents

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING STATEMENTS

This joint proxy statement/prospectus and the other documents incorporated by reference into this joint proxy statement/prospectus contain or may contain forward-looking statements intended to qualify for the safe harbor from liability established by the Private Securities Litigation Reform Act of 1995. These statements can be identified by the fact that they do not relate strictly to historical or current facts. These forward-looking statements are based on Nanometrics' current expectations about future events. Further, statements that include words such as may, will, project, might, expect, believe, anticipate, intend, could, would, estimate, continue or pursue, or the negative words or expressions of similar meaning, identify forward-looking statements. These forward-looking statements are found at various places throughout this joint proxy statement/prospectus and the other documents incorporated by reference. These forward-looking statements are necessarily estimates reflecting the best judgment of the respective management of Nanometrics and Accent Optical and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. These forward-looking statements should, therefore, be considered in light of various important factors, including those set forth in this joint proxy statement/prospectus and incorporated by reference into this joint proxy statement/prospectus. In addition to the risk factors identified elsewhere, important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation:

the ability to obtain the approvals of Nanometrics' shareholders and Accent Optical's stockholders, to satisfy the closing conditions in the merger agreement, as amended, and to otherwise complete the merger in a timely manner;

the ability to timely and cost-effectively integrate the geographically dispersed operations of Nanometrics and Accent Optical;

the ability to realize the synergies and other perceived advantages resulting from the merger;

the ability to retain key personnel both before and after the merger;

the extent and timing of market acceptance of new products;

the ability of Nanometrics and Accent Optical to procure, maintain, enforce and defend their respective patents and other proprietary rights;

the effects of local, national and global economic, credit and capital market conditions on the economy in general, and on the semiconductor industry in particular, and the effects of currency exchange rates and interest rates;

litigation outcomes and judicial actions, including costs of existing litigation matters;

the ability of Nanometrics and Accent Optical to continue to increase customer loyalty and maintain existing distributor, subcontractor and supplier relationships;

environmental restrictions, soil and water conditions, weather and other hazards, site access matters, environmental restrictions and building permit issues;

Edgar Filing: NANOMETRICS INC - Form S-4/A

the ability of Nanometrics to successfully complete any future acquisitions and integrate any acquired businesses;

acts of war or terrorist incidents; and

the effects of competition.

You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this joint proxy statement/prospectus or, in the case of documents incorporated by reference, as of the date of those documents. Neither Nanometrics nor Accent Optical undertakes any obligation to publicly update or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this joint proxy statement/prospectus or to reflect the occurrence of unanticipated events, other than as required by law.

Table of Contents

THE NANOMETRICS SPECIAL MEETING

General

This joint proxy statement/prospectus is being provided to Nanometrics shareholders as part of a solicitation of proxies by the Nanometrics board of directors for use at the special meeting of Nanometrics shareholders. This joint proxy statement/prospectus provides Nanometrics shareholders with information they need to know to be able to vote or instruct their vote to be cast at the Nanometrics special meeting.

Date, Time, and Place

The Nanometrics special meeting will be held on [], 2006 at 10:00 a.m., local time, at its corporate offices located at 1550 Buckeye Drive, Milpitas, California 95035. These proxy solicitation materials were mailed on or about [], 2006 to all shareholders entitled to vote at the special meeting.

Purpose; Other Matters

The Nanometrics special meeting is being held to consider and vote upon a proposal to approve the issuance of shares of Nanometrics common stock in connection with the merger of Alloy Merger Corporation with and into Accent Optical, pursuant to the merger agreement, as amended.

Nanometrics shareholders will also be asked to consider and vote upon any other business as may properly come before the special meeting or any adjournments or postponements of the special meeting. Nanometrics does not expect that any matter other than the proposal presented in this joint proxy statement/prospectus will be brought before the Nanometrics special meeting. However, if other matters incident to the conduct of the special meeting are properly presented at the special meeting or any adjournment or postponement of the special meeting, the persons named as proxies will vote in accordance with their best judgment with respect to those matters.

Except as described below, the vote of a Nanometrics shareholder on one proposal has no bearing on any other matter that may come before the Nanometrics special meeting or any adjournment or postponement thereof. In their discretion, the proxies are authorized to vote upon such other business as may properly be presented to the special meeting or any adjournments or postponements thereof. If you vote **AGAINST** the proposal, the proxy holders will not be authorized to vote for any adjournments or postponements of the special meeting, including for the purpose of soliciting additional proxies, unless you so indicate by marking the appropriate box on the proxy card for the special meeting.

Recommendation of the Nanometrics Board of Directors

After careful consideration, the Nanometrics board of directors determined that the merger is advisable, and is fair to and in the best interests of Nanometrics and its shareholders, and unanimously approved the merger agreement, as amended, and the transactions contemplated thereby, including the issuance of Nanometrics common stock as merger consideration.

The Nanometrics board of directors unanimously recommends that you vote **FOR** the proposal to approve the issuance of shares of Nanometrics common stock in connection with the merger.

Record Date; Outstanding Shares; Voting Rights

Only holders of record of Nanometrics common stock at the close of business on the Nanometrics record date for the special meeting, May 24, 2006, are entitled to notice of and to vote at the special meeting. As of the Nanometrics record date, there were 13,095,332 shares of Nanometrics common stock outstanding and entitled to vote at the special meeting, held by approximately 140 holders of record. Each record holder of Nanometrics

Table of Contents

common stock on the Nanometrics record date is entitled to one vote for each share of Nanometrics common stock held of record as of the Nanometrics record date with respect to the proposal.

A list of Nanometrics shareholders will be available for review at the Nanometrics special meeting and at the executive offices of Nanometrics during regular business hours for a period of 10 days before the Nanometrics special meeting.

Admission to the Special Meeting

Only Nanometrics shareholders, their designated proxies and guests of Nanometrics may attend the Nanometrics special meeting. If you plan to attend the Nanometrics special meeting and wish to vote in person, you will be given a ballot at the special meeting. Please note, however, that if your shares are held in street name, which means your shares are held of record by a broker, bank or other nominee, and you wish to vote at the Nanometrics special meeting, you must bring to the special meeting a legal proxy from the record holder of your shares authorizing you to attend and vote at the Nanometrics special meeting.

Quorum and Vote Required

A quorum of shareholders is necessary to hold a valid special meeting of Nanometrics shareholders. In order to have a quorum for the transaction of business at the Nanometrics special meeting, a majority of shares of Nanometrics common stock issued and outstanding and entitled to vote on the record date must be present in person or by proxy. Shares that are voted FOR, AGAINST or ABSTAIN a matter are treated as being present at the special meeting for purposes of establishing a quorum.

Approval of the issuance of shares of Nanometrics common stock in the merger will require the affirmative vote of the holders of a majority of the shares of Nanometrics common stock represented and voting at the Nanometrics special meeting.

Voting Agreements

All of the Nanometrics directors and executive officers have entered into voting agreements with Accent Optical pursuant to which they have agreed to vote their shares of Nanometrics common stock in favor of the proposal to approve the issuance of shares of Nanometrics common stock in the merger.

At the close of business on January 25, 2006, the date of the merger agreement, directors and executive officers of Nanometrics and their affiliates beneficially owned or were entitled to vote 4,024,815 shares of Nanometrics common stock, collectively representing approximately 30.9% of the shares of Nanometrics common stock outstanding on that date.

As of the record date for the Nanometrics special meeting, directors and executive officers of Nanometrics and their affiliates owned beneficially or were entitled to vote 4,046,147 shares of Nanometrics common stock, collectively representing approximately 31% of the shares of Nanometrics common stock outstanding on that date.

Voting

General

Nanometrics shareholders of record as of the Nanometrics record date may vote their shares by attending the Nanometrics special meeting and voting their shares in person or by completing, signing and dating their respective proxy cards for the special meeting and mailing them in the postage pre-paid envelope enclosed for that purpose. Nanometrics shareholders holding shares of Nanometrics common stock in street name may vote by mail by completing, signing and dating the voting instruction forms for the Nanometrics special meeting

Table of Contents

provided by their brokers, banks, or other nominee and returning their voting instruction forms as directed therein. Even if you plan to attend the Nanometrics special meeting, Nanometrics recommends that you vote by proxy prior to the special meeting. You can always change your vote as described below.

Voting by Proxy

All properly executed proxies that are received prior to the Nanometrics special meeting and not revoked will be voted at the special meeting according to the instructions indicated on the proxies. If you do not specify how you wish Nanometrics to vote your shares, your shares will be voted **FOR** the proposal to approve the issuance of shares of Nanometrics common stock in connection with the merger.

You may receive more than one proxy card depending on how you hold your shares of Nanometrics common stock. Generally, you need to sign and return all of your proxy cards to vote all of your shares. For example, if you hold shares through someone else, such as a broker, you may get proxy materials from that person.

Changing Your Vote

If you are the record holder of your shares of Nanometrics common stock, you can change your vote at any time before your proxy is voted at the Nanometrics special meeting by:

delivering to the Nanometrics corporate secretary a signed notice of revocation;

providing to the Nanometrics proxy holders a new, later-dated proxy in advance of the vote at the special meeting; or

attending the Nanometrics special meeting and voting in person.

Your attendance alone will not revoke your previously granted proxy.

If you hold your shares in street name and you have provided voting instructions to your broker, bank or other nominee for the Nanometrics special meeting, you must follow the instructions of your broker, bank or other nominee in order to change your vote or revoke your proxy for the Nanometrics special meeting.

Abstentions and Broker Non-Votes

An abstention occurs when a shareholder attends a meeting, either in person or by proxy, but abstains from voting. While there is no definitive statutory or case law authority in California as to the proper treatment of abstentions, Nanometrics believes that abstentions should be counted for purposes of determining both (i) the presence or absence of a quorum for the transaction of business and (ii) the total number of shares of Nanometrics common stock represented and voting with respect to a proposal. In the absence of controlling authority to the contrary, Nanometrics intends to treat abstentions in the following manner:

Broker non-votes are shares held by a broker or other nominee that are represented at the special meeting, but with respect to which the broker or nominee is not instructed by the beneficial owner of the shares to vote on the particular proposal and the broker does not have discretionary voting power on the proposal. Broker non-votes will be counted for purposes of determining the presence or absence of a quorum but will not be counted for purposes of determining the number of shares represented and voting with respect to a proposal.

For the proposal to issue shares of Nanometrics common stock, abstentions will be counted towards a quorum, but will not be counted for any purpose in determining whether the proposal is approved.

Table of Contents

Proxy Solicitation

Nanometrics is soliciting proxies for the Nanometrics special meeting from Nanometrics shareholders. Nanometrics will bear the entire cost of soliciting proxies from Nanometrics shareholders, and Accent Optical has agreed to bear all expenses incurred in connection with its solicitation of proxies from its stockholders including, in each case, expenses incurred in the filing with the SEC of the registration statement of which this joint proxy statement/prospectus forms a part, and the printing and mailing of this joint proxy statement/prospectus and related materials. In addition to the solicitation of proxies by mail, Nanometrics will request that brokers, banks and other nominees send proxies and proxy materials to the beneficial owners of Nanometrics common stock held by them and secure their voting instructions, if necessary. Nanometrics will reimburse those record holders for their reasonable expenses. Nanometrics will also use The Altman Group to solicit proxies from Nanometrics shareholders, either personally or by telephone, internet, telegram, facsimile or special delivery letter. Nanometrics has agreed to pay The Altman Group a fee of \$5,000 plus expenses for its services in connection with the solicitation.

Please do not send in any Nanometrics stock certificates with your proxy cards or voting instruction forms.

Postponements and Adjournments

Postponements and adjournments may be made for the purpose of, among other things, soliciting additional proxies. An adjournment may be made from time to time by approval of the holders of shares representing a majority of the shares present in person or by proxy at the special meeting, whether or not a quorum exists, without further notice other than by an announcement made at the special meeting. Nanometrics does not currently intend to seek a postponement or adjournment of the Nanometrics special meeting.

Assistance

If you need assistance in completing your proxy card or have questions regarding the Nanometrics special meeting, please contact Nanometrics Investor Relations at (408) 435-9600 or write to Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035, Attn: Investor Relations. You may also contact our proxy solicitors, The Altman Group, Inc., 1200 Wall Street West, 3rd Floor, Lyndhurst, NJ 07071, or call them at (800) 884-4969.

Table of Contents

THE ACCENT OPTICAL SPECIAL MEETING

General

This joint proxy statement/prospectus is being provided to Accent Optical stockholders as part of a solicitation of proxies by the Accent Optical board of directors for use at the special meeting of Accent Optical stockholders. This joint proxy statement/prospectus provides Accent Optical stockholders with information they need to know to be able to vote or instruct their vote to be cast at the Accent Optical special meeting.

Date, Time, and Place

The Accent Optical special meeting will be held on [], 2006 at 9:00 a.m., local time, at 1320 SE Armour Drive, Suite B2, Bend Oregon 97702. These proxy solicitation materials were mailed on or about [], 2006 to all stockholders entitled to vote at the special meeting.

Purpose; Other Matters

The Accent Optical Special Meeting is being held to consider and vote upon the following proposals in connection with the merger of Alloy Merger Corporation with and into Accent Optical pursuant to the merger agreement, as amended, to:

- (i) Approve and adopt the merger agreement, as amended, approve the merger and the related transactions, approve the appointment of Sanford S. Wadler as Stockholder Agent and approve the escrow agreement; and
- (ii) Approve payments to certain executive officers in connection with the merger.

Accent Optical stockholders will also be asked to consider and vote upon any other business as may properly come before the special meeting or any adjournments or postponements of the special meeting. Accent Optical does not expect that any matter other than the proposal presented in this joint proxy statement/prospectus will be brought before the Accent Optical special meeting. However, if other matters incident to the conduct of the special meeting are properly presented at the special meeting or any adjournment or postponement of the special meeting, the persons named as proxies will vote in accordance with their best judgment with respect to those matters.

Except as described below, the vote of an Accent Optical stockholder on one proposal has no bearing on any other matter that may come before the Accent Optical special meeting or any adjournment or postponement thereof. In their discretion, the proxies are authorized to vote upon such other business as may properly be presented to the special meeting or any adjournments or postponements thereof. If you vote **AGAINST** the proposal, the proxy holders will not be authorized to vote for any adjournments or postponements of the special meeting, including for the purpose of soliciting additional proxies, unless you so indicate by marking the appropriate box on the proxy card for the special meeting.

Recommendation of the Accent Optical Board of Directors

After careful consideration, the Accent Optical board of directors has approved and adopted the merger agreement, as amended, approved the merger and related transactions, approved the appointment of Mr. Wadler as Stockholder Agent, adopted and approved the escrow agreement and approved payments to certain executive officers in connection with the merger and has unanimously determined that the merger agreement, as amended, the merger and related transactions, the appointment of Mr. Wadler as Stockholder Agent, the escrow agreement and payments to certain executive officers in connection with the merger are fair to, and in the best interests of, Accent Optical and its stockholders. Accordingly, the board of directors unanimously recommends to the Accent Optical stockholders that they vote **FOR** the approval and adoption of the merger agreement, as amended,

Table of Contents

approval of the merger and related transactions, the approval of the appointment of Mr. Wadler as Stockholder Agent and the approval of the escrow agreement. The Accent Optical board of directors also recommends to the Accent Optical stockholders being asked to approve payments to certain executive officers in connection with the merger that they vote FOR the approval of such payments.

Record Date; Outstanding Shares; Voting Rights

Only holders of record of Accent Optical shares at the close of business on the Accent Optical record date for the special meeting, [], are entitled to notice of and to vote at the special meeting. As of the Accent Optical record date, there were 141,439,274 shares of Accent Optical Common Stock, 9,444,8334 shares of Accent Optical Series A Preferred Stock, and 7,787,804 shares of Accent Optical Convertible Preferred Stock outstanding. Each record holder of Accent Optical capital stock on the Accent Optical record date is entitled to one vote for each share of Accent Optical capital stock held of record as of the Accent Optical record date, on an as converted to common stock basis, with respect to the proposals. A list of Accent Optical stockholders will be available for review at the Accent Optical special meeting and at the executive offices of Accent Optical during regular business hours for a period of 10 days before the Accent Optical special meeting.

Admission to the Special Meeting

Only Accent Optical stockholders, their designated proxies and guests of Accent Optical may attend the Accent Optical special meeting. If you plan to attend the Accent Optical special meeting and wish to vote in person, you will be given a ballot at the special meeting.

Quorum and Vote Required

A quorum of stockholders is necessary to hold a valid special meeting of Accent Optical stockholders. In order to have a quorum for the transaction of business at the Accent Optical special meeting, a majority of each class and series of shares of Accent Optical capital stock issued and outstanding and entitled to vote on the record date must be present in person or by proxy. Shares that are voted FOR, AGAINST or ABSTAIN a matter are treated as being present at the special meeting for purposes of establishing a quorum.

The vote required to approve and adopt the merger agreement, as amended, approve the merger and the related transactions, approve the appointment of Sanford S. Wadler as Stockholder Agent and approve the escrow agreement is the following:

- (i) the affirmative vote of the holders of the majority of the outstanding shares of Accent Optical Convertible Preferred Stock and Accent Optical Common Stock, voting together as a single class on an as-converted basis;
- (ii) the affirmative vote of the holders of a majority of the outstanding shares of Accent Optical Series A Preferred Stock;
- (iii) the affirmative vote of the holders of a majority of the outstanding shares of Accent Optical Convertible Preferred Stock; and
- (iv) the affirmative vote of the holders of a majority of the outstanding shares of Accent Optical Common Stock.

The vote required to approve the payments to certain executive officers in connection with the merger is the affirmative vote of the holders of at least 75% of the outstanding shares of Accent Optical Preferred Stock and Accent Optical Common Stock, voting together as a single class on an as-converted basis, not including the shares owned or constructively owned by the executive officers receiving such payments.

Table of Contents

Voting Agreements

Each of Peter M. and Lindsay M. Joost, Trustees, U/T/A dated April 11, 2002, JFI II, LP, Rhine 2000 Children's Trust, Jeffrey J. Rosen, Joseph Dox, Rajeev Mundhe, Gregory A. Kaiser, Kaiser Family Trust U/A dated June 20, 2000, Bruce Crawford, Reid Langrill, Bruce C. Rhine and Martha H. Rhine, JTWROS, Bruce Charles Rhine and Martha Hawn Rhine Family Trust U/T/A dated February 6, 2002, MCP Global Corporation Ltd., RS Coinvestment, LLC and Bio-Rad entered into a voting agreement with Nanometrics and Alloy Merger Corporation, agreeing to vote all of the stockholder's shares of Accent Optical capital stock, including shares of Accent Optical capital stock acquired after the date of the voting agreements, in favor of the adoption and approval of the merger agreement, as amended, the approval of the merger and the related transactions, the approval of the appointment of Sanford S. Wadler as Stockholder Agent and the approval of the escrow agreement. The voting agreements originally contained the agreement of each of these stockholders to vote his, her or its shares in favor of the approval of payments to certain Accent Optical executive officers pursuant to Section 280G of the Internal Revenue Code. Nanometrics and Alloy Merger Corporation subsequently waived this requirement in order to provide all Accent Optical stockholders the ability to exercise their voting rights with respect to the executive officer payments independently.

At the close of business on January 25, 2006, the date of the merger agreement, and [], the record date for the Accent Optical special meeting, these stockholders and their affiliates beneficially owned and were entitled to vote 124,193,172 shares of Accent Optical Common Stock, collectively representing approximately 87.9% of the shares of Accent Optical Common Stock outstanding on that date; 8,396.77 shares of Accent Optical Series A Preferred Stock, collectively representing approximately 88.9% of the shares of Accent Optical Series A Preferred Stock outstanding on that date; and 5,036,584 shares of Accent Optical Convertible Preferred Stock, collectively representing approximately 64.7% of the shares of Accent Optical Convertible Preferred Stock outstanding on that date.

Voting

General

Accent Optical stockholders of record as of the Accent Optical record date may vote their shares by attending the Accent Optical special meeting and voting their shares in person or by completing, signing and dating their respective proxies for the special meeting and mailing them in the postage pre-paid envelope enclosed for that purpose. Even if you plan to attend the Accent Optical special meeting, Accent Optical recommends that you vote by proxy prior to the special meeting. You can always change your vote as described below.

Voting by Proxy

All properly executed proxies that are received prior to the Accent Optical special meeting and not revoked will be voted at the special meeting according to the instructions indicated on the proxies. If you do not specify how you wish Accent Optical to vote your shares, your shares will be voted FOR the proposals.

You may receive more than one proxy depending on how you hold your shares of Accent Optical capital stock. Generally, you need to sign and return all of your proxies to vote all of your shares.

Changing Your Vote

If you are the record holder of your shares of Accent Optical capital stock, you can change your vote at any time before your proxy is voted at the Accent Optical special meeting by:

delivering to the Accent Optical corporate secretary a signed notice of revocation;

providing to the Accent Optical proxy holders a new, later-dated proxy in advance of the vote at the special meeting; or

Table of Contents

attending the Accent Optical special meeting and voting in person.
Your attendance alone will not revoke your previously granted proxy.

Abstentions

An abstention occurs when a stockholder physically attends a meeting but refrains from voting, or when a stockholder marks their proxy ABSTAIN. Abstentions will be included in determining the number of shares present and voting at the Accent Optical special meeting for the purpose of determining the presence of a quorum. A stockholder who attends the Accent Optical meeting in person but abstains from voting, or who marks their proxy ABSTAIN will be, in effect, voting against the proposals.

Proxy Solicitation

Accent Optical is soliciting proxies for the Accent Optical special meeting from Accent Optical stockholders. Accent Optical will bear the entire cost of soliciting proxies from Accent Optical stockholders, and Nanometrics has agreed to bear all expenses incurred in connection with its solicitation of proxies from its shareholders including, in each case, expenses incurred in the filing with the SEC of the registration statement of which this joint proxy statement/prospectus forms a part, and the printing and mailing of this joint proxy statement/prospectus and related materials.

Do not send in any stock certificates with your proxy cards. The exchange agent for the merger will mail transmittal forms with instructions for the surrender of stock certificates representing Accent Optical shares to former Accent Optical stockholders as soon as practicable after the completion of the merger.

Postponements and Adjournments

Postponements and adjournments may be made for the purpose of, among other things, soliciting additional proxies. An adjournment may be made from time to time by approval of the holders of shares representing a majority of the shares present in person or by proxy at the special meeting, whether or not a quorum exists, without further notice other than by an announcement made at the special meeting. Accent Optical does not currently intend to seek a postponement or adjournment of the Accent Optical special meeting.

Assistance

If you need assistance in completing your proxies or have questions regarding the Accent Optical special meeting, please contact Accent Optical's Chief Executive Officer at (541) 322-2500 or write to Accent Optical Technologies, Inc., 1320 SE Armour Drive, Suite B2, Bend, Oregon 97702, Attn: Chief Executive Officer.

Table of Contents

PROPOSAL ONE THE MERGER

Background of the Merger

In their ongoing evaluations of their respective businesses, the Nanometrics and Accent Optical boards of directors have, in the past, periodically considered various strategic opportunities to enhance their respective brands and build shareholder value. Nanometrics had, from time to time over the past several years, begun preliminary discussions with various parties, including Accent Optical, with respect to potential strategic transactions.

As a result of the abandonment of its plans for an initial public offering of common stock in 2004, Accent Optical's board of directors increasingly focused on selling all or a part of its business to improve its ability to fund its operations and growth. In March 2005, Accent Optical retained Merrill Lynch as a financial advisor in connection with consideration of such transactions. With Merrill Lynch's assistance, Accent Optical continued to contact potential purchasers in order to discuss the sale of all or a part of the Accent Optical business.

In July 2005, John D. Heaton, the President and Chief Executive Officer of Nanometrics, met with Bruce C. Rhine, Chairman and Chief Executive Officer of Accent Optical, at a trade show in San Francisco, California. During the meeting, Messrs. Heaton and Rhine discussed the potential for Nanometrics to purchase Accent Optical's overlay metrology business.

As a result of this meeting, Messrs. Heaton and Rhine continued periodic discussions regarding the potential asset purchase.

Beginning in September 2005, Mr. Heaton, along with Douglas J. McCutcheon, Nanometrics' Chief Financial Officer, and a representative of Headgate Partners LLC, a consulting firm representing Nanometrics, had several teleconferences with Mr. Rhine, other representatives of Accent Optical and Merrill Lynch about a potential asset purchase.

On October 4, 2005, Messrs. Heaton and McCutcheon had a telephone conference with Mr. Rhine and Reid Langrill, Accent Optical's Chief Financial Officer, during which those present discussed a broader strategic transaction between the parties that could include a purchase of additional assets or a merger of the two companies.

Thereafter, on October 13, 2005, Messrs. McCutcheon and Langrill had a telephone discussion regarding the financial performance and finance organization of the respective companies. They also discussed potential synergies that could result from the proposed strategic transaction.

On October 17, 2005, Messrs. Heaton and McCutcheon discussed the terms of a proposed strategic transaction with Mr. Rhine and a representative of Merrill Lynch. The transaction contemplated was an all-stock acquisition of Accent Optical by Nanometrics.

On October 18, 2005, a representative of Merrill Lynch called Mr. McCutcheon to discuss further the proposed strategic transaction. Subsequently, during a call on October 21, 2005, Accent Optical proposed modifications to the nonbinding preliminary proposal made on October 17, 2005 by Messrs. Heaton and McCutcheon.

On October 25, 2005, Messrs. Heaton and McCutcheon spoke by telephone with Mr. Rhine and a representative of Merrill Lynch. During that call, the representatives of Nanometrics indicated that Nanometrics was unwilling to accept the changes proposed by Accent Optical on October 21, 2005. Mr. Heaton subsequently confirmed the discussion in an e-mail to Mr. Rhine.

On October 28, 2005, Messrs. Heaton and McCutcheon and a representative of Headgate Partners had a telephone conference with Mr. Rhine and representatives of Merrill Lynch. During the conference, the

Table of Contents

Nanometrics representatives discussed a revised nonbinding proposal by Nanometrics to acquire Accent Optical. Subsequently, via e-mail on October 31, 2005, Mr. Heaton confirmed terms of the nonbinding proposal to Mr. Rhine.

On November 3, 2005, Messrs. Heaton and McCutcheon and a representative of Headgate Partners had another call with Mr. Rhine to review in greater detail the terms and conditions of the nonbinding proposal. During a November 4, 2005 conference call with representatives of Nanometrics, Accent Optical, Headgate Partners and Merrill Lynch presented certain proposed revisions to Nanometrics' proposal. Later that day, Mr. Heaton indicated via e-mail to Mr. Rhine that Nanometrics was not amenable to the proposed revisions and suggested that Nanometrics and Accent Optical discontinue discussions.

On November 5, 2005, Mr. Rhine and Mr. Heaton spoke by telephone and Mr. Rhine reinforced Accent Optical's interest in pursuing a business combination transaction with Nanometrics. In that meeting, Messrs. Heaton and Rhine preliminarily agreed to negotiate the acquisition of Accent Optical by Nanometrics pursuant to the November 3, 2005 nonbinding proposal.

On November 14, 2005, Mr. Rhine traveled to Nanometrics' headquarters in Milpitas, California to meet with Messrs. Heaton and McCutcheon and Vincent Coates, Chairman of the Nanometrics board of directors. During the meetings, the parties agreed to begin drafting a confidentiality agreement and preliminary term sheet to guide future discussions and the negotiation of a definitive agreement.

On November 18, 2005, representatives of Wilson Sonsini Goodrich & Rosati, Professional Corporation (WSGR), Nanometrics' legal counsel, sent drafts of a non-binding preliminary term sheet and confidentiality agreement to representatives of Perkins Coie LLP, Accent Optical's legal counsel. Representatives of WSGR and Perkins Coie continued to negotiate the confidentiality agreement and non-binding term sheet from November 18, 2005, to November 29, 2005.

On November 29, 2005, Mr. Rhine and Mr. Heaton discussed the substantive open issues on the preliminary term sheet and confidentiality agreement and scheduled a trip for Mr. Heaton to visit the Accent Optical facilities in Bend, Oregon.

On November 30, 2005, the Nanometrics board of directors had a regularly scheduled meeting. Also present were Mr. McCutcheon and representatives of WSGR. In addition to the regularly scheduled agenda items, Mr. Heaton reviewed the status of discussions regarding the proposed acquisition of Accent Optical by Nanometrics. Mr. Heaton also reviewed anticipated strategic and operational benefits of a transaction with Accent Optical. During the meeting, the Nanometrics board of directors authorized management to continue negotiations with Accent Optical and to enter into the non-binding term sheet and confidentiality agreement with such revisions as would be approved by Messrs. Heaton and McCutcheon and legal counsel.

On December 2, 2005, Mr. Heaton met with Messrs. Rhine and Langrill at Accent Optical's headquarters in Bend, Oregon to discuss Accent Optical's business and intellectual property. On December 3, 2005, Messrs. Heaton and Rhine discussed by telephone the remaining unresolved issues on the non-binding term sheet and confidentiality agreement.

On December 5, 2005, the Accent Optical board of directors met to consider the proposed acquisition as well as the preliminary non-binding term sheet and confidentiality agreement. Also present at the meeting were Mr. Langrill and representatives of Merrill Lynch and Perkins Coie. Mr. Rhine presented the proposal from Nanometrics, including the proposed exclusivity period through January 10, 2006. After discussion, the Accent Optical authorized Mr. Rhine to enter into the non-binding term sheet and confidentiality agreement on substantially the terms presented.

Table of Contents

On December 5, 2005, Nanometrics and Accent Optical executed the confidentiality agreement and non-binding term sheet. The confidentiality agreement provided for an exclusive negotiating period through January 10, 2006.

On December 6, 2005, representatives of WSGR and Perkins Coie discussed the protocol for due diligence meetings and the exchange of materials. From December 6, 2005 through December 9, 2005, Nanometrics management met with several investment banks to discuss potentially retaining them.

From December 11, 2005 to December 14, 2005, Mr. Heaton, Quentin Wright, Nanometrics Chief Accounting Officer, Paul Bacchi, Executive Director of Nanometrics, and a representative of Cowen visited Accent Optical's facilities in York, England with Mr. Rhine and Bruce Crawford, President and Chief Operating Officer of Accent Optical, to perform due diligence on the Accent Optical facilities and operations.

On December 12, 2005, a representative of WSGR circulated a draft of the definitive merger agreement to Messrs. Rhine and Langrill and representatives of Merrill Lynch and Perkins Coie.

From December 14, 2005 to January 25, 2006, representatives of WSGR and Taylor Wessing LLP, English counsel to Nanometrics, conducted legal due diligence review of Accent Optical at Accent Optical's headquarters in Bend, Oregon and at the offices of WSGR and Taylor Wessing. Representatives of Perkins Coie and Merrill Lynch conducted legal or business due diligence of Nanometrics at the offices of WSGR and the representatives' own offices and provided assistance to Accent Optical in its production of documents during the same period.

On December 15, 2005, Mr. McCutcheon and representatives of Cowen met for financial and business due diligence with Messrs. Rhine and Langrill and representatives of Merrill Lynch at Accent Optical's headquarters in Bend, Oregon.

On December 16, 2005, the Nanometrics board of directors held a special meeting at the headquarters of Nanometrics in Milpitas, California. Also present at the meeting were Mr. McCutcheon, a representative of Headgate Partners and representatives of WSGR. Mr. Heaton summarized the status of discussions and due diligence with Accent Optical. A representative of WSGR provided a summary of the legal due diligence review to date. After discussion of various financial advisor candidates, the Nanometrics board of directors formally authorized Messrs. Heaton and McCutcheon to retain Cowen.

On December 21, 2005, Messrs. Heaton, McCutcheon and Rhine and representatives of Perkins Coie and WSGR met at the offices of WSGR in Palo Alto, California to negotiate the terms of the merger agreement and a proposed working capital loan to Accent Optical. In addition, those present discussed the impact of the proposed consideration on the liquidation preferences set forth in Accent Optical's certificate of incorporation, as well as certain change of control payments due to Bio-Rad pursuant to the terms of the July 31, 2000 agreement under which Accent Optical purchased the intellectual property and other assets of Bio-Rad's Semiconductor Measurements Division. On December 24, 2005, a representative of WSGR circulated a revised version of the merger agreement reflecting the discussions at the December 21, 2005 meeting.

On December 22, 2005, the Nanometrics board of directors held a special meeting at Nanometrics' headquarters in Milpitas, California. Also present at the meeting were Mr. McCutcheon, a representative of Headgate Partners and representatives of Cowen and WSGR. Mr. Heaton updated the board of directors regarding the status of his discussions with Accent Optical. A representative of WSGR provided a summary of the discussions on the merger agreement. Finally, representatives of Cowen then discussed their preliminary financial analysis of the proposed merger and Nanometrics' and Accent Optical's historical financial performance.

On December 29, 2005, representatives of WSGR circulated drafts of the form of promissory note, escrow agreement, and employment agreement to Perkins Coie for review.

Table of Contents

On December 30, 2005, Messrs. Rhine and Heaton spoke on the telephone regarding the allocation of the proposed consideration in an acquisition of Nanometrics and, as an alternative, the sale of Accent Optical's overlay metrology business to Nanometrics.

From January 2, 2006 to January 6, 2006, Messrs. Heaton and Rhine spoke several times regarding the proposed asset sale term sheet. On January 4, 2006, Mr. Heaton circulated a draft of a non-binding asset sale term sheet to Mr. Rhine. Mr. Heaton circulated a revised version to Mr. Rhine on January 6, 2006, as well as an amendment to the confidentiality agreement, extending the exclusivity period until January 14, 2006.

On January 6, 2005, Mr. Rhine contacted Mr. Heaton to discuss the concerns of Accent Optical's board of directors and management that the impact of the Bio-Rad change of control payment and preference amounts due to holders of Accent Optical Preferred Stock would result in an unsatisfactory outcome in which holders of Accent Optical Common Stock would not approve the merger as they would receive almost no consideration in the merger.

On January 9, 2006, Accent Optical and Bio-Rad reached a tentative agreement to restructure and reduce the change of control payment conditioned upon the acceptance of concessions by Accent Optical's preferred stockholders.

On January 10, 2006, the Accent Optical board of directors met. Representatives of Perkins Coie were present at the invitation of the board. Mr. Rhine provided the board with an update of the merger negotiations and ongoing efforts to structure the proposed sale in a manner that would benefit all of Accent Optical's stockholders by seeking to obtain concessions from its preferred stockholders and from Bio-Rad with respect to its right to a change of control payment, in order to provide some consideration for its common stockholders. Mr. Rhine also indicated that management was analyzing an alternative proposal to sell only its overlay and scatterometry business to Nanometrics, and that more time was needed to determine whether the alternative transaction was more favorable for Accent Optical and its stockholders. The board authorized management to complete the analysis and to extend the exclusivity period with Nanometrics.

On January 10, 2006, Accent Optical and Nanometrics executed an amended confidential agreement, which extended the exclusivity period until January 14, 2006.

On January 12, 2006, Accent Optical and RS Coinvestment Fund, LLC, the holder of the largest number of shares of Accent Optical Convertible Preferred Stock, reached an agreement pursuant to which RS Coinvestment agreed to restructure its liquidation preference and to vote in favor of the allocation of consideration with respect to the proposed merger.

Also on January 12, 2006, the Nanometrics board of directors held a special meeting. Also present were Mr. McCutcheon, a representative of Headgate Partners and representatives of Cowen and WSGR. At the meeting, Mr. Heaton provided a summary of his recent discussions with Mr. Rhine. The board of directors approved a revised asset sale term sheet presented to them at the meeting and authorized management to move forward with the transaction described therein in the event that Accent Optical was unwilling or unable to agree to be acquired.

On January 13, 2006, Messrs. Heaton and Rhine executed an amendment to the confidentiality agreement extending the exclusivity period to January 21, 2006.

On January 18, 2006, the Accent Optical board of directors met. Mr. Rhine presented management's analysis of the competing proposals to sell either the entire company, or just the overlay and scatterometry businesses, to Nanometrics. The Board authorized management to continue negotiation of the merger as well as the existing preferences and to further extend the exclusivity period if needed. Mr. Rhine and representatives of Bio-Rad and certain holders of Accent Optical's Preferred Stock reached an agreement to restructure the Bio-Rad

Table of Contents

change of control payment and the liquidation preferences of the Preferred Stock in connection with an acquisition, as contemplated by the December 5, 2005 non-binding term sheet.

At that time, Mr. Rhine contacted Mr. Heaton to discuss the accommodation reached and Accent Optical's desire to pursue the merger described in the December 5, 2005 non-binding term sheet rather than the sale of the overlay metrology business. Messrs. Heaton and Rhine agreed to proceed on that basis.

On January 19, 2006, Mr. Langrill and representatives of Merrill Lynch had a call with Mr. McCutcheon to discuss Nanometrics' financial outlook.

From January 19 to January 25, 2006, the parties worked on finalizing the definitive merger agreement and the ancillary agreements, including the form of working capital note, employment agreements and the form of escrow agreement. During that same period, Accent Optical was in communication with some of its largest stockholders with respect to the allocation of consideration and to obtain voting agreements. During this period, Messrs. McCutcheon and Langrill had several discussions regarding employment and severance arrangements for the Accent Optical senior executives.

On January 20, 2006, Messrs. Heaton and Rhine discussed certain changes to the merger agreement, including a proposal regarding placing additional limitations on stockholder indemnification obligations under the merger agreement.

On January 21, 2006, Messrs. Heaton, McCutcheon, Rhine and Langrill and representatives of Perkins Coie and WSGR had a call to discuss the status of various agreements, a proposed schedule to signing and any material, open diligence items.

On January 23, 2006, Mr. Langrill discussed a proposal with Mr. McCutcheon, which proposal was subsequently confirmed through a series of e-mails, regarding the treatment of stock options held by Accent Optical employees whose employment was terminated within six months following the closing of the merger and the treatment of the Accent Optical senior executive team.

On January 23, 2006, Mr. McCutcheon advised Mr. Langrill that Nanometrics would accept the proposed acceleration of Accent Optical options held by employees terminated with the six month period following the merger, provided that such employees had not resigned or been terminated for cause.

On January 23, 2006, Mr. McCutcheon discussed the proposed treatment of the Accent Optical senior executives with Mr. Langrill. Mr. McCutcheon advised Mr. Langrill that the proposed employment arrangements relating to the Accent Optical senior executives including the severance provisions and retention options were acceptable to Nanometrics.

On January 24, 2006, the Accent Optical board of directors met. A representative from Perkins Coie reviewed with the board of directors the legal principles applicable to the proposed sale, including the board's fiduciary duties and authority in considering the proposed merger. The representative from Perkins Coie reviewed the terms of the draft merger agreement and related agreements, and the results of Accent Optical's due diligence investigation of Nanometrics. Representatives from Merrill Lynch made a presentation and delivered its oral fairness opinion to the board of directors, later confirmed in writing, that, as of January 24, 2006, based upon the assumptions made, matters considered and limits of such review, the aggregate consideration was fair, from a financial point of view, to holders of Accent Optical capital stock. See *The Merger Opinion of Accent Optical's Financial Advisor* beginning on page 70. Following lengthy board discussions, the board of directors determined that additional time was needed to fully evaluate the merger agreement and related documents.

On January 25, 2006, the Accent Optical board of directors met. Representatives of Merrill Lynch and Perkins Coie were also present. The board of directors reviewed and discussed the process that had been employed to market the company to potential buyers and the strategic and tactical reasons for the merger. After further discussion and extensive deliberation, the board of directors determined that the merger is in the best

Table of Contents

interests of Accent Optical, approved the merger, the merger agreement and the transactions contemplated by the merger agreement, determined to submit the merger and merger agreement to the Accent Optical's stockholders for approval with the board of director's recommendation that they be so approved, and authorized Accent Optical's management to execute and deliver the merger agreement and related agreements.

Thereafter, also on January 25, 2006, the Nanometrics board of directors held a special meeting. Also present were Mr. McCutcheon, a representative of Headgate Partners and representatives of Cowen and WSGR. The Cowen representatives summarized the terms of the proposed merger and the related financial analyses. The WSGR representatives reviewed the draft merger agreement and related agreements, as well as the findings of the legal diligence review by WSGR and Taylor Wessing. The WSGR representatives also reviewed with the Nanometrics board of directors the legal principles applicable to the proposed acquisition, including the board's fiduciary duties and authority in considering the proposed merger and the share issuance by Nanometrics. Following the presentations and discussions, Cowen delivered its oral opinion to the board of directors, later confirmed in writing that, as of January 25, 2006 and based upon and subject to the factors and assumptions set forth in its written opinion, the merger consideration to be issued pursuant to the merger agreement was fair from a financial point of view to Nanometrics. See *The Merger Opinion of Nanometrics Financial Advisor* beginning on page 65. The board of directors discussed the prior negotiations with Accent Optical and again reviewed the strategic rationale for the merger. After further discussion and extensive deliberation, the Nanometrics board of directors approved and declared the merger, the merger agreement and the transactions contemplated by the merger agreement advisable, determined that it was in the best interests of Nanometrics and its shareholders that the company enter into the merger agreement and consummate the merger on the terms and conditions set forth in the merger agreement, resolved to recommend that the Nanometrics shareholders approve the issuance of Nanometrics common stock in the merger, approved the ancillary agreements, and authorized execution of the merger agreement and the ancillary agreements.

On the evening of January 25, 2006, the parties executed the merger agreement and issued a press release announcing the execution of the merger agreement.

On March 31, 2006, the board of directors of Accent Optical acted by written consent to unanimously recommend to the Accent Optical stockholders to vote for the proposal to approve the payments to certain executive officers in connection with the merger.

On June 9, 2006, Nanometrics, Alloy Merger Corporation, Accent Optical and Sanford S. Wadler, as stockholder agent, entered into an amendment to the merger agreement for the purpose of extending the date by which the merger agreement for the purpose of extending the date by which the merger is required to be completed before either Nanometrics or Accent Optical can terminate the merger agreement and providing for Nanometrics to fund an additional \$1,611,238 in working capital loans to Accent Optical in order to satisfy an interest payment due to Bio-Rad on July 9, 2006.

Joint Reasons of Nanometrics and Accent Optical for the Merger

The Nanometrics and Accent Optical boards of directors have consulted with senior management as well as their respective legal counsel and financial advisors, and considered a number of factors in their analysis of the merger agreement and the proposed merger, including but not limited to:

Combining Accent Optical with Nanometrics is expected to create one of the largest independent metrology companies, which would provide an opportunity for increased sales to and support of current Nanometrics and Accent Optical customers by offering a broader product line.

The combined company would have the technical resources of both Nanometrics and Accent Optical, which will enable the combined company to avoid relying on limited technology platforms in developing its products.

The combined company would have a greater product portfolio available to its customers.

Due to the limited overlap of the customer base of Nanometrics and Accent Optical, the combined company is expected to have a much larger customer base.

Table of Contents

The combined company would have greater opportunities for marketing its products due to the creation of worldwide sales and service channels, the expansion of the companies' dedicated sales teams and a higher profile with customers.

The combined company's sales channels are expected to provide a more effective geographic distribution for its products, which would benefit the combined company by increasing market penetration of such products. In particular, Nanometrics' strength in Japan and Accent Optical's strength in Europe would provide the combined company with greater potential sales opportunities.

The shareholders of Nanometrics and the stockholders of Accent Optical will have the opportunity to participate in the potential for growth of the combined company after the merger.

The experience, financial resources, development expertise, size and breadth of product offerings of the combined company may allow it to respond more quickly and effectively to technological change, increased consolidation and industry demands.

The creation of a combined customer service and technical support system may permit the combined company to provide more effective support and broader geographical coverage to its customers and make it more attractive to new customers.

The combined company may enjoy other economies of scale such as combined administrative functions and efficiencies in manufacturing.

Combining Accent Optical with Nanometrics would provide additional depth and experience to the combined company's management team.

The Nanometrics and Accent Optical boards of directors also considered the following additional factors in its deliberations:

information concerning the financial performance, financial condition, business and prospects of Nanometrics and Accent Optical, as well as conditions in the semiconductor equipment industry generally;

information concerning the recent and past stock price performance of Nanometrics common stock;

the prices paid in comparable transactions involving other semiconductor manufacturing equipment companies, as well as the trading performance of the stock of comparable companies in the industry;

the stock-based merger consideration, which preserves the financial strength of the combined company for continued business investment;

the number of shares issuable as consideration, which provide a level of certainty as to the aggregate number of shares of Nanometrics common stock to be issued to Accent Optical stockholders and optionees and the percentage of the total shares of Nanometrics common stock that current Accent Optical stockholders and optionees will own after the merger; and

the conditions to completion of the merger, in particular the likelihood of obtaining the necessary regulatory and shareholder approvals.

Nanometrics Reasons for the Merger

The Nanometrics board of directors considered a number of factors in its analysis of the merger agreement and the proposed merger, in addition to those listed above, including but not limited to:

the shareholders of Nanometrics will have the opportunity to participate in the potential for growth of the combined company after the merger;

an assessment of alternatives to the merger, including development opportunities and other possible acquisition candidates, and the determination that the merger with Accent Optical was the best strategic fit and presented a unique opportunity to enhance and expand Nanometrics operations, product and service offerings and best positioned Nanometrics for future growth;

Table of Contents

the written opinion of Cowen, dated January 25, 2006, that, as of that date, and based upon and subject to the considerations described in its opinion, the full text of which is attached to this joint proxy statement/prospectus as Annex C, the merger consideration to be issued by Nanometrics was fair from a financial point of view to Nanometrics;

the provisions that prohibit Accent Optical from soliciting other acquisition offers; and

the provisions that require Accent Optical to pay Nanometrics expenses and a termination fee of \$5 million, plus expenses, if the merger agreement is terminated due to Accent Optical's failure to obtain the required stockholder approval.

The Nanometrics board of directors also considered a variety of uncertainties and risks in its deliberations concerning the merger. However, the Nanometrics board of directors concluded that the potential benefits of the merger outweighed these risks, which include, without limitation:

the risk that the potential benefits sought in the merger might not be fully realized;

the possibility that the merger might not be completed, or that completion might be unduly delayed, for reasons beyond Nanometrics control;

the possibility that the merger might not be completed and that, in the event that Nanometrics fails to obtain shareholder approval for the issuance of shares in the proposed merger, Nanometrics would be required to pay Accent Optical a termination fee of \$5 million, plus expenses;

the potential dilution of Nanometrics earnings per share as a result of the issuance of the shares in the merger, and the estimated time period for the merger to be accretive to Nanometrics' earnings per share;

the risk that efforts to integrate the two companies may disrupt Nanometrics' operations;

the effect of the public announcement of the merger on Nanometrics' stock prices;

the substantial costs to be incurred in connection with the merger, including the costs of integrating the businesses of Nanometrics and Accent Optical and the transaction expenses arising from the merger;

the risk that, despite Nanometrics' efforts and the efforts of Accent Optical after the merger, Nanometrics may lose key Accent Optical personnel;

the risk that the restrictions on the conduct of Nanometrics' business during the period between the signing of the merger agreement and the completion of the merger may negatively impact Nanometrics' business; and

the other risks described in the section of this joint proxy statement/prospectus entitled *Risk Factors Risks Relating to the Merger* beginning on page 30.

It was not practical to, and thus the Nanometrics board of directors did not, quantify, rank or otherwise assign relative weights to the wide variety of factors it considered in evaluating the merger and the merger agreement, nor did the board of directors determine that any one factor

Edgar Filing: NANOMETRICS INC - Form S-4/A

was of particular importance in deciding that the merger agreement and associated transactions were in the best interests of Nanometrics and its shareholders. This discussion of information and material factors considered by the Nanometrics board of directors is intended to be a summary rather than an exhaustive list. In considering these factors, individual members of the Nanometrics board of directors may have given different weight to different factors. The board of directors conducted an overall analysis of the factors described above, and overall considered the factors to support its decision in favor of the merger and the merger agreement. The decision of each member of the Nanometrics board of directors was based upon his own judgment, in light of all of the information presented, regarding the overall effect of the merger agreement and associated transactions on the Nanometrics shareholders as compared to any potential alternative transactions or courses of action. After considering this information, the members of the Nanometrics board of directors unanimously approved the merger agreement and the transactions contemplated thereby, including the issuance of shares of Nanometrics common stock in the merger and recommended that the Nanometrics shareholders approve the issuance of shares of Nanometrics common stock in the merger.

Table of Contents

Accent Optical's Reasons for the Merger

The board of directors of Accent Optical considered a number of factors in its analysis of the merger agreement and the proposed merger, in addition to those listed above, including but not limited to:

the recent performance of Accent Optical's business and Accent Optical's cash position;

the prospects for Accent Optical's growth and profitability as a stand-alone company and the risks related to such growth and profitability;

the capital requirements to operate Accent Optical's business on a going-forward basis;

the considerable financial resources available from Nanometrics to help develop the Accent Optical business;

the terms on which additional funding might be available to Accent Optical and the related dilution that existing stockholders would suffer as a result of obtaining such additional funding;

the aggregate value of the merger consideration payable to Accent Optical stockholders pursuant to the merger agreement;

the written opinion of Merrill Lynch, dated January 24, 2006, that, as of that date, and based upon and subject to the assumptions made, matters considered and limits of review, as further described in its opinion, the full text of which is attached to this joint proxy statement/prospectus as Annex D, the aggregate consideration was fair, from a financial point of view, to holders of Accent Optical capital stock;

the fact that the Accent Optical stockholders would receive Nanometrics common stock in the merger, which provides them the opportunity to participate in the potential growth of the combined company following the merger as shareholders of Nanometrics and the opportunity to hold publicly traded stock;

the current financial market conditions and historical market prices, volatility and trading information with respect to Nanometrics common stock;

the fact that the merger is structured such that Accent Optical stockholders would not be immediately taxed on merger consideration consisting of Nanometrics common stock;

the conditions to completion of the merger, in particular the likelihood of obtaining the necessary regulatory and stockholder approvals;

the interests that certain executive officers and directors of Accent Optical may have with respect to the merger. See the section of this proxy statement/prospectus entitled *Interests of Accent Optical Directors and Executive Officers in the Merger* beginning on page 76;

the costs associated with being a public company if Accent Optical pursued its own public offering as a way to access additional capital for its business and liquidity for its stockholders; and

the other strategic alternatives available to Accent Optical discussed above under *Background of the Merger* beginning on page 55. The Accent Optical board of directors also considered a variety of uncertainties and risks in its deliberations concerning the merger. However, the Accent Optical board of directors concluded that the potential benefits of the merger outweighed these risks, which include, without limitation:

the risk that the potential benefits sought in the merger might not be fully realized;

the possibility that the merger might not be completed, or that completion might be unduly delayed, for reasons beyond Accent Optical's control;

the possibility that the merger might not be completed and that, if it failed to obtain the required stockholder approval, Accent Optical might be required to pay Nanometrics a termination fee of \$5 million, plus expenses;

Table of Contents

the provisions that prohibit Accent Optical from soliciting other acquisition offers;

the substantial costs to be incurred in connection with the merger, including the costs of integrating the businesses of Accent Optical and Nanometrics and the transaction expenses arising from the merger;

the risk that the restrictions on the conduct of Accent Optical's business during the period between the signing of the merger agreement and the completion of the merger may negatively impact Accent Optical's business;

the risk that efforts to integrate the two companies would disrupt Accent Optical's operations;

the risk that Nanometrics may be unable to retain key personnel of the combined company; and

the other risks described in the section of this joint proxy statement/prospectus entitled *Risk Factors Risks Relating to the Merger* beginning on page 30.

It was not practical to, and thus the Accent Optical board of directors did not, quantify, rank or otherwise assign relative weights to the wide variety of factors it considered in evaluating the merger and the merger agreement, nor did the board of directors determine that any one factor was of particular importance in deciding that the merger agreement and associated transactions were in the best interests of Accent Optical and its stockholders. This discussion of information and material factors considered by the Accent Optical board of directors is intended to be a summary rather than an exhaustive list. In considering these factors, individual members of the Accent Optical board of directors may have given different weight to different factors. The board of directors conducted an overall analysis of the factors described above, and overall considered the factors to support its decision in favor of the merger, the merger agreement and the related transactions. The decision of each member of the Accent Optical board of directors was based upon his own judgment, in light of all of the information presented, regarding the overall effect of the merger agreement and associated transactions on the Accent Optical stockholders as compared to any potential alternative transactions or courses of action. After considering this information, the members of the Accent Optical board of directors unanimously approved the merger, the merger agreement and the transactions contemplated thereby and recommended that the Accent Optical stockholders approve the proposal to approve and adopt the merger agreement and approve the merger, the appointment of Mr. Wadler as Stockholder Agent and the escrow agreement.

Recommendation of the Nanometrics Board of Directors

The Nanometrics board of directors believes there are substantial benefits to the Nanometrics shareholders that can be obtained as a result of the merger. At a meeting held on January 25, 2006, the Nanometrics board of directors unanimously determined that the merger and the other transactions contemplated by the merger agreement, including the issuance of shares of Nanometrics common stock as consideration in the merger, are advisable and in the best interests of Nanometrics and the Nanometrics shareholders. Thereafter, the Nanometrics board of directors unanimously resolved to recommend that the Nanometrics shareholders approve the issuance of shares of Nanometrics common stock in the merger.

The Nanometrics board of directors unanimously recommends that the Nanometrics shareholders vote FOR Nanometrics proposal to approve the issuance of shares of Nanometrics common stock in the merger.

Table of Contents

Recommendation of the Accent Optical Board of Directors

The Accent Optical board of directors believes there are substantial benefits to the Accent Optical stockholders that can be obtained as a result of the merger. At a meeting held on January 25, 2006, the Accent Optical board of directors unanimously determined that the merger agreement, the merger and the related transactions, including the appointment of Mr. Wadler as Stockholder Agent and the escrow agreement and the payments to certain executive officers, are advisable and in the best interests of Accent Optical and the Accent Optical stockholders. Thereafter, the Accent Optical board of directors unanimously resolved to recommend that the Accent Optical stockholders approve adoption of the merger agreement, the merger, the appointment of Mr. Wadler as Stockholder Agent and the escrow agreement and approve the payments to certain executive officers.

The Accent Optical board of directors unanimously recommends that Accent Optical stockholders vote FOR the proposal to approve and adopt the merger agreement, as amended, and approve the merger, the appointment of Mr. Wadler as Stockholder Agent and the escrow agreement and FOR the proposal to approve the payments to certain executive officers.

Opinion of Nanometrics Financial Advisor

On January 25, 2006, Cowen delivered its opinion to the Nanometrics board of directors that, subject to the various assumptions set forth therein, as of January 25, 2006, the consideration to be paid in the merger was fair, from a financial point of view, to Nanometrics.

The full text of the written opinion of Cowen, dated January 25, 2006, is attached to this joint proxy statement/prospectus as Annex C. Holders of Nanometrics common stock are urged to read the opinion in its entirety for the assumptions made, procedures followed, other matters considered and limits of the review undertaken in connection with the opinion by Cowen. The summary of the written opinion of Cowen set forth herein is qualified in its entirety by reference to the full text of such opinion. Cowen's analyses and opinion were prepared for and addressed to the Nanometrics board of directors and are directed only to the fairness, from a financial point of view, to Nanometrics of the consideration to be paid in the merger, and do not constitute an opinion as to the merits of the merger or a recommendation to any shareholder as to how to vote on the proposed merger. The consideration paid in the merger was determined through negotiations between Nanometrics and Accent Optical and not pursuant to recommendations of Cowen.

In arriving at its opinion, Cowen reviewed and considered such financial and other matters as it deemed relevant, including, among other things:

a draft of the merger agreement dated January 23, 2006;

certain publicly available financial and other information for Nanometrics, and certain other relevant financial and operating data furnished to Cowen by Nanometrics;

certain publicly available financial and other information for Accent Optical, and certain other relevant financial and operating data furnished to Cowen by Accent Optical and Nanometrics;

certain internal financial analyses, financial forecasts, reports and other information concerning Nanometrics and Accent Optical prepared by the managements of Nanometrics and Accent Optical, respectively, as well as the amounts and timing of the cost savings and related expenses expected to result from the merger furnished to Cowen by Nanometrics;

First Call estimates and financial projections in Wall Street analyst reports for Nanometrics;

discussions Cowen had with certain members of the managements of each of Nanometrics and Accent Optical concerning their respective historical and current business operations and financial conditions and the prospects of Nanometrics and Accent Optical, the expected synergies and such other matters Cowen deemed relevant;

Table of Contents

certain operating results and the reported price and trading history of the shares of the common stock of Nanometrics compared to the operating results and reported price and trading histories of certain publicly traded companies Cowen deemed relevant;

certain financial terms of the merger as compared to the financial terms of certain selected business combinations Cowen deemed relevant; and

certain anticipated pro forma financial effects of the merger excluding goodwill of the merger on an accretion/dilution basis.

In conducting its review and arriving at its opinion, Cowen, with Nanometrics' consent, assumed and relied, without independent investigation, upon the accuracy and completeness of all financial and other information provided to it by Nanometrics and Accent Optical or which was publicly available. Cowen further relied upon the assurance of management of Nanometrics that they were unaware of any facts that would make the information provided to Cowen incomplete or misleading in any respect. In addition, Cowen did not conduct any physical inspection of the properties or facilities of Nanometrics or Accent Optical. Cowen, with Nanometrics' consent, assumed that the financial forecasts and synergies provided to Cowen were reasonably prepared by the management of Nanometrics, and reflected the best available estimates and good faith judgments of such management as to the future performance of Nanometrics and the synergies. Management of each of Nanometrics and Accent Optical confirmed to Cowen, and Cowen assumed, with Nanometrics' consent, that each of the financial forecasts and synergies, and the First Call estimates and analyst projections utilized in Cowen's analyses with respect to Nanometrics and Accent Optical provided a reasonable basis for its opinion.

Cowen did not make or obtain any independent evaluations, valuations or appraisals of the assets or liabilities of Nanometrics or Accent Optical, nor was Cowen furnished with these materials. Cowen's services to Nanometrics in connection with the merger were limited to rendering an opinion from a financial point of view of the consideration paid in the merger. Cowen's opinion was necessarily based upon economic and market conditions and other circumstances as they existed and could be evaluated by Cowen on the date of its opinion. Cowen assumed that the final form of the merger agreement would be substantially similar to the last draft received by Cowen prior to rendering its opinion. Cowen also assumed that all governmental, regulatory and other consents and approvals contemplated by the merger agreement would be obtained and that, in the course of obtaining any of those consents, no restrictions will be imposed or waivers made that would have an adverse effect on the contemplated benefits of the merger.

Cowen's opinion does not constitute a recommendation to any Nanometrics shareholder or Accent Optical stockholder as to how such person should vote on the matters set forth in this joint proxy statement/ prospectus. Cowen's opinion does not imply any conclusion as to the likely trading range for Nanometrics common stock following consummation of the merger or otherwise, which may vary depending on numerous factors that generally influence the price of securities. Cowen expresses no opinion as to the underlying business reasons that may support the decision of the Nanometrics board to approve, or Nanometrics' decision to consummate, the merger.

The following is a summary of the principal financial analyses performed by Cowen to arrive at its opinion. Some of the summaries of financial analyses include information presented in tabular format. In order to fully understand the financial analyses, the tables must be read together with the text of each summary. The tables alone do not constitute a complete description of the financial analyses, nor does the order of the analyses described represent the relative importance or weight given to those analyses by Cowen. Considering the data set forth in the tables without considering the full narrative description of the financial analyses, including the methodologies and assumptions underlying the analyses, could create a misleading or incomplete view of the financial analyses. Cowen performed certain procedures, including each of the financial analyses described below, and reviewed with the management of Nanometrics the assumptions on which such analyses were based and other factors, including the historical and projected financial results of Nanometrics and Accent Optical.

Table of Contents

Analysis of Selected Transactions. Cowen reviewed the financial terms, to the extent publicly available, of selected transactions referred to as the Precedent Transactions involving the acquisition of companies in the semiconductor capital equipment industry, which were announced or completed since January 1, 2001. These Precedent Transactions were (listed as acquirer/target):

Brooks Automation Inc. / Helix Technology Corp.

Entegris Inc. / Mykrolis Corp.

Aviza Technology Inc. / Trikon Technologies Inc.

Helix Technology Corp. / ICG Polycold Systems Inc.

Toppan Printing Co. Ltd. /DuPont Photomasks Inc.

Applied Materials Inc. / Metron Technology N.V.

AIXTRON AG/ Genus, Inc.

Novellus Systems Inc. / Peter Wolters AG

GSI Group, Inc. / MicroE Systems Corp.

Credence Systems Corp. / NPTest Holding LLC

Veeco Instruments Inc. / Emcore Corp. MOCVD Business

Partnership led by Francisco Partners Inc. / NPTest Holding Corp.

Investor Group Ltd. / CoorsTek Inc.

Novellus Systems Inc. / SpeedFam-IPEC Inc.

Newport Corp. / Micro Robotics Systems Inc.

MKS Instruments Inc. / ENI Division of Emerson Electric Co.

Brooks Automation Inc. / PRI Automation Inc.

Veeco Instruments Inc. / Applied EPI Inc.

Teradyne Inc. / GenRad Inc.

Credence Systems Corp. / Integrated Measurement Systems Inc.

Brooks Automation Inc. / SEMY Engineering Inc.

Cowen reviewed the market capitalization of common stock plus total debt less cash and equivalents (the Enterprise Value) paid in the Precedent Transactions as a multiple of the last quarter annualized (LQA) revenues, the latest reported twelve month (LTM) revenues and the estimated next twelve month (NTM) revenues, and also examined the multiples of equity value paid in the Precedent Transactions to NTM earnings.

The following table presents, for the periods indicated, the multiples implied by the ratio of Enterprise Value to LTM revenues and NTM revenue, and the ratio of equity value to NTM earnings. The information in the table was based on the closing sale price of Nanometrics stock as reported on the Nasdaq Stock Market on January 24, 2006.

	Precedent Transactions				Multiple Implied by
	1 st Quartile	Mean	Median	3 rd Quartile	Consideration Paid
Enterprise Value / LTM Revenue	1.3 x	1.8 x	1.9 x	2.3 x	1.9 x
Enterprise Value / NTM Revenue	1.5 x	1.8 x	1.8 x	2.1 x	1.5 x
Equity Value / NTM Earnings	30 x	37 x	37 x	46 x	24 x ^(a)

(a) Equity Value / NTM Earnings assumes earnings are fully taxed at 36%.

Although the Precedent Transactions were used for comparison purposes, none of those transactions is directly comparable to the merger, and none of the companies in those transactions is directly comparable to Nanometrics or Accent Optical. Accordingly, an analysis of the results of such a comparison is not purely mathematical, but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the companies involved and other factors that could affect the acquisition value of such companies or Accent Optical to which they are being compared.

Table of Contents

Analysis of Selected Publicly Traded Companies. To provide contextual data and comparative market information, Cowen compared selected historical operating and financial data and ratios for Accent Optical to the corresponding financial data and ratios of certain other companies (the Selected Companies) whose securities are publicly traded and which Cowen believes have operating, market valuation and trading valuations similar to what might be expected of Accent Optical. These Selected Companies were:

ADE Corporation

FEI Company

KLA-Tencor Corp.

Nanometrics Incorporated

Nova Measuring Instruments Ltd.

Rudolph Technologies, Inc.

Therma-Wave, Inc.

Veeco Instruments Inc.

Zygo Corporation

The data and ratios included the Enterprise Value of the Selected Companies as multiples of LQA revenues, estimated 2005 calendar year revenues and estimated 2006 calendar year revenues. Cowen also examined the ratios of the current share prices of the Selected Companies to estimated 2006 calendar year earnings per share (EPS) (as available from research analyst reports or, if not so available, First Call) for the Selected Companies.

The following table presents, for the periods indicated, the multiples implied by the ratio of Enterprise Value to estimated (E) 2005 calendar year (CY) revenues, and estimated 2006 CY revenues, and the ratio of equity value as reported on the Nasdaq Stock Market to estimates for 2006 CY earnings. The information in the table is based on the closing sale price of Nanometrics stock on January 24, 2006 as reported on the Nasdaq Stock Market.

	Selected Company Multiples				Multiple Implied by
	1 st Quartile	Mean	Median	3 rd Quartile	Consideration Paid
Enterprise Value / LOA Revenue	1.8 x	2.3 x	2.0 x	2.6 x	2.7 x
Enterprise Value / CY 2005 E Revenue	1.8 x	2.3 x	2.0 x	2.5 x	1.9 x
Enterprise Value / CY 2006 E Revenue	1.6 x	2.1 x	1.7 x	2.3 x	1.5 x
Equity Value / CY 2006 E Earnings	23 x	30 x	24 x	35 x	24 x (a)

(a) Equity Value / NTM Earnings assumes earnings are fully taxed at 36%.

Although none of the Selected Companies is directly comparable to Accent Optical, the companies included were chosen because they are publicly traded companies with operations that for purposes of analysis may be considered similar to certain operations of Accent Optical.

Table of Contents

Contribution Analysis. Cowen analyzed the respective implied contributions of various operating metrics of Nanometrics and Accent Optical to the combined company, based upon the historical and projected financial results of Nanometrics and Accent Optical (based upon Wall Street research analyst estimates for Nanometrics, and the financial forecasts supplied by Accent Optical and revised by management of Nanometrics). The contribution analysis did not reflect any synergies, purchase accounting adjustments or merger related costs resulting from the consummation of the merger.

	Accent Optical	Nanometrics
Relative Contribution	Contribution	Contribution
Revenue		
LTM	35%	65%
LQA	34%	66%
CY 2005E	37%	63%
CY 2006E	42%	58%
Gross Profit		
LTM	36%	64%
LQA	37%	63%
CY 2005E	39%	61%
CY 2006E	44%	56%
Operating Income		
LTM	NM	NM
LQA	NM	NM
CY 2005E	NM	NM
CY 2006E	56%	44%
Net Income		
LTM	NM	NM
LQA	NM	NM
CY 2005E	NM	NM
CY 2006E	46%	54%

Pro Forma Ownership Analysis. Cowen analyzed the pro forma ownership in the combined company by the holders of Accent Optical and noted that holders of Accent Optical capital stock would own approximately 27% of the combined company, based on the Nanometrics closing sales price as reported on the Nasdaq Stock Market on January 24, 2006.

Pro Forma Earnings Analysis. Cowen analyzed the potential effect of the merger on the projected combined income statement of operations of Nanometrics and Accent Optical for the calendar year ending December 31, 2006, and for the period from April 1, 2006 to December 31, 2006. This analysis was based upon publicly available information, estimates prepared by Nanometrics management and selected Wall Street research estimates. For purposes of the analysis, EPS was calculated both on the basis of GAAP and on a cash EPS basis, which added back to GAAP net income amortization of intangible assets and transaction expenses resulting from the merger. In addition, for purposes of the analysis of pro forma 2006 results, Cowen assumed the merger will close on March 31, 2006 and prepared this analysis assuming no synergies and \$5.2 million in transaction expenses. Based on these estimates and assumptions, Cowen's analysis showed that the merger would result in accretion for the calendar year ending December 31, 2006, and for the period from April 1, 2006 to December 31, 2006, to Nanometrics' cash EPS, and dilution for the calendar year ending December 31, 2006, and for the period from April 1, 2006 to December 31, 2006 to Nanometrics' GAAP EPS. The financial forecasts that underlie this analysis are subject to substantial uncertainty and, therefore, actual results may be substantially different.

Table of Contents

Cowen was selected by the Nanometrics board to render an opinion to the Nanometrics board because Cowen is a nationally recognized investment banking firm and because, as part of its investment banking business, Cowen is continually engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for corporate and other purposes. In addition, in the ordinary course of its business, Cowen and its affiliates trade the equity securities of Nanometrics for their own account and for the accounts of their customers, and, accordingly, may at any time hold a long or short position in such securities. Cowen and its affiliates in the ordinary course of business have from time to time provided, and in the future may continue to provide, commercial and investment banking services to Nanometrics, including serving as a financial advisor on potential acquisitions and as an underwriter on equity offerings, and have received and may in the future receive fees for the rendering of such services.

Pursuant to a letter agreement, Nanometrics engaged Cowen to act as its exclusive financial advisor in connection with the merger, for which it is entitled to receive a transaction fee of \$500,000 if the merger is consummated. Nanometrics has also paid a fee to Cowen for rendering its opinion, which fee shall be credited against any transaction fee paid. Additionally, Nanometrics has agreed to reimburse Cowen for its reasonable out of pocket expenses, up to \$35,000, including attorneys' fees, and has agreed to indemnify Cowen against certain liabilities, including liabilities under the federal securities laws. To date, Nanometrics has paid Cowen an aggregate of \$400,000 for services relating to the merger. Other than this amount, Nanometrics has not made any payments to Cowen over the preceding two years.

Opinion of Accent Optical's Financial Advisor

Accent Optical retained Merrill Lynch to act as exclusive financial advisor to Accent Optical in connection with the merger. In connection with that engagement, Accent Optical requested that Merrill Lynch evaluate the fairness of the aggregate consideration, from a financial point of view, to the holders of Accent Optical shares of capital stock. At the meeting of Accent Optical's board of directors on January 24, 2006, Merrill Lynch rendered its oral opinion to the Accent Optical board, and confirmed in writing, that as of January 24, 2006, based upon the assumptions made, matters considered and limits of such review, as set forth in its opinion, the aggregate consideration was fair, from a financial point of view, to the holders of Accent Optical shares of capital stock.

The full text of Merrill Lynch's opinion, which sets forth material information relating to Merrill Lynch's fairness opinion, including the assumptions made, matters considered and qualifications and limitations on the scope of review undertaken by Merrill Lynch, is attached as Annex D and is incorporated into this document by reference in its entirety. This description of Merrill Lynch's opinion is qualified in its entirety by reference to, and should be reviewed together with, the full text of the opinion. You are urged to read the opinion and consider it carefully. Merrill Lynch's opinion is addressed to the Board of Directors of Accent Optical and addresses only the fairness, from a financial point of view, of the aggregate consideration to the holders of Accent Optical shares of capital stock. The opinion does not address the merits of the underlying decision of Accent Optical to engage in the merger and does not constitute a recommendation to any stockholder as to how such stockholder should vote on, or consent to, the proposed merger or any matter related thereto. In addition, Accent Optical has not asked Merrill Lynch to address, and this opinion does not address, the fairness to, or any other consideration of, the holders of any class of securities, creditors or other constituencies of Accent Optical, other than the holders of Accent Optical shares of capital stock on an aggregate basis.

In arriving at its opinion, Merrill Lynch, among other things:

Reviewed certain publicly available business and financial information relating to Accent Optical and Nanometrics that Merrill Lynch deemed to be relevant;

Reviewed certain information, including financial forecasts, relating to the business, earnings, cash flow, assets, liabilities and prospects of Accent Optical and Nanometrics furnished to Merrill Lynch by Accent Optical and Nanometrics, respectively, as well as the amount and timing of the cost savings and

Table of Contents

related expenses and synergies expected to result from the merger (the Expected Synergies) furnished to Merrill Lynch by Accent Optical;

Conducted discussions with members of senior management of Accent Optical and Nanometrics concerning the matters described above, as well as their respective businesses and prospects before and after giving effect to the merger and the Expected Synergies;

Reviewed the valuation multiples for Accent Optical and Nanometrics and compared them with those of certain publicly traded companies that Merrill Lynch deemed to be relevant;

Reviewed the results of operations of Accent Optical and Nanometrics and compared them with those of certain publicly traded companies that Merrill Lynch deemed to be relevant;

Compared the proposed financial terms of the merger with the financial terms of certain other transactions that Merrill Lynch deemed to be relevant;

Participated in certain discussions and negotiations among representatives of Accent Optical, and Nanometrics and its financial advisor;

Reviewed the potential pro forma impact of the merger;

Reviewed the merger agreement; and

Reviewed such other financial studies and analyses and took into account such other matters as Merrill Lynch deemed necessary, including its assessment of general economic, market and monetary conditions.

In preparing its opinion, Merrill Lynch assumed and relied on the accuracy and completeness of all information supplied or otherwise made available to it, discussed with or reviewed by or for it, or publicly available, and Merrill Lynch did not assume any responsibility for independently verifying such information or undertake an independent evaluation or appraisal of any of the assets or liabilities of Accent Optical or Nanometrics, nor was Merrill Lynch furnished with any such evaluation and appraisal, and Merrill Lynch did not evaluate the solvency or fair value of Accent Optical or Nanometrics under any state or federal laws relating to bankruptcy, insolvency or similar matters. In addition, Merrill Lynch did not assume any obligation to conduct any physical inspection of the properties or facilities of Accent Optical or Nanometrics. With respect to the financial forecast information and the Expected Synergies furnished to or discussed with Merrill Lynch by Accent Optical or Nanometrics, Merrill Lynch assumed that they had been reasonably prepared and reflected the best currently available estimates and judgment of Accent Optical's or Nanometrics' management as to the expected future financial performance of Accent Optical or Nanometrics, as the case may be, and the Expected Synergies. Merrill Lynch makes no representations as to the actual timing or amount of Expected Synergies, if any, which may result from the merger. Merrill Lynch assumed that the final form of the merger agreement would be substantially similar to the last draft reviewed by it.

Merrill Lynch's opinion was necessarily based upon market, economic and other conditions as they existed and could be evaluated on the date of the opinion, and upon the information made available to Merrill Lynch as of the date of the opinion. For purposes of rendering this opinion, Merrill Lynch assumed that, in all respects material to its analysis, the representations and warranties of Accent Optical, Nanometrics and the merger subsidiary contained in the merger agreement were true and correct, that Accent Optical, Nanometrics and the merger subsidiary will each perform all of the covenants and agreements to be performed by it under the merger agreement, and all conditions and obligations of each of Accent Optical, Nanometrics and the merger subsidiary will be satisfied without waiver. Merrill Lynch also assumed that all governmental, regulatory or other approvals and consents required in connection with the consummation of the merger will be obtained, and that in connection with obtaining such governmental or other approvals and consents, or any amendments, modifications or waivers to any agreements, instruments or orders to which either Accent Optical or Nanometrics is a party or is subject or by which it is bound, no limitations, restrictions or conditions will be imposed that would have a material adverse effect on Accent Optical or Nanometrics or materially reduce the contemplated benefits of

the merger to Accent Optical, Nanometrics or the combined company.

Table of Contents

Merrill Lynch has no obligation to update its opinion to take into account events occurring after the date that its opinion was delivered to Accent Optical's board of directors. Circumstances could develop prior to consummation of the merger that, if known at the time Merrill Lynch rendered its opinion, would have altered such opinion. Merrill Lynch has expressed no opinion as to the prices at which shares of Nanometrics common stock will trade following the announcement or consummation of the merger. In addition, as described above, Merrill Lynch's fairness opinion was among several factors taken into consideration by Accent Optical's board of directors in making its determination to approve the merger agreement and the merger. Consequently, Merrill Lynch's analysis described below should not be viewed as determinative of the decision of Accent Optical's board of directors or the Accent Optical management with respect to the fairness of the aggregate consideration, to the holders of Accent Optical shares of capital stock.

At the meeting of Accent Optical's board of directors held on January 24, 2006, Merrill Lynch presented certain financial analyses accompanied by delivery of its written materials in connection with the delivery of its oral opinion at that meeting and its subsequent written opinion. The following is a summary of the material financial analyses performed by Merrill Lynch in arriving at its opinion.

Accent Optical Valuation Analysis

Comparable Public Trading Multiples Analysis. Using publicly available securities research analyst estimates and other information, Merrill Lynch compared selected financial data of Accent Optical with similar data for selected publicly traded companies engaged in businesses that Merrill Lynch judged to be reasonably comparable to those of Accent Optical. These companies were:

FEI Company

Veeco Instruments Inc.

ADE Corporation

Zygo Corporation

Rudolph Technologies, Inc.

Nanometrics Incorporated

August Technology Corporation

Therma-Wave, Inc.

Nova Measuring Instruments Ltd.

Merrill Lynch used publicly available securities research analyst estimates for each of these companies to determine multiples of the enterprise value or equity value of the comparable companies to several estimated financial metrics for the comparable companies. The following table summarizes the derived ranges of multiples and the ranges of enterprise values of Accent Optical implied by such multiples, assuming Accent Optical target and conservative management estimates:

Implied Enterprise Value

of Accent Optical

	Multiple Range		(in millions)
Target Case CY2005 Estimated Revenue	0.41x	2.12x	\$17 - \$89
Target Case CY2006 Estimated EBITDA	6.8x	13.6x	\$69 - \$138
Target Case CY2007 Estimated EBITDA	5.9x	17.0x	\$71 - \$205
Target Case CY2007 Estimated Net Income	10.7x	22.3x	\$80 - \$155
Conservative Case CY2005 Estimated Revenue	0.41x	2.12x	\$17 - \$89
Conservative Case CY2006 Estimated EBITDA	6.8x	13.6x	\$13 - \$27
Conservative Case CY2007 Estimated EBITDA	5.9x	17.0x	\$18 - \$53
Conservative Case CY2007 Estimated Net Income	10.7x	22.3x	\$23 - \$36

Table of Contents

Merrill Lynch observed that the implied multiples being paid for Accent Optical were:

in the range of the comparable public trading multiples for target case for CY 2005 based on estimated revenue, and target case for CYs 2006 and 2007 based on estimated EBITDA;

below the range of the comparable public trading multiples for target case for CY 2007 based on estimated net income;

in the range of the comparable public trading multiples for conservative case for CY 2005 based on estimated revenue; and

above the range of the comparable public trading multiples for conservative case for CYs 2006 and 2007 based on estimated EBITDA, and conservative case for CY 2007 based on estimated net income.

It should be noted that no company used in the above analysis is identical to Accent Optical. In evaluating companies identified by Merrill Lynch as comparable to Accent Optical, Merrill Lynch made judgments and assumptions with regard to industry performance, general business, economic, market and financial conditions and other matters, many of which are beyond the control of Accent Optical, such as the impact of competition on the business of Accent Optical and the industry generally, industry growth and the absence of any material change in the financial condition and prospects of Accent Optical or the industry or in the financial markets in general. A complete analysis involves complex considerations and judgments concerning differences in financial and operating characteristics of the comparable companies and other factors that could affect the public trading values of such comparable companies to which they are being compared; mathematical analysis is not in itself a meaningful method of using selected company data.

Comparable Transaction Analysis. Using publicly available securities research analyst estimates and other information, Merrill Lynch examined the following transactions that Merrill Lynch deemed to be relevant to determine the multiple of the value of such transactions at the time of announcement to estimates at the time of announcement of the LTM revenues and next CY revenues for the target companies. The precedent transactions that Merrill Lynch considered are:

Acquiror

Brooks Automation, Inc.
 Entegris, Inc.
 KLA-Tencor Corporation
 Rudolph Technologies, Inc.
 Nanometrics Incorporated
 Toppan Printing Co., Ltd.
 Applied Materials, Inc.
 Amkor Technology, Inc.
 AIXTRON Aktiengesellschaft
 Credence Systems Corporation
 Veeco Instruments Inc.
 Francisco Partners / Shah Management
 Investor Group
 Novellus Systems, Inc.
 MKS Instruments, Inc.
 Brooks Automation, Inc.
 Texas Pacific Group
 Teradyne, Inc.
 Credence Systems Corporation

Target

Helix Technology Corporation
 Mykrolis Corporation
 August Technology Corporation
 August Technology Corporation
 August Technology Corporation
 DuPont Photomasks, Inc.
 Metron Technology N.V.
 Unitive, Inc.
 Genus, Inc.
 NPTest, Inc.
 TurboDisc Segment of Emcore Corporation
 NPTest, Inc.
 CoorsTek, Inc.
 SpeedFam-IPEC, Inc.
 ENI Division of Emerson Electric Co.
 PRI Automation, Inc.
 MEMC Electronic Materials, Inc.
 GenRad, Inc.
 Integrated Measurement Systems, Inc.

All calculations of multiples paid in the selected transactions were based on public information available at the time of public announcement. Merrill Lynch's analysis did not take into account different market and other

Table of Contents

conditions during the period in which the selected transactions occurred. The following table summarizes the derived ranges of multiples and the ranges of enterprise value implied by such multiples, assuming Accent Optical target and conservative management estimates:

	Implied Enterprise Value of Accent Optical			
	Multiple Range		(in millions)	
Target Case LTM Revenue	0.43x	2.70x	\$18	\$113
Target Case Next CY Estimated EBITDA	3.8x	15.2x	\$55	\$222
Conservative Case LTM Revenue	0.43x	2.70x	\$18	\$113
Conservative Case Next CY Estimated EBITDA	3.8x	15.2x	\$21	\$85

Merrill Lynch observed that the implied multiples being paid for Accent Optical were in the range of multiples paid for selected comparable transactions.

It should be noted that no transaction utilized in the analysis above is identical to the proposed merger. A complete analysis involves complex considerations and judgments concerning differences in financial and operating characteristics of the companies involved in these transactions and other factors that could affect the transaction multiples or premiums paid in such comparable transactions to which the transaction is being compared; mathematical analysis (such as determining the mean or the median) is not in itself a meaningful method of using selected transaction data.

Nanometrics Valuation Analysis

Comparable Public Trading Multiples Analysis. Using publicly available securities research analyst estimates and other information, Merrill Lynch compared selected financial and trading data of Nanometrics with similar data for selected publicly traded companies engaged in businesses that Merrill Lynch judged to be reasonably comparable to those of Nanometrics. These companies were:

FEI Company

Veeco Instruments Inc.

ADE Corporation

Zygo Corporation

Rudolph Technologies, Inc.

August Technology Corporation

Therma-Wave, Inc.

Edgar Filing: NANOMETRICS INC - Form S-4/A

Nova Measuring Instruments Ltd.

Merrill Lynch used publicly available securities research analyst estimates for each of these companies to determine multiples of the enterprise value or equity value of the comparable companies to several estimated financial metrics for the comparable companies. The following table summarizes the derived ranges of multiples and the ranges of equity values per Nanometrics share implied by such multiples, assuming Nanometrics management estimates for calendar years 2005 and 2006 and estimates derived from discussion with Nanometrics management for calendar year 2007:

	Multiple Range		Implied Equity	
			Value per Nanometrics Share	
CY2005 Estimated Revenue	0.41x	3.63x	\$5.15	\$20.95
CY2006 Estimated Revenue	0.86x	3.10x	\$7.95	\$20.47
CY2006 Estimated EBITDA	6.8x	13.6x	\$7.97	\$12.81
CY2007 Estimated EBITDA	5.9x	10.2x	\$11.38	\$17.39
CY2007 Estimated P/E	10.7x	22.3x	\$8.74	\$18.21

Table of Contents

Merrill Lynch observed that the multiples for Nanometrics were:

in the range of the comparable public trading multiples for management case for CY 2005 and 2006 based on estimated revenue, management-derived case for CY 2007 based on estimated EBITDA and management-derived case for CY 2007 based on P/E; and

above the range of the comparable public trading multiples for management case for CY 2006 based on estimated EBITDA. It should be noted that no company used in the above analysis is identical to Nanometrics. In evaluating companies identified by Merrill Lynch as comparable to Nanometrics, Merrill Lynch made judgments and assumptions with regard to industry performance, general business, economic, market and financial conditions and other matters, many of which are beyond the control of Nanometrics, such as the impact of competition on the business of Nanometrics and the industry generally, industry growth and the absence of any material change in the financial condition and prospects of Nanometrics or the industry or in the financial markets in general. A complete analysis involves complex considerations and judgments concerning differences in financial and operating characteristics of the comparable companies and other factors that could affect the public trading values of such comparable companies to which they are being compared; mathematical analysis is not in itself a meaningful method of using selected company data.

The summary set forth above does not purport to be a complete description of the analyses performed by Merrill Lynch in arriving at its opinion. The preparation of a fairness opinion is a complex process involving various determinations as to the most appropriate and relevant methods of financial analysis and the application of those methods to the particular circumstances and, therefore, such an opinion is not readily susceptible to partial analysis or summary description. No company, business or transaction used in such analyses as a comparison is identical to Nanometrics or Accent Optical or the merger, nor is an evaluation of such analyses entirely mathematical. In arriving at its opinion, Merrill Lynch did not attribute any particular weight to any analysis or factor considered by it, but rather made qualitative judgments as to the significance and relevance of each analysis and factor. Accordingly, Merrill Lynch believes that its analyses must be considered as a whole and that selecting portions of its analyses and of the factors considered by it, without considering all factors and analyses, would, in the view of Merrill Lynch, create an incomplete and misleading view of the analyses underlying Merrill Lynch's opinion.

Accent Optical retained Merrill Lynch based upon Merrill Lynch's experience and expertise. Merrill Lynch is an internationally recognized investment banking firm with substantial experience in transactions similar to the proposed merger. Merrill Lynch, as part of its investment banking business, is continually engaged in the valuation of businesses and securities in connection with business combinations and acquisitions and for other purposes and has substantial experience in transactions similar to the proposed Nanometrics-Accent Optical transaction.

Under the terms of the engagement letter between Merrill Lynch and Accent Optical, Merrill Lynch provided financial advisory services and the financial fairness opinion in connection with the transaction, and Accent Optical agreed to pay Merrill Lynch a fee of \$2 million which is contingent upon consummation of the transaction, plus related expenses up to \$50,000. In addition, Accent Optical has agreed to indemnify Merrill Lynch and its affiliates, their respective directors, officers, agents, employees and controlling persons against certain liabilities and expenses, including certain liabilities under the federal securities laws, related to or arising out of Merrill Lynch's engagement. Accent Optical has not made any payments to Merrill Lynch over the past two years for services relating to the merger or otherwise.

In the ordinary course of its business, Merrill Lynch may actively trade in the securities of Nanometrics, for its own account and for the accounts of its customers and, accordingly, may at any time hold a long or short position in such securities.

Table of Contents

Interests of Nanometrics Directors and Executive Officers in the Merger

Nanometrics Board of Directors and Executive Officers after the Merger

Accent Optical and Nanometrics have agreed that all of the current directors of Nanometrics will serve as members of the board of directors of Nanometrics following the completion of the merger. Additionally, Accent Optical and Nanometrics have agreed to take all action necessary to ensure that the current executive officers of Nanometrics will continue to serve as executive officers of Nanometrics following completion of the merger. In addition, Mr. Rhine, a current director of Accent Optical, will join the Nanometrics board of directors following completion of the merger. Mr. Rhine, also the current Chief Executive Officer of Accent Optical, will also become an executive officer of Nanometrics and serve as Chief Strategy Officer after the merger is completed.

Directors and Officers Insurance

Nanometrics does not currently maintain directors and officers insurance for its directors and officers.

Interests of Accent Optical Directors and Executive Officers in the Merger

In considering the recommendation of the Accent Optical board of directors that Accent Optical stockholders approve the merger agreement, as amended, the merger and the related transactions and approve the payments to certain executive officers, you should be aware that members of the Accent Optical board of directors and Accent Optical executive officers have interests in the merger that may be different than, or in addition to, the interests of Accent Optical stockholders generally. These interests include:

the appointment of Mr. Rhine, a current director and Chief Executive Officer of Accent Optical, as a director of the combined company upon completion of the merger, and the appointment of Mr. Rhine, as an executive officer of the combined company upon completion of the merger;

the potential receipt of severance payments by certain Accent Optical executive officers, including Mr. Rhine, Reid Langrill, Accent Optical's Chief Financial Officer, and Bruce Crawford, Accent Optical's President and Chief Operating Officer;

the grant of additional stock options to Accent Optical officers which will be assumed by Nanometrics, including Messrs. Rhine and Crawford, Gregory Kaiser, Accent Optical's Senior Vice President, Business Development, and Steve Hummel, Accent Optical's Chief Technology Officer;

the acceleration of vesting of assumed options of officers and directors, including Messrs. Rhine, Langrill and Crawford, if their employment or service relationship is terminated in connection with the merger;

the continued indemnification following the merger of the current Accent Optical directors and officers for acts or omissions occurring prior to the closing of the merger;

the receipt by Bio-Rad, a company affiliated with Accent Optical director David Schwartz, of approximately \$12.0 million as repayment of a loan and a contractual fee of \$2.5 million (related to the 2000 Bio-Rad SMD purchase), each in connection with the closing of the merger; and

the re-allocation of the merger consideration so that holders of Accent Optical Common Stock can receive more of the merger consideration than they originally would have been entitled to, which benefits the directors and officers that hold Accent Optical Common Stock.

Edgar Filing: NANOMETRICS INC - Form S-4/A

The Accent Optical board of directors was aware of these interests and considered them, among other matters, in making its recommendation.

Nanometrics Board of Directors after the Merger

Accent Optical and Nanometrics have agreed that up to three current directors of Accent Optical will join the board of directors of Nanometrics following the completion of the merger. The parties currently expect that

Table of Contents

Mr. Rhine will become a member of the Nanometrics board of directors and that no other appointments of the two other candidates will be made.

Employment Agreement with Nanometrics

Mr. Rhine, Accent Optical's Chairman and Chief Executive Officer, has entered into an employment agreement with Nanometrics, pursuant to which Mr. Rhine will become an executive officer of Nanometrics and serve as its Chief Strategy Officer following the completion of the merger. He will receive a base salary of \$250,000 per year, standard Nanometrics employee benefits and paid vacation. In connection with his employment, Mr. Rhine has agreed to certain non-competition and non-solicitation provisions, described under *Agreements Related to the Merger Employment Agreement*.

Executive Officer Retention and Severance Arrangements

Reid Langrill. In connection with the merger, Accent Optical entered into an agreement with Reid Langrill, its Chief Financial Officer, which provides for Mr. Langrill's continued employment with Accent Optical or its successors through the completion of the merger and for up to 30 days thereafter. During his period of employment, he will continue to earn his regular salary. Upon his termination, he will receive a severance payment equal to the greater of either \$185,000 or the difference between \$500,000 and the value of Mr. Langrill's options that are in-the-money as of the completion of the merger, subject to withholding. As such the value of the severance payment is dependent on the share price of Nanometrics common stock. Based on an Average Closing Price of \$13.00, the value of the severance payment would be approximately \$327,000. Following his termination, Mr. Langrill has agreed to provide consulting services to Nanometrics through March 15, 2007, subject to earlier termination, at a rate of \$105 per hour and reimbursement of expenses. Mr. Langrill will provide consulting services relating to Accent Optical's financial reports, financial statements, corporate matters, tax matters and other related areas in which Mr. Langrill was involved during his employment with Accent Optical as its Chief Financial Officer. Mr. Langrill will not be required to perform more than 80 hours per month of consulting services for the first three months following his termination nor more than 40 hours per month for the fourth month following his termination through March 15, 2007. Assuming that Mr. Langrill's employment with Accent Optical is terminated on July 1, 2006, the maximum amount of compensation that Mr. Langrill could receive for his consulting services (excluding reimbursement of expenses) is \$48,300.

For purposes of determining Mr. Langrill's severance payment, the value of the options that are in-the-money as of the completion of the merger will be equal to the fair market value of the shares covered by such options as of the closing (including shares for which the option had previously been exercised) minus the aggregate exercise price of such options.

Bruce Crawford. Accent Optical entered into an employment agreement with Bruce Crawford, upon commencement of his role as President and Chief Operating Officer, which provides for certain severance benefits if Accent Optical terminates Mr. Crawford's employment without good cause or Mr. Crawford terminates his employment for good reason, as defined below, during the five-year term of the agreement. Upon such termination, Mr. Crawford is entitled to receive a lump-sum payment of his annual salary (currently \$213,000), continued group health or other group benefits as allowed under COBRA for a period of 12 months (with a potential gross-up for taxes arising from the provision of such benefits) and reimbursement of relocation expenses up to \$50,000.

As used in Mr. Crawford's employment agreement with Accent Optical, the term good cause means: (a) willful and repeated failure to comply with the lawful instructions of the board of directors or chief executive officer, (b) willful misconduct in the performance of duties, (c) Mr. Crawford's dishonesty, fraud or willful misconduct with respect to the business or affairs of Accent Optical, or (d) Mr. Crawford's conviction of a felony or conviction of a misdemeanor involving theft, fraud, dishonesty or other acts of moral turpitude. As used in Mr. Crawford's employment agreement with Accent Optical, the term good reason means (1) a material

Table of Contents

reduction in Mr. Crawford's reporting responsibilities not mutually agreed upon, (2) a reduction in Mr. Crawford's salary by more than 15%, (3) demand by Accent Optical that Mr. Crawford relocate more than 50 miles from the Bend, Oregon area, (4) the occurrence of a change of control of Accent Optical; however, Mr. Crawford will remain during the six-month transition period after such change in control upon written request. The term change of control means the acquisition by any person or entity or group of related persons or entities of beneficial ownership of more than 50% of Accent Optical's Common Stock or voting power entitled to vote in an election of directors, subject to exclusions for public offerings and acquisitions of stock by Accent Optical, an employee benefit plan or persons and entities who beneficially owned more than 50% of Accent Optical's stock or voting power prior to the acquisition. In certain circumstances, change of control, as used in the employment agreement, has the same meaning as used in Section 409A of the Internal Revenue Code. Mr. Crawford must provide written notice to Accent Optical of the good reason event, and allow Accent Optical 50 days to cure the conditions. If Accent Optical does not cure the conditions within 50 days, Mr. Crawford must exercise his right to terminate the employment agreement for good reason within 50 days thereafter, or he will have waived the conditions.

Executive Officer Option Grants

In connection with the merger, Accent Optical granted nonqualified options to purchase Accent Optical Common Stock to certain of its executive officers, as set forth below, and to certain key employees. Nanometrics desires to retain the services of these individuals following the consummation of the merger, and the options were granted to provide an additional incentive for these individuals to continue their employment with Accent Optical through the consummation of the merger and with Nanometrics thereafter. The options were granted on January 25, 2006 and have an exercise price of \$0.33 per share. The exercise price is equal to the fair market value of Accent Optical Common Stock as of the date of grant, as determined by the merger consideration payable for such shares as of that date. Based on the Average Closing Price as of June 6, 2006, the estimated value of the merger consideration payable for each share of Accent Optical Common Stock underlying the options is \$0.2421 per share. The options are subject to vesting with one-third of the options vesting on each of the first, second and third anniversaries of the grant date. Upon consummation of the merger, these nonqualified stock options will be assumed by Nanometrics pursuant to the terms of the merger agreement, as amended. If the employment of the holder of Accent Optical stock options assumed by Nanometrics upon completion of the merger is terminated by Accent Optical or Nanometrics without cause or by the employee for good reason, as defined below, within six months following the completion of the merger, the vesting of such options will accelerate in full.

Executive Officer	Title	Shares Subject to Accent Optical Options Granted in connection with the Merger
Bruce C. Rhine	Chairman and Chief Executive Officer	4,122,000
Bruce Crawford	President and Chief Operating Officer	800,000
Gregory Kaiser	Senior Vice President, Business Development	100,000
Steve Hummel	Chief Technology Officer	250,000
Raj Mundhe	Vice President, Global Sales	250,000

With respect to these option grants, the term good reason means: (a) a change in the holder's status, title, position or responsibilities (including reporting responsibilities) that, in the holder's reasonable judgment, represents a substantial reduction in the status, title, position or responsibilities as in effect immediately prior thereto; the assignment to the holder of any duties or responsibilities that, in the holder's reasonable judgment, are materially inconsistent with such status, title, position or responsibilities; or any removal of the holder from or failure to reappoint or reelect the holder to any of such positions, except in connection with the termination of the holder's employment for cause, as a result of his or her disability or death, or by the holder other than for good reason; (b) a reduction in the holder's annual base salary; or (c) Accent Optical or its successor requiring the holder (without the holder's consent) to be based at any place outside a 50 mile radius of his place of

Table of Contents

employment prior to the completion of the merger, except for reasonably required travel on business that is not materially greater than such travel requirements prior to the completion of the merger.

With respect to these option grants, the term *cause* means: a termination of employment or service based upon a finding by Accent Optical, acting in good faith and based on its reasonable belief at the time, that the holder (a) has been negligent in the discharge of his duties to Accent Optical, has refused to perform stated or assigned duties or is incompetent in or (other than by reason of a disability or analogous condition) incapable of performing those duties; (b) has been dishonest or committed or engaged in an act of theft, embezzlement or fraud, a breach of confidentiality, an unauthorized disclosure or use of inside information, customer lists, trade secrets or other confidential information; (c) has breached a fiduciary duty, or willfully and materially violated any other duty, law, rule, regulation or policy of Accent Optical or an affiliate; or has been convicted of, or plead guilty or nolo contendere to, a felony or misdemeanor (other than minor traffic violations or similar offenses); (d) has materially breached any of the provisions of any agreement with Accent Optical or an affiliated entity; (e) has engaged in unfair competition with, or otherwise acted intentionally in a manner injurious to the reputation, business or assets of, Accent Optical or an affiliate; or (f) has improperly induced a vendor or customer to break or terminate any contract with Accent Optical or an affiliate or induced a principal for whom Accent Optical or an affiliate acts as agent to terminate such agency relationship.

Indemnification; Directors and Officers Insurance

In the merger agreement, as amended, Nanometrics agreed that, for a period of six years following completion of the merger, Nanometrics and any of its subsidiaries would honor any indemnification agreements currently in place between Accent Optical and any of its current or former directors and officers. Additionally, Nanometrics agreed that, for a period of six years following completion of the merger, Nanometrics and any of its subsidiaries would cause the certificate of incorporation and bylaws (or any similar organizational documents) of the surviving corporation and its subsidiaries to contain indemnification and exculpation provisions no less favorable than the indemnification and exculpation provisions contained in the Accent Optical certificate of incorporation and bylaws immediately prior to the merger and not amend, repeal or otherwise modify such provisions of the certificate or articles of incorporation or bylaws in any manner.

In addition, for a period of six years from the completion of the merger, Nanometrics and the surviving corporation will cause Accent Optical's existing policy of directors and officers and fiduciary liability insurance to be maintained, subject to certain limitations. Alternatively, Nanometrics is permitted to purchase a six-year tail prepaid policy on Accent Optical's current policy of directors and officers and fiduciary liability insurance and maintain the policy in full force and effect for a period of six years.

Payments to Bio-Rad Corporation

In 2000, Accent Optical purchased the assets of the former Bio-Rad SMD from Bio-Rad, a company affiliated with Accent Optical director David Schwartz. Pursuant to the asset purchase agreement, Accent Optical agreed to pay Bio-Rad \$13.0 million upon a change of control of Accent Optical. In connection with the negotiations with Nanometrics related to the merger described in this joint proxy statement/prospectus, Bio-Rad agreed to reduce this change of control payment to \$2.5 million, which will be paid to it upon completion of the merger. In addition, Bio-Rad will receive approximately \$12.0 million in connection with the closing of the merger as repayment of a loan to Accent Optical.

Stock and Options of Directors and Executive Officers

In addition to the interests of Accent Optical's directors and executive officers described above, which may be different from the interests of an Accent Optical stockholder, each of the directors and executive officers of Accent Optical owns stock and/or options to purchase Accent Optical Common Stock. They will be entitled to the same rights as other Accent Optical stockholders and optionholders with respect to such ownership interests,

Table of Contents

including the right to a portion of the merger consideration, assumption of options and vesting acceleration, as applicable. The allocation of the merger consideration required by the merger agreement, as amended, reflects a reduction of the liquidation preference on Accent Optical's Convertible Preferred Stock and elimination of accrued dividends on both Accent Optical's Series A Preferred Stock and Convertible Preferred Stock. As a result of these concessions, holders of Accent Optical's Common Stock, including directors and executive officers, will receive a greater amount of the merger consideration.

Material United States Federal Income Tax Consequences of the Merger

The following discussion summarizes the material United States federal income tax consequences of the merger that are generally applicable to holders of Accent Optical stock. This discussion is based on the Internal Revenue Code, judicial decisions, and administrative regulations and interpretations in effect as of the date of this proxy statement/prospectus, all of which are subject to change, possibly with retroactive effect. Accordingly, the tax consequences of the merger to the holders of Accent Optical stock could differ from those described below.

This discussion does not address all aspects of United States federal income taxation that may be relevant to holders of Accent Optical stock in light of their particular circumstances, nor does it address the United States federal income tax consequences to holders that are subject to special rules under United States federal income tax law, including:

dealers in securities or foreign currencies;

tax-exempt organizations;

foreign persons;

financial institutions or insurance companies;

holders who have a functional currency other than the U.S. dollar;

holders who own their shares indirectly through partnerships, trusts, or other entities that may be subject to special treatment;

holders who acquired their Accent Optical stock in connection with stock options or stock purchase plans or other compensatory transactions; and

holders who hold their shares as a hedge or as part of a straddle, constructive sale, conversion transaction, or other risk management transaction.

In addition, this discussion does not describe the federal income tax consequences of transactions other than those pursuant to the merger or the tax consequences of the merger under foreign, state, or local law or federal estate and gift tax laws.

The obligation of each of Accent Optical and Nanometrics to effect the merger is conditioned upon the receipt of a written opinion, respectively, from each of Perkins Coie, counsel to Accent Optical, and WSGR, counsel to Nanometrics to the effect that, on the basis of statements and representations made by each of Nanometrics, Accent Optical and Alloy Merger Corporation, and subject to the limitations, qualifications and assumptions set forth therein, for United States federal income tax purposes, the merger will constitute a reorganization within the meaning of Section 368(a) of the Internal Revenue Code. If one party's counsel fails to deliver an opinion, this condition shall be satisfied if counsel to the other party delivers an opinion to both parties. These opinions will not be binding on the Internal Revenue Service and will not preclude the Internal Revenue Service from taking a contrary position. Neither Accent Optical nor Nanometrics has requested, nor will request, a ruling from the Internal Revenue Service regarding any of the federal income tax consequences of the merger.

Table of Contents

The discussion set forth below, subject to the limitations and qualifications set forth herein, constitutes the opinion of each of Perkins Coie and WSGR as to the material federal income tax consequences to the Accent Optical stockholders of the exchange of Accent Optical stock for Nanometrics common stock pursuant to the merger.

The merger will qualify as a reorganization under Section 368(a) of the Internal Revenue Code.

Holders of Accent Optical stock will not recognize any gain or loss upon receipt of Nanometrics common stock solely in exchange for their Accent Optical stock in the merger.

A holder of Accent Optical stock who receives cash in the transaction in lieu of a fractional share of Nanometrics common stock will be treated as if the holder had received the fractional share and then had that share redeemed for cash. The holder of Accent Optical stock will recognize gain or loss equal to the difference between the cash received and that portion of the holder's basis in the Accent Optical stock attributable to the fractional share.

The aggregate tax basis in the Nanometrics common stock received by a holder of Accent Optical stock pursuant to the merger (including any fractional share that the holder will be treated as having received and then as having immediately redeemed for cash) will be the same as the aggregate tax basis of the Accent Optical stock surrendered in the exchange.

The holding period of Nanometrics common stock received by a holder of Accent Optical stock in exchange for shares of Accent Optical stock will include the holding period of the shares of Accent Optical stock surrendered in the exchange if the holder held that Accent Optical stock as a capital asset at the time of the transaction.

Holders of Accent Optical capital stock will be treated as having received the escrowed shares upon the consummation of the merger. No gain or loss will be recognized and no amount will be included in the income of the Accent Optical stockholders by reason of the release of escrowed shares to the Accent Optical stockholders. However, if escrowed shares are released to Nanometrics in satisfaction of any indemnity claims, a holder of Accent Optical capital stock will recognize gain or loss on each such share in an amount equal to the difference between (i) the value of the share released in satisfaction of the claim as determined pursuant to the merger agreement, as amended, (with such amount to be added to the basis of the holder's remaining Nanometrics shares), and (ii) the Accent Optical stockholder's basis in such share.

An Accent Optical stockholder who exercises appraisal rights with respect to Accent Optical capital stock and receives payment for such stock in cash will recognize capital gain or loss based on the difference between such holder's tax basis in such stock and the amount of cash received, provided that such payment is not treated as a dividend distribution for tax purposes. Such payment to an Accent Optical stockholder should not be treated as a dividend distribution if, after the payment, the Accent Optical stockholder owns no shares of Nanometrics capital stock, actually or constructively.

These opinions have been rendered on the basis of certain assumptions, including assumptions regarding the absence of changes in existing facts and that the merger will be completed in accordance with the merger agreement, as amended. These opinions also have been rendered on the basis of statements and representations, including those contained in the merger agreement, as amended, the registration statement of which this proxy statement/prospectus forms a part, and officers' certificates of Accent Optical and Nanometrics, all of which must be true, correct and complete as of the effective date of the registration statement and must continue to be true, correct and complete at all relevant times thereafter, including as of the effective time of the merger. If any of those statements, representations or assumptions is untrue, incorrect, or incomplete, the conclusions contained in these opinions could be adversely affected.

Accent Optical stockholders will be required to attach a statement to their U.S. federal income tax returns that contains the information listed in Treasury Regulation Section 1.368-3(b). Such statement must include the stockholder's tax basis in the Accent Optical capital stock surrendered in the merger and a description of the Nanometrics common stock received.

Table of Contents

Holders of Accent Optical stock are urged to consult their own tax advisors as to specific tax consequences to them of the merger in light of their particular circumstances, including the applicability and effect of any state, local or foreign tax laws and of changes in applicable tax laws.

Accounting Treatment of the Merger

The merger will be accounted for under the purchase method of accounting in accordance with Statement of Financial Accounting Standards No. 141, *Business Combinations*. Under the purchase method of accounting, the total estimated purchase price is allocated to the net tangible and identifiable intangible assets of Accent Optical acquired in connection with the merger, based on their respective estimated fair values. Management has made a preliminary allocation of the estimated purchase price to the tangible and identifiable intangible assets acquired and liabilities assumed based on various preliminary estimates. Any excess of the estimated purchase price over the fair value of net assets acquired will be accounted for as goodwill.

In accordance with the Statement of Financial Accounting Standards No. 142, *Goodwill and Other Intangible Assets*, goodwill resulting from the business combination will not be amortized but instead will be tested for impairment at least annually (more frequently if certain indicators are present).

Regulatory Matters Relating to the Merger

The merger is not subject to review by the Department of Justice and the FTC under the HSR Act. However, the Department of Justice, the FTC, or other United States or foreign governmental authorities could challenge or seek to block the merger under the antitrust laws, at any time, even after completion of the merger. Moreover, in some jurisdictions, a competitor, customer or other third party could initiate a private action under the antitrust laws challenging or seeking to enjoin the merger, either before or after it is completed. Nanometrics and Accent Optical cannot be sure that a challenge to the merger will not be made or that, if a challenge is made, the merger will be allowed to go forward.

Dissenters or Appraisal Rights in Connection with the Merger

Appraisal Rights for the Accent Optical Stockholders

Under the provisions of the Delaware General Corporation Law, or the DGCL, Accent Optical stockholders may object to the transaction and demand in writing that the combined company pay the fair value of their shares. Determination of fair value is based on all relevant factors, but excludes any appreciation or depreciation resulting from the anticipation or accomplishment of the transaction. Accent Optical stockholders who elect to exercise appraisal rights must comply with all of the procedures to preserve those rights. Failure to vote against the merger in and of itself will not constitute a waiver of appraisal rights. However, a vote in favor of the merger will constitute a waiver of appraisal rights. A copy of Section 262 of the DGCL, which sets forth the appraisal rights, is attached hereto as Annex H.

Section 262 of the DGCL sets forth the procedures that an Accent Optical stockholder requesting appraisal must follow. These procedures are complicated and must be followed in their entirety. A vote against the merger will not be deemed to satisfy any portion of Section 262 of the DGCL. Failure to comply with these procedures may cause an Accent Optical stockholder to lose his or her appraisal rights. In the event that a stockholder fails to perfect his or her appraisal rights, he or she will receive the same merger consideration per share as other Accent Optical stockholders receive in the transaction. The following information is only a summary of the required procedures and is qualified in its entirety by the provisions of Section 262 of the DGCL. Please review Section 262 for the complete procedures. Accent Optical will not give to its stockholders any notice of their appraisal rights other than as described in this document and as required by the DGCL.

Table of Contents

General Requirements. Section 262 of the DGCL requires that stockholders must:

deliver a written demand for appraisal to the secretary of Accent Optical at its offices located at 1320 SE Armour Drive, Suite B2, Bend, Oregon 97702 no later than 20 days after _____, 2006, the date this document is first mailed to Accent Optical stockholders; and

continuously hold their shares of Accent Optical stock from the date they make the demand for appraisal rights through the closing of the transaction.

Requirements for Written Demand for Appraisal. A written demand for appraisal of Accent Optical stock is sufficient if it reasonably informs Accent Optical of the identity of the stockholder, as well as the intention of the stockholder to demand an appraisal of the fair value of the shares held.

Accent Optical's stockholders electing to exercise their appraisal rights should address the written demand to Accent Optical Technologies, Inc., 1320 SE Armour Drive, Suite B2, Bend, Oregon 97702, Attention: Secretary. Accent Optical must receive all written demands by _____, 2006 in order for the demands to be honored. This written demand should be signed by, or on behalf of, the stockholder of record. The written demand for appraisal should specify the stockholder's name and mailing address, the number of shares of stock owned and that the stockholder is thereby demanding appraisal of the stockholder's shares.

Written Notice. Within 10 days after the closing of the transaction, the combined company must give written notice of the date that the transaction closed to each Accent Optical stockholder who has fully complied with the conditions of Section 262 of the DGCL. Except as required by law, stockholders will not be notified of any dates by which appraisal rights must be exercised.

Petition with the Chancery Court. Within 120 days after the closing of the transaction, the combined company or any stockholder who has complied with the conditions of Section 262 of the DGCL may file a petition in the Delaware Court of Chancery. This petition should request that the Chancery Court determine the value of the shares of Accent Optical stock held by all of the stockholders who are entitled to appraisal rights. Stockholders should file a petition in the Chancery Court if they intend to exercise rights of appraisal. Neither Accent Optical nor Nanometrics have any intention at this time to file a petition. Because neither Accent Optical nor Nanometrics has an obligation to file a petition, if stockholders do not file such a petition within 120 days after the closing, they will lose their rights of appraisal.

Withdrawal of Demand. A stockholder may withdraw a demand for appraisal at any time within 60 days after the closing of the transaction. A stockholder may withdraw his or her demand for appraisal 60 or more days after the closing of the transaction, but only with the written consent of Nanometrics. Stockholders who withdraw their demands for appraisal will receive the merger consideration as provided in the merger agreement, as amended.

Request for Appraisal Rights Statement. Stockholders who have complied with the conditions of Section 262 of the DGCL will be entitled to receive a statement setting forth the number of shares for which appraisal rights have been exercised and the number of Accent Optical stockholders who own those shares. In order to receive this statement, a stockholder must send a written request to Nanometrics, addressed c/o Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035, Attention: Chief Financial Officer, within 120 days after the closing of the transaction. After the transaction is completed, Nanometrics will have 10 days after receiving a request to mail the statement to the stockholder.

Chancery Court Procedures. Nanometrics will have 20 days after the petition is filed in the Chancery Court to provide the Chancery Court with a list of the names and addresses of all Accent Optical stockholders who have demanded appraisal and have not reached an agreement with Nanometrics as to the value of their shares. If the Chancery Court decides it is appropriate, it will then send notice to all of the Accent Optical stockholders who have demanded appraisal and publish such notice in one or more publications it deems advisable at least one week before the day of the hearing. The Chancery Court has the power to conduct a hearing to determine whether the Accent Optical stockholders have fully complied with Section 262 of the DGCL and whether the Accent

Table of Contents

Optical stockholders are entitled to appraisal under that section. The Chancery Court may also require stockholders to submit their stock certificates to the Registry in Chancery so that it can note on the certificates that an appraisal proceeding is pending. Stockholders who do not follow the Chancery Court's directions may be dismissed from the proceeding.

Chancery Court Appraisal of Accent Optical Shares. After the Chancery Court determines which Accent Optical stockholders are entitled to appraisal rights, the Chancery Court will appraise the shares of stock. To determine the fair value of the shares, the Chancery Court will consider all relevant factors except for any appreciation or depreciation resulting from the anticipation or accomplishment of the transaction. After the Chancery Court determines the fair value of the shares, it will direct Nanometrics to pay that value to the stockholders who are entitled to appraisal. The Chancery Court can also direct Nanometrics to pay interest, simple or compound, on that value if the Chancery Court determines that interest is appropriate. Stockholders must surrender their stock certificates to Nanometrics in order to receive fair value for their shares. The Chancery Court could determine that the fair value per share of Accent Optical stock is more than, the same as, or less than the merger consideration per share of Common Stock. Stockholders could receive less consideration than they would under the merger agreement, as amended.

Costs and Expenses of Appraisal Proceeding. The costs and expenses of the appraisal proceeding may be assessed against Nanometrics and the Accent Optical stockholders participating in the appraisal proceeding, as the Chancery Court deems equitable under the circumstances. Stockholders may request that the Chancery Court determine the amount of interest, if any, that Nanometrics should pay on the value of Accent Optical Common Stock owned by stockholders entitled to the payment of interest. Stockholders may also request that the Chancery Court allocate the expenses of the appraisal action incurred by any stockholder pro rata against the value of all of the Accent Optical shares entitled to appraisal.

Loss of Stockholder's Rights. After the closing of the acquisition, stockholders who demand appraisal rights will not be entitled to:

vote, for any purpose, the shares of Accent Optical Common Stock for which appraisal has been demanded;

receive payment of dividends or any other distribution with respect to their shares of Accent Optical Common Stock, except for dividends or distributions, if any, that are payable to holders of record as of a record date before the effective time of the transaction;
or

receive the payment of the merger consideration provided for in the merger agreement, as amended.

Dissenting stockholders may regain these rights with respect only to the Nanometrics shares into which their Accent Optical stock will convert in part, if no petition for an appraisal is filed with the Chancery Court within 120 days after the closing of the transaction, or if such stockholder delivers to Nanometrics a written withdrawal of their demand for an appraisal and their acceptance of the transaction, either within 60 days after the closing of the transaction or with the written consent of Nanometrics. These actions will also terminate such stockholder's appraisal rights. However, an appraisal proceeding in the Chancery Court cannot be dismissed without the Chancery Court's approval. The Chancery Court may condition its approval upon any terms that it deems just.

Accent Optical stockholders who fail to comply strictly with these procedures will lose their appraisal rights they may otherwise wish to perfect. Consequently, Accent Optical stockholders who wish to exercise their appraisal rights are strongly urged to consult their personal legal advisor before attempting to exercise appraisal rights.

Listing of Nanometrics Common Stock

Application will be made to have the shares of Nanometrics common stock issued in the merger approved for listing on the Nasdaq National Market.

Table of Contents

Restrictions on Sales of Certain Shares of Nanometrics Common Stock Received in the Merger; Shareholder Agreements with Nanometrics

All Nanometrics common shares that Accent Optical stockholders receive in the merger will be freely transferable, with the exception of the Nanometrics common shares received by persons who are deemed to be affiliates of Accent Optical under the Securities Act of 1933, as amended (the Securities Act), and the related SEC rules and regulations, at the time of the Accent Optical stockholders' meeting. These affiliates may resell their Nanometrics common shares only in transactions permitted by Rule 145 under the Securities Act or as otherwise allowed under that Act. Persons who may be deemed to be affiliates of Accent Optical for these purposes generally include individuals or entities that control, are controlled by, or are under common control with Accent Optical and may include some officers, directors and principal stockholders of Accent Optical.

In addition, each of Messrs. Rhine and Joost and their respective affiliates and Bio-Rad have executed shareholder agreements (the Shareholder Agreements) prohibiting them from selling, transferring or otherwise disposing of shares of Nanometrics common stock received in connection with the merger or received by such stockholder during the period its respective Shareholder Agreement is in effect (excluding any shares of Nanometrics common stock purchased on the open market by such stockholder). During the period commencing on the effective date of the merger and ending 24 months after the effective date of the merger, each of Messrs. Rhine and Joost and their affiliates has agreed not to, nor to contract to, sell, pledge, encumber or grant an option with respect to, transfer or dispose of (each referred to as a transfer) any Nanometrics shares or any securities convertible into or exercisable or exchangeable for Nanometrics shares except as follows: each such stockholder may transfer up to 1/24th of their holdings of such shares on a monthly basis or, if such stockholder sells less than the permitted number of shares, it can accumulate the right to sell up to 1/8th of its original holdings in a single month. During the period commencing on the effective date of the merger and ending 12 months after the effective date of the merger, Bio-Rad has agreed not to, nor to contract to, transfer any Nanometrics shares or any securities convertible into or exercisable or exchangeable for Nanometrics shares provided that Bio-Rad may transfer up to 1/12th of its holdings of such shares on a monthly basis. Forms of the shareholder agreements are attached to this joint proxy statement/prospectus as Annex E-1 and E-2, respectively.

Table of Contents

THE MERGER AGREEMENT

The following summary describes the material provisions of the merger agreement. The merger agreement is complicated and not easily summarized. This summary may not contain all of the information about the merger agreement that is important to you. The merger agreement is attached to this joint proxy statement/prospectus as Annex A and is incorporated by reference into this joint proxy statement/prospectus. You are encouraged to read the merger agreement carefully in its entirety for a more complete understanding of the terms and conditions of the merger agreement. The representations and warranties of Nanometrics, Alloy Merger Corporation and Accent Optical contained in the merger agreement are qualified by information in confidential disclosure schedules delivered by each of Nanometrics, Alloy Merger Corporation and Accent Optical to each other in connection with signing the merger agreement, which schedules modify and create exceptions to the representations and warranties contained in the merger agreement. While neither Nanometrics nor Accent Optical believe that the disclosure schedules contain information that the securities laws require to be publicly disclosed, the disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached merger agreement. Accordingly, the representations and warranties should not be relied upon as characterizations of the actual state of facts, since they are modified by the underlying disclosure schedules. These disclosure schedules contain information that has been included in Nanometrics' prior public disclosures, as well as potential additional non-public information. Moreover, information concerning the subject matter of the representations and warranties may have changed since the date of the merger agreement, which subsequent information may or may not be fully reflected in Nanometrics' public disclosures.

Structure of the Merger

The merger agreement provides for the merger of Alloy Merger Corporation, a wholly owned subsidiary of Nanometrics, with and into Accent Optical, with Accent Optical surviving the merger as a wholly owned subsidiary of Nanometrics. The surviving subsidiary will, effective as of the closing of the merger, be named Accent Optical Technologies Nanometrics, Inc.

Closing and Effective Time of the Merger

Nanometrics and Accent Optical will complete the merger when all of the conditions to completion of the merger, which are described in the section entitled *Conditions to Obligations to Complete the Merger* beginning on page 96, are satisfied or waived. Such conditions include, but are not limited to, approval by the Nanometrics shareholders of the issuance of shares of Nanometrics common stock in the merger and approval by the Accent Optical stockholders of the merger agreement and the merger.

The merger will become effective upon the filing of the certificate of merger with the Secretary of State of the State of Delaware.

Nanometrics and Accent Optical are working to complete the merger as quickly as possible. Because completion of the merger is subject to certain conditions that are beyond our control, we cannot predict the exact timing. Absent any unanticipated delay, we expect to complete the merger during the second quarter of 2006.

Treatment of Securities

Upon completion of the merger, shares of outstanding Accent Optical capital stock and in-the-money and certain other options to acquire Accent Optical Common Stock will be converted into the right to receive Nanometrics common stock and options to acquire Nanometrics common stock. The total number of shares of Nanometrics common stock that will be issued or subject to assumed options in the merger will be:

(i) 4,900,000, plus (ii) a number of shares equal to the value of the outstanding in-the-money Accent Optical stock options prior to closing (other than options granted after January 23, 2006) divided by the Average Closing Price, described

Table of Contents

below, plus (iii) shares of Nanometrics common stock issuable upon exercise of the Accent Optical stock options granted on or after January 23, 2006 (at the same conversion ratio as the Accent Optical in-the-money options). Of the shares issued to Accent Optical stockholders at closing, Nanometrics will deposit approximately 490,000 shares of common stock into an escrow account that will be available to compensate Nanometrics if it is entitled to indemnification under the merger agreement. Upon closing, Nanometrics will have an immediate claim on the escrow for a number of shares equal to (x) the Accent Optical transaction costs that exceed \$4.2 million which excess is currently estimated to be approximately \$950,000 divided by (y) the Average Closing Price.

The Average Closing Price will be equal to the average of the closing sales prices of Nanometrics common stock as reported on the Nasdaq Stock Market for the 10 trading days ending two days prior to the closing of the merger.

The maximum number of shares of common stock that Nanometrics would issue (or, in the case of options reserved for issuance) is approximately 5,212,286 shares, assuming that the Average Closing Price is equal to \$15.63, which would result in the Accent Optical stockholders holding approximately 27% of the fully diluted shares of Nanometrics common stock immediately after the merger, and the Nanometrics shareholders holding approximately 73% of the fully diluted shares of Nanometrics common stock immediately after the merger. For comparison purposes, the Average Closing Price for the 10 trading days ending on June 6, 2006 was \$10.84 per share which would have resulted in the issuance or reservation for issuance of approximately 5,138,282 shares of Nanometrics common stock had the merger closed two days following June 6, 2006.

Nanometrics will not issue fractional shares of its common stock in the merger. As a result, each Accent Optical stockholder will receive cash in lieu of any fractional share of Nanometrics common stock the stockholder would otherwise be entitled to receive in the merger.

Accent Optical has three classes of capital stock outstanding, and each class will be entitled to a different exchange ratio in the merger. Each share of Accent Optical's Series A Preferred Stock will receive Nanometrics common stock valued at \$1,000, the original purchase price of such shares. In addition, holders of Series A Preferred will forego the 13.5% cumulative dividend that Accent Optical has been accruing since 2000 (which dividends totaled approximately \$1,027 per share as of December 31, 2005). Each share of Accent Optical's Convertible Preferred Stock will receive Nanometrics common stock valued at \$1.13, which is approximately 55% of the \$2.05 liquidation preference on such shares under Accent Optical's certificate of incorporation. In addition, holders of Convertible Preferred will forego the 8% cumulative dividend that Accent Optical has been accruing since the shares were issued (which dividends totaled approximately \$0.83 per share as of December 31, 2005). If the value of the shares of Nanometrics common stock to be issued in the merger is insufficient to provide the full amounts to the holders of Series A Preferred Stock and Convertible Preferred Stock, as described above, then the available merger consideration will be prorated, and the holders of Accent Optical's Common Stock and options will receive no consideration in the merger.

If the value of Nanometrics common stock is sufficient to provide the full amounts to the holders of Series A Preferred Stock and Convertible Preferred Stock described above, the remaining shares of Nanometrics common stock to be issued in the merger will be issued (or, in the case of options, reserved for issuance) to the holders of Accent Optical Common Stock and in-the-money options (other than options granted on or after January 23, 2006) pro rata. In addition, holders of options to purchase Accent Optical Common Stock granted on or after January 23, 2006 will receive options to purchase Nanometrics common stock at the same exchange ratio.

For more information relating to the treatment of options to purchase Accent Optical Common Stock, see the section of this joint proxy statement/prospectus entitled *Treatment of Accent Optical Stock Options and Stock Plan* beginning on page 88.

The exchange ratio of common stock in the merger (*i.e.*, the number of shares of Nanometrics common stock issuable for each share of Accent Optical capital stock) will be adjusted to reflect the effect of any stock

Table of Contents

split, reverse stock split, reclassification, stock dividend, reorganization, recapitalization, consolidation, exchange or other like change with respect to Nanometrics common stock or Accent Optical capital stock occurring or having a record date after the date of the merger agreement and prior to the closing of the merger.

Fractional Shares

Nanometrics will not issue any fractional shares of common stock in the merger. Instead, each holder of Accent Optical capital stock who would otherwise be entitled to receive a fraction of a share of Nanometrics common stock (determined after taking into account all of the Accent Optical capital stock held by each such holder and multiplying such shares by the applicable exchange ratio) will receive cash, without interest, in an amount equal to the fraction multiplied by the per share value of Nanometrics common stock.

Treatment of Accent Optical Stock Options and Stock Plan

When the merger is completed, Nanometrics will assume all outstanding options to purchase shares of Accent Optical Common Stock that are either in-the-money or were granted between January 23, 2006 and the closing of the merger, and convert them into options to purchase shares of Nanometrics common stock. Nanometrics will convert each assumed option into an option to purchase that number of shares of Nanometrics common stock equal to the number of shares of Accent Optical Common Stock subject to the option immediately prior to the merger, multiplied by the common stock exchange ratio, rounded down to the nearest whole share. The exercise price per share for each assumed Accent Optical option will be equal to the exercise price per share of the original Accent Optical option divided by the common stock exchange ratio, rounded up to the nearest whole cent such that the aggregate exercise price for such option remains constant. Each assumed option will be subject to all other terms and conditions set forth in the applicable documents evidencing each Accent Optical option immediately prior to the effective time of the merger. However, if the employment of the holder of Accent Optical stock options assumed by Nanometrics is terminated by Accent Optical or Nanometrics without cause or by the employee for good reason, as defined below, within six months following the completion of the merger, the vesting of such options will accelerate in full. As of June 6, 2006, options to purchase approximately 16,528,217 shares of Accent Optical Common Stock were outstanding in the aggregate under the Accent Optical stock option plan. Of these options, approximately 13,259,343 of the outstanding Accent Optical options were in-the-money based on an assumed Average Closing Price of \$10.84 or were granted between January 23, 2006 and the closing of the merger and would be assumed by Nanometrics. The remaining 3,268,874 Accent Optical options would not be assumed based on the same assumed Average Closing Price.

With respect to the options and shares subject to vesting, the term *cause* means: a termination of employment or service based upon a finding by Nanometrics (as the successor to Accent Optical), acting in good faith and based on its reasonable belief at the time, that the holder (a) has been negligent in the discharge of his duties to Nanometrics, has refused to perform stated or assigned duties or is incompetent in or (other than by reason of a disability or analogous condition) incapable of performing those duties; (b) has been dishonest or committed or engaged in an act of theft, embezzlement or fraud, a breach of confidentiality, an unauthorized disclosure or use of inside information, customer lists, trade secrets or other confidential information; (c) has breached a fiduciary duty, or willfully and materially violated any other duty, law, rule, regulation or policy of Nanometrics or an affiliate; or has been convicted of, or plead guilty or nolo contendere to, a felony or misdemeanor (other than minor traffic violations or similar offenses); (d) has materially breached any of the provisions of any agreement with Nanometrics or an affiliated entity; (e) has engaged in unfair competition with, or otherwise acted intentionally in a manner injurious to the reputation, business or assets of, Nanometrics or an affiliate; or (f) has improperly induced a vendor or customer to break or terminate any contract with Nanometrics or an affiliate or induced a principal for whom Nanometrics or an affiliate acts as agent to terminate such agency relationship.

With respect to the options and shares subject to vesting, the term *good reason* means: (a) a change in the holder's status, title, position or responsibilities (including reporting responsibilities) that, in the holder's

Table of Contents

reasonable judgment, represents a substantial reduction in the status, title, position or responsibilities as in effect immediately prior thereto; the assignment to the holder of any duties or responsibilities that, in the holder's reasonable judgment, are materially inconsistent with such status, title, position or responsibilities; or any removal of the holder from or failure to reappoint or reelect the holder to any of such positions, except in connection with the termination of the holder's employment for cause, as a result of his or her disability or death, or by the holder other than for good reason; (b) a reduction in the holder's annual base salary; (c) Nanometrics or its successor requiring the holder (without the holder's consent) to be based at any place outside a 50 mile radius of his place of employment prior to the completion of the merger, except for reasonably required travel on business that is not materially greater than such travel requirements prior to the completion of the merger.

Nanometrics will file, within 15 business days after completion of the merger, a registration statement on Form S-8 with the SEC covering shares of Nanometrics common stock issuable in connection with the assumed options. As a result, all shares of Nanometrics common stock issuable upon the exercise of assumed options will be freely transferable as long as the registration statement remains effective.

Exchange Fund; Exchange of Stock Certificates

Prior to completion of the merger, Nanometrics will establish an exchange fund with a bank or trust company, which shall act as the exchange agent for the merger, to hold the stock and cash to be issued to Accent Optical stockholders in the merger. The exchange fund will consist of stock certificates representing shares of Nanometrics common stock and cash to be issued in lieu of fractional shares of Nanometrics common stock or as dividends or other distributions, if any, on Nanometrics common stock with a record date occurring after the completion of the merger.

As soon as practicable following completion of the merger, the exchange agent will mail to each record holder of Accent Optical capital stock a letter of transmittal and instructions for surrendering the record holder's stock certificates in exchange for a certificate representing the shares of Nanometrics common stock issuable to each such holder pursuant to the merger. Only those holders of Accent Optical capital stock who properly surrender their Accent Optical stock certificates in accordance with the exchange agent's instructions will receive (i) a certificate representing the shares of Nanometrics common stock issuable to each such holder pursuant to the merger, (ii) cash in lieu of any fractional share of Nanometrics common stock issuable to any such holders, and (iii) dividends or other distributions, if any, to which they are entitled under the terms of the merger agreement. The surrendered certificates representing Accent Optical capital stock will be cancelled. After the merger has been completed, each certificate representing shares of Accent Optical capital stock that has not been surrendered will represent only the right to receive shares of Nanometrics common stock issuable pursuant to the merger and cash in lieu of any fractional share of Nanometrics common stock to which the holder of any such certificate is entitled. Following the completion of the merger, Accent Optical will not register any transfers of Accent Optical capital stock on its stock transfer books.

Holders of Accent Optical capital stock should not send in their Accent Optical stock certificates until they receive a letter of transmittal from the exchange agent with instructions for the surrender of Accent Optical stock certificates.

Distributions with Respect to Unexchanged Shares

Holders of Accent Optical capital stock are not entitled to receive any dividends or other distributions on Nanometrics common stock until the merger is completed. After the merger is completed, holders of Accent Optical capital stock will be entitled to dividends and other distributions declared or made after completion of the merger with respect to the number of whole shares of Nanometrics common stock which they are entitled to receive upon exchange of their Accent Optical capital stock. These holders will not be entitled to receive these dividends or distributions, however, until they surrender their Accent Optical capital stock to the exchange agent in accordance with the exchange agent instructions.

Table of Contents

Termination of Exchange Fund; No Liability

At any time following the six-month anniversary of the completion of the merger, Nanometrics will be entitled to the return of all cash and shares of Nanometrics common stock held in the exchange fund. Thereafter, Accent Optical equity holders may look only to Nanometrics for any merger consideration and any cash payment relating to any fractional shares, dividends or distributions to which they may be entitled.

Neither Nanometrics nor Accent Optical will be liable to any holder of Accent Optical capital stock, Accent Optical optionee for any shares (or any related dividends or distributions) delivered to a public official under any applicable abandoned property, escheat or similar law following the passage of time specified therein.

Lost, Stolen or Destroyed Certificates

If an Accent Optical stock certificate is lost, stolen or destroyed, the holder of the certificate must deliver an affidavit of such fact, and may also be required to deliver an agreement of indemnity or an indemnity bond prior to receiving any merger consideration. Nanometrics will issue only (i) Nanometrics common stock, (ii) cash in lieu of a fractional share and (iii) any dividends or distributions that may be applicable in a name other than the name in which a surrendered Accent Optical stock certificate is registered only if the person requesting the exchange presents to the exchange agent all documents required to show and effect the unrecorded transfer of ownership and to show that the requesting person paid any applicable stock transfer taxes.

Representations and Warranties

The merger agreement contains general representations and warranties made by each of Nanometrics and Accent Optical, regarding aspects of their respective businesses, financial condition and structure, as well as other facts pertinent to the merger. These representations and warranties relate to the following subject matters with respect to one or both of the parties:

corporate organization, qualifications to do business, corporate standing and corporate power;

capitalization;

corporate authorization, including board approval, to enter into and carry out the obligations contained in the merger agreement;

enforceability of the merger agreement;

the vote of shareholders or stockholders required to complete the merger;

absence of any conflict or violation of the corporate charter and bylaws or the charter, bylaws and similar organizational documents of subsidiaries, any applicable law, or any agreements with third parties, as a result of entering into and carrying out the obligations contained in the merger agreement;

absence of any rights of first refusal or acquisition or pre-emptive rights with respect to capital stock or other assets or properties arising or resulting from entering into and carrying out the obligations contained in the merger agreement;

governmental and regulatory approvals required in connection with the merger;

Edgar Filing: NANOMETRICS INC - Form S-4/A

compliance with applicable laws, and possession and compliance with all permits required for the operation of business;

SEC filings and the financial statements contained in those filings;

controls and procedures for required disclosures of financial and non-financial information to the SEC;

absence of certain changes or events since September 30, 2005 or October 1, 2005, as the case may be;

absence of undisclosed liabilities;

Table of Contents

absence of litigation and investigations;

material agreements and the absence of breaches of material agreements;

employee benefit plans and employment contracts;

labor matters;

real property and assets;

taxes;

environmental matters;

intellectual property;

insurance;

interested party transactions;

brokers used in connection with the transactions contemplated by the merger agreement;

opinions of financial advisors; and

applicability of Delaware and California antitakeover statutes to the merger.

Conduct of Business Before Completion of the Merger

Pursuant to the merger agreement, each of Nanometrics and Accent Optical has agreed that, until the earlier of the completion of the merger or termination of the merger agreement, or unless the other party consents in writing, it will carry on its business in the ordinary course consistent with past practices and in material compliance with applicable law, and will use commercially reasonable efforts to:

preserve intact its present business organization;

keep available the services of its current officers, employees and consultants; and

Edgar Filing: NANOMETRICS INC - Form S-4/A

preserve its relationships with customers, suppliers, distributors and others with which it has significant business relations. Pursuant to the merger agreement, Accent Optical has agreed that, until the earlier of the completion of the merger or termination of the merger agreement, or unless Nanometrics consents in writing, it will not:

amend or otherwise change its corporate charter and bylaws or other equivalent organizational documents;

issue, sell, transfer, pledge, redeem, accelerate rights under, dispose of or encumber, or authorize the issuance, sale, transfer, pledge, redemption, acceleration of rights under, disposition or encumbrance of, any shares of its capital stock of any class, or any options, warrants, convertible securities or other rights of any kind to acquire any shares of its capital stock, or any other ownership interest in such party, other than the issuance of common stock upon the exercise of outstanding stock options and the acceleration of vesting of cancelled options in accordance with the applicable stock plan;

sell, pledge, mortgage, dispose, lease, license or encumber any of its properties or assets (whether tangible or intangible), or suffer to exist any lien thereupon other than (i) sales of assets not to exceed in the aggregate \$25,000 if prior to March 31, 2006 and \$50,000 if after March 31, 2006 and (ii) sales, leases or licenses of the proprietary products in the ordinary course of business consistent with past practice;

declare, set aside, make or pay any dividend or make any other distribution;

acquire (by merger, consolidation or acquisition of stock or assets or otherwise) any corporation, partnership or other business organization or division thereof or any equity interest therein;

Table of Contents

incur any indebtedness for borrowed money, issue any debt securities, guarantee any obligations, or make any loans, advances, capital contributions or investments other than in the ordinary course of business consistent with past practice;

amend any material contract or enter into a contract that would be deemed a material contract, or terminate, cancel or waive any right under any material contract, other than in the ordinary course of business;

adopt or implement any shareholder rights plan, or take any action to cause any takeover statute to apply to the merger agreement, the voting agreements or the transactions contemplated by such agreements;

make or authorize any capital expenditures or purchase of fixed assets outside the ordinary course of business;

modify or amend standard product warranty terms or any other existing warranty obligations in a materially adverse manner, other than extensions of warranties in the ordinary course of business;

increase the compensation payable or to become payable to, or accelerate the vesting of any benefits of, its directors, officers or employees other than increases in compensation or stock option grants based on annual employment reviews and option grants to nonemployee directors;

hire or promote any officer or director level employee or appoint any director;

make any loan, advance or capital contribution (other than loans or advances of reasonable relocation expenses), or grant any severance or termination pay to any current or former officers or employees, or enter into or amend any employee benefit plan or other plan, contract, agreement or arrangement;

establish, adopt, enter into or amend any collective bargaining agreement or other plan, agreement, trust, fund, policy or arrangement for the benefit of any of its current or former directors, officers or employees;

pay any discretionary bonuses to any of its officers;

materially change any actuarial assumption or other assumption used to calculate funding obligations with respect to any pension or retirement plan, or change the manner in which contributions to any such plan are made or the basis on which such contributions are determined, except, as may be required by applicable law or contractual commitments which were existing as of the date of the merger agreement;

change accounting policies and procedures except as required by GAAP or other applicable law;

make any tax election inconsistent with past practice and take (or fail to take) certain other actions with regard to tax liabilities and obligations;

Edgar Filing: NANOMETRICS INC - Form S-4/A

pay, discharge or satisfy any claims, liabilities or obligations other than payment or satisfaction in the ordinary course of business consistent with past practice of liabilities reflected in its financial statements or incurred in the ordinary course of business consistent with past practice;

fail to pay accounts payable and other obligations in the ordinary course of business;

accelerate the collection of receivables or modify their payment terms, other than in the ordinary course of business consistent with past practice;

sell, securitize or transfer any accounts receivable;

adopt a plan of complete or partial liquidation, dissolution, merger, consolidation, recapitalization or reorganization, other than as provided in the merger agreement;

implement any plant closings or layoffs, except in compliance with applicable law;

terminate or lay off employees in such numbers as would give rise to liability under applicable laws for severance, termination pay or other payments due upon termination of employment, reduction of hours, or temporary or permanent layoffs;

Table of Contents

take any action that would or would reasonably be expected to prevent or materially impair it from consummating (or cause it not to consummate) the transactions described in the merger agreement;

take any action that would make any of its representations and warranties contained in the merger agreement untrue or incorrect, or prevent it from performing or causing it not to perform its covenants such that the closing conditions of the other party would not be satisfied; or

authorize, take, or agree in writing or otherwise take any actions with respect to any of the foregoing matters.

Under the merger agreement, Nanometrics has also agreed that, until the earlier of the completion of the merger or termination of the merger agreement, or unless Accent Optical consents in writing, Nanometrics will not:

amend or otherwise change its corporate charter and bylaws or other equivalent organizational documents;

issue, sell, transfer, pledge, redeem, accelerate rights under, dispose of or encumber, or authorize the issuance, sale, transfer, pledge, redemption, acceleration of rights under, disposition or encumbrance of, any shares of its capital stock of any class, or any options, warrants, convertible securities or other rights of any kind to acquire any shares of its capital stock, or any other ownership interest in such party, other than (i) the grant of options to purchase up to 400,000 shares of common stock to employees pursuant to the Nanometrics employee stock purchase plan, (ii) the issuance of shares of Nanometrics common stock in connection with acquisitions with an aggregate value of up to \$25 million or (iii) the issuance of Nanometrics common stock in connection with convertible debt offerings with aggregate proceeds to Nanometrics not to exceed \$25 million;

change the size of the Nanometrics board of directors, except in accordance with the merger agreement;

adopt a plan of complete or partial liquidation, dissolution, merger, consolidation, recapitalization or reorganization, other than as provided in the merger agreement;

take any action that would materially delay or prevent the merger;

take any action that would make any of its representations and warranties contained in the merger agreement untrue or incorrect, or prevent it from performing or causing it not to perform its covenants such that the closing conditions of the other party would not be satisfied; or

authorize, take, or agree in writing or otherwise take any actions with respect to any of the foregoing matters.

Accent Optical Prohibited from Soliciting Other Offers

Under the merger agreement, Accent Optical has agreed, and has agreed to cause its subsidiaries, affiliates, directors, officers, employees, agents and representatives (including any retained investment banker, attorney or accountant), to:

cease any discussions or negotiations with any other parties with respect to any acquisition proposal; and

Edgar Filing: NANOMETRICS INC - Form S-4/A

not release any third party from, or waive any provisions of, any existing confidentiality or standstill agreement with respect to any acquisition proposal.

For purposes of those restrictions, an acquisition proposal is any inquiry, proposal or offer, filing of any regulatory application or disclosure of any intention relating to any of the following:

the direct or indirect acquisition of a business that constitutes a substantial portion of the net revenues, net income or assets of the party or its significant subsidiaries; or

Table of Contents

any merger, consolidation, business combination or similar transaction involving a party or any of its subsidiaries, other than transactions specifically contemplated by the merger agreement.

Under the terms of the merger agreement, subject to certain exceptions described below, Accent Optical also agreed that it would not directly or indirectly, nor will it authorize or permit any of its respective subsidiaries, affiliates, directors, officers, employees, agents and representatives (including any retained investment banker, attorney or accountant) to:

solicit, initiate, facilitate, encourage, furnish information or take any other action (other than to disclose the existence of its non-solicitation obligation under the merger agreement) that constitutes, or is reasonably likely to lead to, any acquisition proposal by a third party of the type described above;

participate in any discussions or negotiations with any third party regarding any acquisition proposal of the type described above; or

enter into or execute any letter of intent or similar document or any contract agreement or commitment constituting or otherwise relating to any acquisition proposal of the type described above.

Accent Optical is obligated to notify Nanometrics orally and confirm in writing within 24 hours from its receipt of any acquisition proposal of the type described above or any request for nonpublic information from a party who has made, or indicated an intention to enter into discussions relating to, an acquisition proposal of the type described above. The notice must include the material terms and conditions of the acquisition proposal or information request, the identity of the person or group making the acquisition proposal or information request, and all related written materials provided in connection with the proposal or request.

Obligations of the Nanometrics Board of Directors and the Accent Optical Boards of Directors with Respect to their Recommendation and Holding a Meeting

Under the terms of the merger agreement, the Nanometrics and Accent Optical boards of directors each agreed to call, hold and convene a meeting of the shareholders and stockholders, respectively, promptly after the registration statement of which this joint proxy statement/prospectus forms a part is declared effective by the SEC. The Nanometrics board of directors agreed to recommend to its shareholders the approval of the issuance of shares of Nanometrics common stock in the merger and to use reasonable best efforts to obtain the required shareholder approval. The Accent Optical board of directors agreed to recommend to its stockholders the approval of the merger agreement and the merger and to use reasonable best efforts to obtain the required stockholder approvals.

The board of directors of Accent Optical has also agreed not to withdraw or modify, or publicly propose to withdraw or modify, its recommendations relating to the merger agreement and the transactions contemplated thereby, and not to adopt, approve or recommend to its shareholders that they accept any other acquisition proposal of the type described above. Regardless of whether either the Nanometrics or Accent Optical board of directors has received an acquisition proposal of the type described above, or has withheld, withdrawn, amended or modified its recommendation to its shareholders or stockholders relating to the merger agreement, each of Nanometrics and Accent Optical is obligated to call, give notice of, convene and hold a meeting to consider and vote upon its respective proposal relating to the merger agreement and the transactions contemplated thereby; and the fact that any of the foregoing has occurred will not give Nanometrics or Accent Optical a right to terminate the merger agreement or affect any other obligation of the parties under the merger agreement.

Public Announcements

Neither Nanometrics nor Accent Optical will issue any press release or make any public statement with respect to the merger agreement or the transactions contemplated thereby without the prior written consent of the other party, which consent shall not be unreasonably withheld. However, Nanometrics and Accent Optical may, without the prior consent of the other, issue a press release or make a public statement relating to the merger

Table of Contents

agreement or the transactions contemplated thereby if, after consulting with outside counsel, it determines that the press release or public statement is required by applicable law or the rules and regulations of the Nasdaq National Market, and it has used all reasonable best efforts to consult with the other party regarding the timing, scope and content of any such press release or public statement.

Indemnification and Insurance

Under the terms of the merger agreement, Nanometrics agreed to honor for a period of six years after completion of the merger all obligations of Accent Optical contained in any indemnification agreement between Accent Optical or its subsidiaries, on the one hand, and any of its current or former directors or officers, on the other; provided that such agreement was in effect prior to completion of the merger. Also, for six years following completion of the merger, the certificate of incorporation and bylaws of Nanometrics will contain provisions with respect to indemnification and exculpation that are at least as favorable as the indemnification and exculpation provisions contained in the articles of incorporation or bylaws or similar organizational documents of Accent Optical and its subsidiaries as in effect prior to completion of the merger, and Nanometrics and its subsidiaries will not amend, repeal or otherwise modify such provisions in any respect, except as required by law.

For six years from completion of the merger, Nanometrics also will maintain the existing policy of Accent Optical's directors and officers and fiduciary liability insurance covering claims arising from facts or events that occurred prior to the completion of the merger, including acts or omissions occurring in connection with the merger agreement and completion of the transactions contemplated thereby to the extent such acts or omissions are covered by the existing insurance policy, and covering each director and officer of Accent Optical who was covered at the closing of the merger on terms with respect to coverage and amounts no less favorable than those in effect on the date of the signing of the merger agreement. However, Nanometrics will not be required to expend in any one year an amount in excess of 200% of the annual premium paid by Accent Optical at the time the merger agreement was signed. In the event the premium exceeds 200% of the annual premium at the time the merger agreement was signed, Nanometrics will be obligated to obtain an insurance policy with the greatest coverage available for a cost not exceeding 200% of the annual premium paid by Accent Optical at the time the merger agreement was signed. Alternatively, Nanometrics may, prior to completion of the merger, purchase a tail prepaid insurance policy for an effective term of six years from the completion of the merger, covering only those directors and officers of Accent Optical who were covered at the closing of the merger for actions and omissions that occurred prior to the completion of the merger, and on terms, conditions and amounts no less advantageous than the existing insurance policy.

Reasonable Best Efforts to Complete the Merger

Under the terms of the merger agreement, each of Nanometrics and Accent Optical has agreed to cooperate fully with the other and use its reasonable best efforts to take all actions, and to do all things necessary, proper or advisable to complete the merger in the most expeditious manner possible, including:

obtaining any clearance, consent or approval of any governmental entity required to be obtained by Nanometrics or Accent Optical in connection with the merger, and making any and all registrations and filings necessary or advisable to obtain the approval or waiver from any governmental entity, including all filings required by the HSR Act and any other applicable antitrust laws;

obtaining all necessary consents, waivers and approvals under any of material contracts and real property leases in connection with the merger;

authorizing for listing on the Nasdaq National Market, upon official notice of issuance, the shares of Nanometrics common stock to be issued in the merger;

reserving for issuance the shares of Nanometrics common stock issuable upon the exercise of all Accent Optical assumed options;

Table of Contents

defending any lawsuit or proceeding seeking to challenge the merger agreement or the transactions contemplated by the merger agreement, including seeking to have lifted or rescinded any injunction or restraining order or other order adversely affecting the ability of Nanometrics or Accent Optical to complete the transactions contemplated by the merger agreement; and

executing any certificates, instruments or other documents necessary to complete the transactions contemplated by the merger agreement.

Each of Nanometrics and Accent Optical also agreed to keep the other reasonably informed of the status of their respective efforts to complete the transactions contemplated by the merger agreement, including by:

promptly notifying the other in writing of any written communications or material oral communications from any governmental entity with respect to the transactions contemplated by the merger agreement;

permitting the other to review and discuss in advance, and consider in good faith the views of the other in connection with proposed communications with any such governmental entity;

not participating in any meeting with any such governmental entity unless it consults with the other in advance and to the extent permitted by such governmental entity gives the other the opportunity to attend and participate at such meeting;

furnishing the other with copies of all correspondence, filings and communications between it and any governmental entity with respect to the transactions contemplated by the merger agreement; and

furnishing the other with such necessary information and reasonable assistance as each of them may reasonably request in connection with its preparation of necessary filings or submissions of information to any such governmental entity.

Conditions to Obligations to Complete the Merger

The respective obligations of Nanometrics and Accent Optical to complete the merger and the other transactions contemplated by the merger agreement are subject to the satisfaction or waiver of each of the following conditions:

the SEC shall have declared Nanometrics' registration statement effective, no stop order suspending its effectiveness shall have been issued and no proceedings for suspension of the registration statement's effectiveness, or a similar proceeding in respect of this joint proxy statement/prospectus, shall have been initiated or threatened in writing by the SEC;

the merger agreement and the merger shall have been approved by the vote of holders of the requisite number of shares of Accent Optical capital stock under applicable law, as more fully described in the section of this joint proxy statement/prospectus entitled *The Accent Optical Special Meeting Record Date; Outstanding Shares; Voting Rights and Quorum and Vote Required* beginning on page 51;

the issuance of shares of Nanometrics common stock in the merger shall have been approved by the vote of holders of the requisite number of shares of Nanometrics common stock under applicable law, as more fully described in the section of this joint proxy statement/prospectus entitled *The Nanometrics Special Meeting Quorum and Vote Required* beginning on page 47;

Edgar Filing: NANOMETRICS INC - Form S-4/A

all waiting periods with respect to the merger and the other transactions contemplated by the merger agreement shall have expired or terminated early and all clearances, consents, approvals, orders and authorizations necessary for the consummation of the merger under the antitrust laws shall have been received;

no temporary restraining order, preliminary or permanent injunction or other order issued by any court of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the merger shall be in effect;

Table of Contents

no statute, rule, regulation or order shall have been enacted, entered, enforced or deemed applicable to the merger by a governmental entity of competent jurisdiction and has the effect of making completion of the merger illegal;

the shares of Nanometrics common stock to be issued in the merger shall have been authorized for listing on the Nasdaq National Market; and

each of Nanometrics and Accent Optical shall have received from its respective tax counsel an opinion to the effect that the merger will constitute a reorganization within the meaning of Section 368(a) of the Internal Revenue Code and such opinions shall not have been withdrawn, or to the extent counsel for Accent Optical does not issue such tax opinion, counsel to Nanometrics shall have delivered such tax opinion to Accent Optical and to the extent counsel for Nanometrics does not issue such tax opinion, counsel to Accent Optical shall have delivered such tax opinion to Nanometrics.

In addition, individually, the respective obligations of Nanometrics and Alloy Merger Corporation on the one hand, and Accent Optical on the other, to effect the merger and the other transactions contemplated by the merger agreement are subject to the satisfaction or waiver of a number of additional conditions, including:

the representations and warranties of the other party shall have been true and correct (without giving any effect to any qualification as to materiality or material adverse effect contained in any specific representation or warranty) on January 25, 2006 and as of the date the merger is to be completed as if made at and as of that time, except:

for changes contemplated or permitted by the merger agreement;

to the extent the representations and warranties of the other party address matters only as of a particular date, they must be true and correct only as of that date;

where any failures of such representations and warranties to be true and correct, individually or in the aggregate, do not have a material adverse effect;

the other party shall have performed or complied in all material respects with all of its agreements and covenants required by the merger agreement to be performed or complied with by it before completion of the merger; and

no material adverse effect, with respect to the other party shall have occurred since January 25, 2006.

Material Adverse Effect

Under the terms of the merger agreement, a material adverse effect on either Nanometrics or Accent Optical means any change, effect or circumstance that (i) is materially adverse to the business, operation, properties or condition (financial or otherwise) of Nanometrics and its subsidiaries or Accent Optical and any of its subsidiaries, taken as a whole, or (ii) materially and adversely affects the ability of Nanometrics or Accent Optical, as the case may be, to complete the transactions contemplated by the merger agreement. However, under the terms of the merger agreement, none of the following, either alone or in combination, will be deemed to constitute, nor will any of the following be taken into account in determining whether there has been or will or could be, a material adverse effect:

any changes resulting from or arising out of general market, economic or political conditions (including any changes arising out of acts of terrorism, or war, weather conditions or other force majeure events), provided that the change does not have a substantially disproportionate impact on Nanometrics and its subsidiaries or Accent Optical and its subsidiaries, as the case may be, taken as a

whole;

any changes resulting from or arising out of general market, economic or political conditions in the industries in which Nanometrics or Accent Optical conduct business (including any changes arising out of acts of terrorism, or war, weather conditions or other force majeure events), provided that the changes do not have a substantially disproportionate impact on Nanometrics and its subsidiaries or Accent Optical and its subsidiaries, as the case may be, taken as a whole;

Table of Contents

any changes resulting from or arising out of actions taken pursuant to (and required by) the merger agreement or at the request of Nanometrics or Accent Optical, as the case may be, or the failure to take any actions due to restrictions set forth in the merger agreement;

any changes in the price or trading volume of Nanometrics common stock, in and of itself;

any failure of Nanometrics to meet published revenue or earnings projections, in and of itself;

any amendments to or restatements of Nanometrics financial statements or other effects arising from the matters set forth in Nanometrics Current Report on Form 8-K dated October 27, 2005, as amended; and

any changes or effects arising out of or resulting from any legal claims or other proceedings made by any of the Accent Optical or Nanometrics stockholders or shareholders, as the case may be, arising out of or related to the merger agreement, the merger or any other transactions contemplated by the merger agreement.

Termination; Termination Fees and Expenses

Termination

The merger agreement may be terminated in accordance with its terms at any time prior to completion of the merger, whether before or after the approval of the merger agreement and approval of the merger by shareholders of Accent Optical or the approval of the issuance of the shares of Nanometrics common stock in the merger by shareholders of Nanometrics:

by mutual written consent of Nanometrics and Accent Optical, duly authorized by their respective boards of directors;

by either Nanometrics or Accent Optical, if the merger is not completed by July 31, 2006; provided, however, that neither party may terminate the merger agreement on this basis if such terminating party has breached its obligations under the merger agreement;

by either Nanometrics or Accent Optical, if a court of competent jurisdiction or governmental, regulatory or administrative agency or commission has issued a nonappealable final order or taken any other action having the effect of permanently prohibiting the merger;

by either Nanometrics or Accent Optical, if the merger agreement and the merger fail to receive the requisite affirmative vote for approval at the Accent Optical stockholders meeting, provided that Accent Optical may not terminate the merger agreement on this basis if Accent Optical has breached the provisions of the merger agreement relating to non-solicitation, board recommendations and filing this joint proxy statement/prospectus, or if Accent Optical has not complied with its obligations relating to payment of fees and expenses described below;

by either Nanometrics or Accent Optical, if the issuance of shares of Nanometrics common stock in the merger fails to receive the requisite affirmative vote at the Nanometrics shareholders meeting, provided that Nanometrics may not terminate the merger agreement on this basis if Nanometrics has breached the provisions of the merger agreement relating to filing this joint proxy statement/prospectus, or if Nanometrics has not complied with its obligations relating to payment of fees and expenses described below;

Edgar Filing: NANOMETRICS INC - Form S-4/A

by Nanometrics, upon a breach of, or failure to perform, any representation, warranty or covenant in the merger agreement, which breach or failure to perform would reasonably be expected to cause the completion of Accent Optical's representations and warranties or covenants to not be met; however, if the breach or inaccuracy is curable by Accent Optical, then Nanometrics may not terminate the merger agreement for 20 days after delivery of written notice from Nanometrics to Accent Optical of the breach, and if the breach is cured during those 20 days Nanometrics may not exercise this termination right; or

Table of Contents

by Accent Optical, upon a breach of, or failure to perform, any representation, warranty or covenant in the merger agreement, which breach or failure to perform would reasonably be expected to cause the completion of Nanometrics representations and warranties or covenants to not be met; however, if the breach or inaccuracy is curable by Nanometrics, then Accent Optical may not terminate the merger agreement for 20 days after delivery of written notice from Accent Optical to Nanometrics of the breach, and if the breach is cured during those 20 days, Accent Optical may not exercise this termination right.

Termination Fees and Expenses

Under the terms of the merger agreement, Nanometrics must pay a fee to Accent Optical of \$5 million, plus expenses, if Accent Optical terminates the merger agreement because (i) the Nanometrics shareholder approval required to complete the merger has not been obtained at the Nanometrics special meeting or (ii) any clearance, consent, authorization, order or approval of, or any exemption by, any governmental entity required to effect the merger is not granted or received as a result of Nanometrics exercising its right not to sell or dispose of any assets or any business interests necessary to obtain such clearance, consent, authorization, order or approval of, or exemption by, any governmental entity.

Under the terms of the merger agreement, Accent Optical must pay a fee to Nanometrics of \$5 million, plus expenses, if Nanometrics terminates the merger agreement because Accent Optical has (i) breached any provisions of the merger agreement related to non-solicitation, board recommendation or effectiveness of the registration statement or (ii) the Accent Optical stockholder approval required to complete the merger has not been obtained at the Accent Optical special meeting. Accent Optical may pay the fee through the issuance of its Common Stock at a price per share of \$0.40.

Expenses Generally

Except as provided above, all fees and expenses incurred in connection with the merger agreement and the transactions contemplated thereby will be paid by the party incurring the fees or expenses, whether or not the merger is completed, other than expenses incurred in connection with filing and printing this joint proxy statement/prospectus, the registration statement, and filings by Nanometrics and Accent Optical under the HSR Act or any similar filing requirement of any governmental entity applicable to the merger, which will be shared equally by Nanometrics and Accent Optical. Notwithstanding the foregoing, in the event that Accent Optical's expenses exceed \$4.2 million, excluding the HSR Act expenses, Nanometrics shall be entitled to reimbursement of such expenses after the effective time of the merger from the escrow fund without regard to any threshold or deductible.

The Voting Agreements

Nanometrics Voting Agreements. Each of Vincent J. Coates, John D. Heaton, Edmond R. Ward, William G. Oldham, Stephen J. Smith, J. Thomas Bentley, Roger Ingalls, Jr., Norman Coates, Douglas J. McCutcheon and Quentin Wright, constituting all of the directors and executive officers of Nanometrics, has entered into a voting agreement with Accent Optical, agreeing to vote all of his respective shares of Nanometrics common stock, including shares of Nanometrics common stock acquired after the date of the voting agreements, as follows:

in favor of the adoption and approval of the merger agreement, and in favor of each of the other actions contemplated by the merger agreement and any action required to further the merger; and

in favor of waiving any consents or waivers that are required for the consummation of the merger under the terms of any agreement to which the shareholder is a party or in respect of any rights the shareholder may have in connection with the merger or any other transactions provided for in the merger agreement.

Each of these shareholders has also granted to Accent Optical an irrevocable proxy to vote the shares of Nanometrics common stock subject to the voting agreements in accordance with its terms. The voting

Table of Contents

agreements and irrevocable proxies terminate upon the earlier of the termination of the merger agreement or the closing of the merger.

At the close of business on January 25, 2006, the parties to the Nanometrics voting agreement and their affiliates owned and were entitled to vote 4,024,815 shares of Nanometrics common stock, collectively representing approximately 30.9% of the shares of Nanometrics common stock outstanding on that date. As of the record date for the Nanometrics special meeting, the parties to the Nanometrics voting agreement and their affiliates owned and were entitled to vote 4,046,147 shares of Nanometrics common stock, collectively representing approximately 31% of the shares of Nanometrics common stock outstanding on that date.

The voting agreements prohibit the signing shareholders from selling or disposing of any shares or options of Nanometrics common stock beneficially owned by the signing shareholders, unless the transferee agrees to be bound by the terms and conditions of the voting agreement. A form of the Nanometrics voting agreement is attached to this joint proxy statement/prospectus as Annex B-1.

Accent Optical Voting Agreements. Each of Peter M. and Lindsay M. Joost, Trustees, U/T/A dated April 11, 2002, JFI II, LP, Rhine 2000 Children's Trust, Jeffrey J. Rosen, Joseph Dox, Rajeev Mundhe, Gregory A. Kaiser, Kaiser Family Trust U/A dated June 20, 2000, Bruce Crawford, Reid Langrill, Bruce C. Rhine and Martha H. Rhine, JTWROS, Bruce Charles Rhine and Martha Hawn Rhine Family Trust U/T/A dated February 6, 2002, MCP Global Corporation Ltd., RS Coinvestment, LLC and Bio-Rad has entered into a voting agreement with Nanometrics and Alloy Merger Corporation, agreeing to vote all of his, her or its shares of Accent Optical capital stock, including shares of Accent Optical capital stock acquired after the date of the voting agreements, as follows:

in favor of the adoption and approval of the merger agreement, and in favor of each of the other actions contemplated by the merger agreement and any action required to further the merger or these actions;

in favor of the appointment of the Stockholder Agent;

in favor of the approval of the escrow agreement related to the merger;

against any action, approval or agreement that would compete with, impede, interfere with, or adversely affect the approval of the merger agreement, the merger or the timely consummation of the transactions contemplated by the merger agreement;

against any action, approval or agreement that would result in any material breach of a representation, warranty, covenant or agreement of Accent Optical under the merger agreement; and

against any proposal for any extraordinary corporate transaction, such as a recapitalization, dissolution, liquidation, or sale of assets of Accent Optical or any merger, consolidation or other business combination (other than the merger) between Accent Optical and any person (other than Nanometrics or a subsidiary of Nanometrics) or any other action or agreement that is intended or which reasonably could be expected to impede, interfere with, delay, postpone or materially adversely affect the merger and the transactions contemplated by the merger agreement.

The voting agreements originally contained the agreement of each of these stockholders to vote the stockholder's shares in favor of the approval of certain payments to Accent Optical executive officers pursuant to Section 280G of the Internal Revenue Code. Nanometrics and Alloy Merger Corporation subsequently waived this requirement.

Each of these stockholders has also granted to Nanometrics an irrevocable proxy to vote the shares of Accent Optical capital stock subject to the voting agreements in accordance with its terms. The voting agreements and irrevocable proxies terminate upon the earlier of the termination of the merger agreement, the closing of the merger or 12 months after the date of the agreement.

Table of Contents

At the close of business on January 25, 2006, and as of the record date for the Accent Optical special meeting, _____, these stockholders and their affiliates beneficially owned and were entitled to vote 124,193,172 shares of Accent Optical Common Stock, collectively representing approximately 87.9% of the shares of Accent Optical Common Stock outstanding on that date; 8,396.77 shares of Accent Optical Series A Preferred Stock, collectively representing approximately 88.9% of the shares of Accent Optical Series A Preferred Stock outstanding on that date; and 5,036,584 shares of Accent Optical Convertible Preferred stock, collectively representing approximately 64.7% of the shares of Accent Optical Series A Preferred stock outstanding on that date.

The Accent Optical voting agreements prohibit the signing stockholders from selling or disposing of any shares or options of Accent Optical capital stock beneficially owned by the signing stockholders without the prior written consent of Nanometrics. A form of the Accent Optical voting agreement is attached to this joint proxy statement/prospectus as Annex B-2.

The Shareholder Agreements

Accent Optical Shareholder Agreements. Each of Bruce Charles Rhine and Martha Hawn Rhine Family Trust U/T/A dated February 6, 2002, Bruce C. Rhine and Martha H. Rhine, JTWR0S, Peter M. and Lindsay M. Joost, Trustees, U/T/A dated April 11, 2002, JFI II, L.P. and Bio-Rad has entered into a shareholder agreement with Nanometrics. Pursuant to those agreements, each of the above-listed shareholders, with the exception of Bio-Rad, has agreed not to transfer any shares of Nanometrics common stock acquired as consideration in the merger until the earlier to occur of (i) such date and time as the merger agreement shall have been validly terminated in accordance with its terms and conditions or (ii) the second anniversary of such date and time as the merger shall become effective in accordance with its terms and conditions. Notwithstanding the foregoing, these shareholders may transfer (i) shares of Nanometrics common stock held by the shareholder in transactions effected on a national securities exchange or through the Nasdaq Stock Market so long as the number of shares so transferred in any month does not exceed 1/24th of the number of shares received in the merger by such shareholder; provided that, if such stockholder sells less than the permitted number of shares he, she or it can accumulate the right to sell up to 1/8th of his, her or its original holdings in a single month, (ii) any of the shares in connection with the exercise (cashless or otherwise) of options to acquire shares of Nanometrics common stock in an amount that is sufficient to satisfy the payment of any transaction costs and any tax liability incurred by that shareholder in connection with that exercise, (iii) to a family member or trust for estate planning purposes, provided the transferee has agreed in writing to be bound by the terms of the Shareholder Agreement and to hold such shares subject to all the terms and provisions of the Shareholder Agreement, (iv) to a lender pursuant to a margin loan or other secured lending obligation provided the lender has agreed in writing to be bound by the terms of the Shareholders Agreement, (v) pursuant to, and in accordance with, the terms of a shareholder's 10b5-1 plan or arrangement with Nanometrics, if any, with terms and conditions consistent with the provisions of the Shareholders Agreement or (vi) in a transaction approved in writing by Nanometrics.

Pursuant to the Shareholder Agreement between Bio-Rad and Nanometrics, Bio-Rad agreed not to transfer any shares of Nanometrics common stock acquired as consideration in the merger until the earlier to occur of (i) such date and time as the merger agreement shall have been validly terminated in accordance with its terms and conditions or (ii) the first anniversary of such date and time as the merger shall become effective in accordance with its terms and conditions. Notwithstanding the foregoing, Bio-Rad may transfer (i) shares of Nanometrics common stock in transactions effected on a national securities exchange or through the Nasdaq Stock Market so long as the number of shares so transferred in any month does not exceed 1/12th of the number of shares received in the merger by Bio-Rad, (ii) any of the shares in connection with the exercise (cashless or otherwise) of options to acquire shares of Nanometrics common stock in an amount that is sufficient to satisfy the payment of any transaction costs and any tax liability incurred by Bio-Rad in connection with that exercise, (iii) to a family member or trust for estate planning purposes, provided the transferee has agreed in writing to be bound by the terms of the Shareholder Agreement and to hold such shares subject to all the terms and provisions of the Shareholder Agreement, (iv) to a lender pursuant to a margin loan or other secured lending obligation

Table of Contents

provided the lender has agreed in writing to be bound by the terms of the Shareholder Agreement, (v) pursuant to, and in accordance with, the terms of a shareholder's 10b5-1 plan or arrangement with Nanometrics, if any, with terms and conditions consistent with the provisions of the Shareholder Agreement or (vi) in a transaction approved in writing by Nanometrics. Forms of the shareholder agreements are attached to this joint proxy statement/prospectus as Annex E-1 and E-2, respectively.

Employment Agreement

As a condition to Nanometrics entering into the merger agreement, Mr. Rhine entered into an employment agreement with Nanometrics, which provides for his employment with Nanometrics following the merger, as described in *Interests of Accent Optical Directors and Executive Officers in the Merger*. In addition, Mr. Rhine has agreed that, during the period from the completion of the merger until one year following Mr. Rhine's termination of employment with Nanometrics, Mr. Rhine will not engage as an employee or other service provider of, have any ownership interest in (other than certain passive interests in publicly traded entities) or participate in the financing, operation, management or control of a corporation or other entity or business that is in competition with Nanometrics or its subsidiaries or any business or proposed business of Nanometrics or its subsidiaries. Mr. Rhine has also agreed that, during the period from the completion of the merger until one year following Mr. Rhine's termination of employment with Nanometrics, he will not directly or indirectly solicit, induce or encourage any employee or customer of Nanometrics or its subsidiaries to terminate his, her or its employment or customer relationship with Nanometrics or its subsidiaries.

Escrow Agreement

Pursuant to the merger agreement, approximately 490,000 shares of Nanometrics common stock deliverable as consideration in the merger will be withheld and deposited with U.S. Stock Transfer Corporation (the *Escrow Agent*) and held in an escrow fund (the *Escrow Fund*) in order to secure Accent Optical's and its former stockholders' performance of indemnification obligations under Article IX of the merger agreement.

Upon closing, Nanometrics will have an immediate claim on the escrow for a number of shares equal to the Accent Optical transaction costs that exceed \$4.2 million, which excess is currently anticipated to be approximately \$950,000, divided by the Average Closing Price for the 10 trading days ending two days prior to the closing date of the merger.

In connection with the execution of the merger agreement on January 25, 2006, Nanometrics, Alloy Merger Corporation, the Stockholder Agent and the Escrow Agent entered into an escrow agreement setting forth additional terms and conditions relating to the operation of the Escrow Fund, treatment of the Escrow Shares and the indemnification claim procedures.

The full text of the escrow agreement is attached as Annex F. The escrow agreement includes the following provisions:

Escrow Fund the Escrow Fund will, subject to the terms and conditions of the merger agreement and the escrow agreement, be held as security for the indemnification obligations of Accent Optical stockholders pursuant to Article IX of the merger agreement.

Dividends any securities distributed in respect of or in exchange for any of the Escrow Shares, whether by way of stock dividends, stock splits or otherwise, will be delivered to the Escrow Agent, who will hold such securities in the Escrow Fund on behalf of Accent Optical stockholders.

Voting Rights the Stockholder Agent has the right, in his sole discretion, on behalf of Accent Optical stockholders, to direct the Escrow Agent in writing as to the exercise of any voting rights pertaining to the Escrow Shares, and the Escrow Agent must comply with any such written instructions.

Transferability the respective interests of Accent Optical stockholders in the Escrow Shares are not assignable or transferable, other than by operation of law.

Table of Contents

Indemnification Claim Procedures on or before the first anniversary of the closing date of the merger (the Termination Date), Nanometrics may deliver to the Escrow Agent a certificate signed by any officer of Nanometrics (an Officer s Certificate):

stating that an indemnified party has paid, suffered, incurred or sustained (or reasonably and in good faith anticipates that it may pay, suffer, incur or sustain) losses for which such indemnified party is entitled to indemnification pursuant to the merger agreement;

stating the amount of such losses (which, in the case of losses not yet paid, suffered, incurred, sustained, may be the maximum amount reasonably anticipated to be so paid, suffered, incurred or sustained);

specifying in reasonable detail (based upon the information then possessed by Nanometrics) the individual items of such losses included in the amount so stated and the nature of the claim for indemnification to which such losses relate; and

the specific provisions of the merger agreement that form the basis for such claim for indemnification of such losses.

Distribution of Escrow Shares at the time of delivery of any Officer s Certificate to the Escrow Agent, Nanometrics must deliver a duplicate copy of such Officer s Certificate to the Stockholder Agent, and for a period of 20 business days after such delivery to the Escrow Agent and the Stockholder Agent of such Officer s Certificate, the Escrow Agent may make no disbursement of Escrow Shares unless the Escrow Agent shall have received written authorization from the Stockholder Agent to make such delivery or disbursement. After the expiration of such 20 business day period, the Escrow Agent will deliver or disburse Escrow Shares having a value equal to such losses from the Escrow Fund to Nanometrics; provided, however, that no such delivery may be made if and to the extent the Stockholder Agent objects in a written statement to any claim or claims made in the Officer s Certificate, and such statement has been delivered to the Escrow Agent and to Nanometrics prior to the expiration of such 20 business day period.

Value of Escrow Shares for the purposes of determining the number of Escrow Shares to be delivered to Nanometrics or the Stockholder Agent, as applicable, out of the Escrow Fund, the Escrow Shares are valued at the average of the closing prices of Nanometrics common stock for the 10 trading days ending two trading days prior to the time that an Officer s Certificate is delivered to the Escrow Agent.

Distribution Following Termination Date within 20 business days after the Termination Date, the Escrow Agent must distribute to Accent Optical stockholders that number of Escrow Shares, if any, then held in escrow less any Escrow Shares to be delivered to the Stockholder Agent. Notwithstanding the foregoing, if Nanometrics has previously delivered to the Escrow Agent a copy of an Officers Certificate and the Escrow Agent has not received written notice of the resolution of the claim covered thereby, the Escrow Agent, upon written instructions received from Nanometrics and the Stockholder Agent will retain in escrow after such Termination Date such number of Escrow Shares as have a value equal to 100% of (i) the losses covered by such Officers Certificate or (ii) the estimated amount of losses set forth in such Officers Certificate, as the case may be.

Method of Distribution any distribution of all or a portion of the Escrow Shares to Accent Optical stockholders will be made by delivery of a check, in the case of a cash payment, other property or stock certificates, as applicable, issued in the name of Accent Optical stockholders, with the distribution to the individual Accent Optical stockholders to be determined by multiplying the aggregate cash, other property or Escrow Shares being distributed by the percentages set forth opposite such holders respective names listed on Attachment A of the escrow agreement; provided, however, that the Escrow Agent will withhold the distribution of the portion of the cash, other property or Escrow Shares otherwise distributable to a Accent Optical stockholder who has not, according to a written notice provided by Nanometrics to the Escrow Agent and the Stockholder Agent, prior to such distribution, surrendered pursuant to the terms of the merger agreement such Accent Optical stockholder s stock certificates formerly representing shares of capital stock of Accent Optical.

Table of Contents

UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL STATEMENTS

The following unaudited pro forma condensed combined balance sheet as of April 1, 2006 and the unaudited pro forma condensed combined statements of operations for the year ended December 31, 2005 and the three months ended April 1, 2006 are based on the historical consolidated financial statements of Nanometrics, incorporated by reference, adjusted to give pro forma effect to the purchase of Soluris as if that transaction had occurred on January 2, 2005 (see footnote 2), and the historical consolidated financial statements of Accent Optical included in this joint proxy statement/prospectus, after giving effect to the merger as a purchase of Accent Optical by Nanometrics using the purchase method of accounting and applying the assumptions and adjustments described in the accompanying notes to the unaudited pro forma condensed combined financial statements.

The fiscal years of Nanometrics and Accent Optical ended on the same day in 2005. Accordingly, the unaudited pro forma condensed combined balance sheet combines Nanometrics with Accent Optical's historical consolidated balance sheet as of April 1, 2006, giving effect to the merger as if it had occurred on April 1, 2006. The unaudited pro forma condensed combined statements of operations for the year ended December 31, 2005 and the three months ended April 1, 2006 combines Nanometrics with Accent Optical's historical consolidated statements of operations. The unaudited pro forma condensed combined statements of operations give effect to the merger as if it had occurred on January 2, 2005.

The merger will be accounted for under the purchase method of accounting in accordance with Statement of Financial Accounting Standards (SFAS) No. 141, *Business Combinations*. Under the purchase method of accounting, the total estimated purchase price, calculated as described in Note 1 to these unaudited pro forma condensed combined financial statements, is allocated to the net tangible and identifiable intangible assets of Accent Optical acquired in connection with the merger, based on the assets' respective estimated fair values. Nanometrics has made a preliminary allocation of the estimated purchase price to the tangible and identifiable intangible assets acquired and liabilities assumed based on various preliminary estimates. A final determination of these estimated fair values, which cannot be made prior to the completion of the merger, will be based on the actual net tangible and identifiable intangible assets of Accent Optical that exist as of the date of completion of the merger.

The unaudited pro forma condensed combined financial statements do not include any adjustments for liabilities that may result from integration activities, as Nanometrics and Accent Optical are in the process of making these assessments and estimates of these costs are not currently known. However, liabilities ultimately may be recorded for severance related to Accent Optical employees, costs of vacating some facilities of Accent Optical, or other costs associated with exiting activities of Accent Optical that may affect amounts in the pro forma financial statements. Any such liabilities would be recorded as an adjustment to the purchase price and an increase in goodwill. In addition, Nanometrics may incur significant restructuring charges upon completion of the merger or in subsequent quarters for severance costs related to Nanometrics employees, costs of vacating some pre-merger Nanometrics facilities, or other costs associated with exiting activities of Nanometrics. Any such restructuring charges would be recorded as an expense in the consolidated statement of operations in the period in which they were incurred. Since the final estimated fair value of the unvested stock options assumed will be calculated at the closing date of the merger, the associated deferred stock-based compensation could change materially depending on the price of Nanometrics common stock or the number of Accent Optical unvested options outstanding as of the time of the closing of the merger.

These unaudited pro forma condensed combined financial statements have been prepared based on preliminary estimates of fair values. Amounts preliminarily allocated to intangible assets with definite lives may change significantly, which could result in a material change in amortization of intangible assets. Therefore, the actual amounts recorded as of the completion of the merger may differ materially from the information presented in these unaudited pro forma condensed combined consolidated financial statements. The impact of ongoing integration activities, the timing of completion of the merger and other changes in Accent Optical's net tangible and intangible assets that occur prior to completion of the merger could cause material differences in the information presented.

Table of Contents

The unaudited pro forma condensed combined financial statements have been prepared by Nanometrics and Accent Optical for illustrative purposes only and are not necessarily indicative of the condensed consolidated financial position or results of operations in future periods or the results that actually would have been realized had Nanometrics and Accent Optical been a combined company during the specified periods. The pro forma adjustments are based on the preliminary information available at the time of the preparation of this document. The unaudited pro forma condensed combined financial statements, including the notes thereto, should be read in conjunction with, Nanometrics' historical consolidated financial statements included in its Annual Report on Form 10-K for the year ended December 31, 2005, which are incorporated herein by reference, and Accent Optical's historical consolidated financial statements and Quarterly Report on Form 10-Q for the three months ended April 1, 2006, included elsewhere herein.

Table of Contents**UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET**

AS OF APRIL 1, 2006

(In thousands)

	Historical Nanometrics	Historical Accent Optical	Reclassifications	Pro Forma Adjustments	Pro Forma Combined
Assets					
Current assets:					
Cash and cash equivalents	\$ 33,915	\$ 3,239	\$	\$	\$ 37,154
Trade receivables, net	20,570	10,740			31,310
Inventories	27,494	10,961		1,895(l)	40,350
Prepaid and other current assets	4,183	1,284		(1,261)(h)	3,456
				(750)(q)	
Total current assets	86,162	26,224		(116)	112,270
Property, plant and equipment, net	42,613	1,540			44,153
Intangibles, net	4,760	17		(17)(a)	30,460
				25,700(j)	
Goodwill	3,030	2,327		(2,327)(a)	49,427
				46,397(k)	
Other assets	1,483	135			1,618
Total assets	\$ 138,048	\$ 30,243	\$	\$ 69,637	\$ 237,928
Liabilities and Stockholders Equity					
Current liabilities:					
Revolving line of credit	\$ 510	\$	\$ 855(A)	\$	\$ 1,365
Accounts payable	4,653	4,775			9,428
Accrued payroll and related expense	2,086				2,086
Deferred revenue	3,818	686			4,504
Other current liabilities	3,920	7,974		662(h)	16,552
				4,746(i)	
				(750)(q)	
Income taxes payable	748				748
Current portion of long-term debt	381	3,066	(855)(A)	11,772(o)	14,364
Total current liabilities	16,116	16,501		16,430	49,047
Long-term debt, net of current portion	1,313	11,772		(11,772)(o)	1,313
Other long-term liabilities	257	10			267
Total liabilities	17,686	28,283		4,658	50,627
Stockholders equity:					
Preferred stock		78		(78)(b)	
Common stock	107,592	1		(1)(b)	174,531
				65,697(f)	
				1,242(g)	
Additional paid-in-capital	853	32,281		(32,281)(b)	853
Retained earnings (accumulated deficit)	10,896	(31,759)		31,759(b)	10,896
Accumulated other comprehensive income	1,021	1,359		(1,359)(b)	1,021
Total stockholders equity	120,362	1,960		64,979	187,301

Edgar Filing: NANOMETRICS INC - Form S-4/A

Total liabilities and shareholders' equity	\$ 138,048	\$ 30,243	\$	\$ 69,637	\$ 237,928
--	------------	-----------	----	-----------	------------

See accompanying notes to unaudited pro forma condensed combined financial statements.

Table of Contents**UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS****FOR THE YEAR ENDED DECEMBER 31, 2005**

	Pro Forma Nanometrics	Historical Accent Optical	Reclassifications	Pro Forma Adjustments	Pro Forma Combined
	(In thousands, except per share amounts)				
Net revenues:					
Product revenues	\$ 67,191	\$ 33,911	\$		\$ 101,102
Service revenues	12,025	7,963			19,988
Total revenues	79,216	41,874			121,090
Costs and expenses:					
Cost of product revenues	32,133	16,742		(33)(d) 11 (m)	50,649
Cost of service revenues	11,805	5,453		1,796 (n) (41)(d)	17,234
Research and development	15,311	8,233		17 (m) (109)(d)	23,537
Selling and marketing	13,714	14,052	(5,837)(B)	102 (m) (370)(d)	22,456
General and administrative	12,985		5,837 (B) 16 (C)	57 (m) 840 (n) 362 (m)	19,057
Merger termination fee	(8,300)			(143)(e)	(8,300)
Amortization of acquired intangibles		453		(453)(c)	
Restructuring		16	(16)(C)		
Asset impairment and disposition	2,232				2,232
Total costs and expenses	79,880	44,949		2,036	126,865
Loss from operations	(664)	(3,075)		(2,036)	(5,775)
Other income (expense):					
Interest income	1,001				1,001
Interest expense	(73)	(1,839)			(1,912)
Other expense	(579)	(211)			(790)
	349	(2,050)			(1,701)
Loss before provision for income taxes	(315)	(5,125)		(2,036)	(7,476)
Provision for income taxes	218	124			342
Net loss	(533)	(5,249)		(2,036)	(7,818)
Cumulative dividends on preferred stock		(3,549)		(3,549) (p)	
Net loss attributable to common shareholders	\$ (533)	(8,798)	\$	\$ 1,513	\$ (7,818)
Net loss per share:					
Basic	\$ (0.04)	\$ (0.06)			\$ (0.46)

Edgar Filing: NANOMETRICS INC - Form S-4/A

Diluted	\$ (0.04)	\$ (0.06)	\$ (0.46)
---------	-----------	-----------	-----------

Shares used to compute net loss per share:			
Basic	12,760	140,928	17,067
Diluted	12,760	140,928	17,067

See accompanying notes to unaudited pro forma combined financial statements.

Table of Contents**UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS****FOR THE THREE MONTHS ENDED APRIL 1, 2006**

	Pro Forma Nanometrics	Historical Accent Optical	Reclassifications	Pro Forma Adjustments	Pro Forma Combined
(In thousands, except per share amounts)					
Net revenues:					
Product revenues	\$ 16,504	\$ 8,210	\$	\$	\$ 24,714
Service revenues	3,579	1,855			5,434
Total revenues	20,083	10,065			30,148
Costs and expenses:					
Cost of product revenues	8,257	3,688		(10)(d) 2(m)	12,386
Cost of service revenues	2,733	1,251		449(n) (10)(d)	3,978
Research and development	2,969	1,918		4(m) (58)(d)	4,856
Selling and marketing	3,611	3,876	(1,837)(B)	27(m) (226)(d)	5,649
General and administrative	4,780		1,837(B)	15(m) 210(n) 95(m)	6,451
Amortization of acquired intangibles		27		(261)(e) (27)(c)	
Total costs and expenses	22,350	10,760		210	33,320
Loss from operations	(2,267)	(695)		(210)	(3,172)
Other income (expense):					
Interest income	332				332
Interest expense	(13)	(449)			(462)
Other income	10	(237)			(227)
	329	(686)			(357)
Loss before provision for income taxes	(1,938)	(1,381)		(210)	(3,529)
Provision for income taxes	44	12			56
Net loss	(1,982)	(1,393)		(210)	(3,585)
Cumulative dividends on preferred stock		(904)		904(p)	
Net loss attributable to common shareholders	\$ (1,982)	\$ (2,297)	\$	\$ 684	\$ (3,585)
Net loss per share:					
Basic	\$ (0.15)	\$ (0.02)			\$ (0.21)
Diluted	\$ (0.15)	\$ (0.02)			\$ (0.21)

Shares used to compute net loss per share:

Edgar Filing: NANOMETRICS INC - Form S-4/A

Basic	13,018	141,176	17,325
Diluted	13,018	141,176	17,325

See accompanying notes to unaudited pro forma combined financial statements.

Table of Contents**Notes to Unaudited Pro Forma****Condensed Combined Balance Sheet****1. Basis of Pro Forma Presentation**

On January 25, 2006, Nanometrics and Accent Optical entered into the merger agreement pursuant to which a subsidiary of Nanometrics will merge with and into Accent Optical and Accent Optical will become a wholly owned subsidiary of Nanometrics in a business combination to be accounted for using the purchase method. The total estimated purchase price of \$68.9 million includes the exchange of approximately 4.7 million shares of Nanometrics common stock (4.9 million shares less 172,283 shares reserved for options to be issued for in-the-money Accent Optical options granted prior to January 23, 2006 (see below)) valued at \$65.7 million, assumed vested stock options with a fair value of \$1.2 million and estimated direct transaction costs of \$1.9 million.

The unaudited pro forma condensed combined financial statements assume the issuance of 4.9 million shares of Nanometrics common stock to the holders of Accent Optical capital stock and includes a reserve of shares to cover the issuance of Nanometrics options to the holders of certain Accent Optical stock options granted prior to January 23, 2006 that have exercise prices less than the price implied by the common stock exchange ratio in the merger estimated to be 172,283 shares assuming an Average Closing Price of \$13.87. Nanometrics will also issue to the holders of Accent Optical capital stock an additional number of shares (Option Adjustment Amount) of its common stock equal to the quotient of the aggregate exercise price of all Accent stock options assumed, other than stock options issued on or after January 23, 2006 (aggregate exercise price), divided by the Average Closing Price currently estimated to be 76,681 shares. As the Average Closing Price and the aggregate Accent Optical stock options assumed will not be known until the date of closing, the additional shares to be issued under the Option Adjustment Amount was estimated using the aggregate exercise price divided by \$13.87, the average closing price for the period beginning two trading days before and ending two trading days after the merger was announced. The actual number of shares of Nanometrics common stock to be issued pursuant to the in-the-money options granted prior to January 23, 2006 will be determined based on the Average Closing Price on the date of closing of the merger. Accent Optical has agreed to indemnify Nanometrics for its transaction expenses in excess of \$4.2 million. Accent Optical estimates its transaction expenses to be approximately \$5.15 million. Upon closing, Nanometrics will have an immediate claim against the escrow for that portion of Accent Optical's transaction expenses in excess of \$4.2 million. The aggregate merger consideration includes an estimated reduction of 68,483 shares of Nanometrics common stock, the expected claim against escrow divided by the Average Closing Price. As the Average Closing Price and the claim against escrow will not be known until the date of closing, the reduction in shares was estimated using the expected claim against escrow divided by \$13.87, the average closing price for the period beginning two trading days before and ending two trading days after the merger was announced.

Under the terms of the merger agreement, each outstanding in-the-money option, as determined prior to closing, and each option granted on or after January 23, 2006 (whether in-the-money or not) to purchase Accent Optical Common Stock will be assumed by Nanometrics and converted into an option to purchase Nanometrics Common Stock. Under the terms of the merger agreement, Nanometrics would assume Accent Optical stock options to purchase an aggregate of approximately 0.3 million shares of Nanometrics common stock at an estimated closing price of \$13.87 which includes approximately 150,000 shares for options granted after January 23, 2006. The estimated fair value of the vested options assumed was determined using a Black-Scholes valuation model with the following weighted-average assumptions: volatility of 65.2%; risk-free interest rate of 4.5%, expected life of 2.85 years and dividend yield of zero. The actual number of stock options to be assumed will be determined based on the actual number of Accent Optical stock options in-the-money or granted on or after January 23, 2006 that are outstanding at the completion of the merger.

The unaudited pro forma condensed combined financial statements reflect the exchange of the outstanding in-the-money Accent Optical stock options as a modification based on the guidance of Financial Accounting Standards Board Interpretation No. 44 and Emerging Issues Task Force Issue No. 00-23 by analogy to the fair

Table of Contents

value model of Statement of Financial Accounting Standards 123(R) (SFAS 123R) as the transaction will close after the implementation date of SFAS 123R. Accordingly the amount recorded as purchase consideration is equal to the fair value of Nanometrics vested and unvested options issued to holders of Accent Optical options, less the portion of the fair value of the unvested options attributable to the post-acquisition service period.

There were no significant intercompany balances and transactions between Nanometrics and Accent Optical as of the dates and for the periods of these pro forma condensed combined financial statements. However, as part of the merger agreement, Nanometrics agreed to provide Accent Optical with a working capital loan in the aggregate amount of \$2.5 million. As of April 1, 2006, Nanometrics had advanced \$750,000 to Accent Optical as part of this agreement. Subsequent to April 1, 2006, Nanometrics advanced an additional \$1,750,000 to Accent Optical. Certain reclassification adjustments have been made to conform Nanometrics' and Accent Optical's historical reported balances to the pro forma condensed combined financial statement basis of presentation.

The estimated purchase price and the allocation of the estimated purchase price discussed below are preliminary because the proposed merger has not yet been completed. The actual purchase price will be based on the Nanometrics shares issued to Accent Optical stockholders and the options to purchase Accent Optical stock assumed by Nanometrics on the closing date of the merger. The final allocation of the purchase price will be based on Accent Optical's assets and liabilities on the closing date.

The total preliminary estimated purchase price of the merger is as follows (in thousands):

	Amount
Estimated fair value of Nanometrics shares issued to Accent Optical stockholders	\$ 65,697
Estimated fair value of assumed Accent Optical stock options	1,242
Estimated direct transaction fees and expenses	1,923
Total preliminary estimated purchase price	\$ 68,862

Under the purchase method of accounting, the total preliminary estimated purchase price as shown in the table above is allocated to Accent Optical's tangible and intangible assets and liabilities based on their estimated fair values as of the date of completion of the merger. The total preliminary estimated purchase price is allocated as follows (in thousands):

	Amount	First Year Charges	Estimated Useful Life
Net tangible liabilities	\$ (3,235)		n/a
Identifiable intangible assets:			
Purchased technology	9,400	1,289	7.7 years
Brand names	3,700	507	7.7 years
Customer relationships	12,600	840	15 years
Goodwill	46,397		n/a
Total preliminary estimated purchase price	\$ 68,862	\$ 2,636	

A final determination of fair values, which cannot be made prior to the completion of the merger, may differ materially from the preliminary estimates and will include Nanometrics' final valuation of the fair values of assets acquired and liabilities assumed. This final valuation will be based on the actual net tangible assets of Accent Optical that exist as of the date of the completion of the merger. The final valuation may change the allocations of purchase price, which could affect the fair value assigned to the assets and liabilities and could result in a change to the unaudited pro forma condensed combined financial statements data.

A preliminary estimate of \$3.2 million has been allocated to net tangible liabilities assumed and \$25.7 million has been allocated to amortizable identifiable intangible assets acquired. The depreciation and

Table of Contents

amortization related to the fair value adjustment to net tangible assets and the amortization related to the amortizable identifiable intangible assets are reflected as pro forma adjustments to the unaudited pro forma condensed combined statements of operations.

Identifiable intangible assets. Of the total estimated purchase price, \$25.7 million was allocated to purchased technology, brand names and customer relationships. This adjustment is preliminary and is based on Nanometrics management's estimates. The amount ultimately allocated to identifiable intangible assets may differ materially from this preliminary allocation. A \$5.0 million increase or decrease in value allocated to the amortizable intangible assets would increase or decrease annual amortization by approximately \$0.4 million.

Identification and allocation of value to the identified intangible assets was based on the provisions of SFAS 141. The fair value of the identified intangible assets was estimated by performing a discounted cash flow analysis using the income approach. This method includes a forecast of direct revenues and costs associated with the respective intangible assets and charges for economic returns on tangible and intangible assets utilized in cash flow generation. Net cash flows attributable to the identified intangible assets are discounted to their present value at a rate commensurate with the perceived risk. The projected cash flow assumptions considered contractual relationships, customer attrition, eventual development of new technologies and market competition.

Purchased Technology and Brand Names. The amount allocated to purchased technology was determined through established valuation techniques in the high-technology industry. The Company acquired various process control and metrology products that enable organizations to measure optical, electrical and material properties, including the structural composition of compound and silicon semiconductor devices and wafers, the amount of impurities or contaminants in semiconductor devices, electron mobility and the wavelength and intensity of light emitted by light emitting diodes and laser diodes. Its systems also measure the degree of alignment and dimensions of semiconductor device features. Management considers each of the product brand names to be recognized throughout the worldwide community of semiconductor manufacturers as a premier source of process control and metrology technology. Subsequent to the merger, management intends to maintain and continue to market existing products under each of the product brand names. The purchased technology and brand name intangible assets were determined by discounting the estimated future net cash flows to their present value utilizing the relief of royalty method of the income approach. The estimated net cash flows from the products were based on estimates of royalty streams from each of the product revenues and related income taxes charges. The Company believes the assumptions used in the valuation were reasonable at the time of the acquisition. The estimated net revenues were based on management's projections and reflect a future long-term growth rate of five percent. The business projections were compared with and found to be in line with industry analysts' forecasts of growth in substantially all of the relevant markets. These projections were based on estimates of market size and growth, expected trends in technology, and the nature and expected timing of new product introductions by the Company and those of its competitors. The Company applied a royalty rate of the estimated net revenues for each product to attribute value for dependency on existing technology of five percent and two percent, for purchased technology and brand names, respectively. The royalty rate was based upon a profit split analysis and industry comparable royalty agreements. The effective tax rate utilized in the analysis reflects a 40% rate for the United States Federal and state statutory income taxes. The risk adjusted discount rate used in computing the present value of net cash flows was 16%.

Customer relationships. Accent Optical has established long-standing relationships with its major customers. The customer relationships intangible assets were determined by discounting the estimated future net cash flows to their present value utilizing excess earnings method of the income approach. The estimated net cash flows associated with the customers were based on estimates of the product revenues, product gross margins, operating expenses and related income taxes charges. The Company believes the assumptions used in the valuation were reasonable at the time of the acquisition. The estimated net revenues were based on management's projections and reflect a future growth rate of five percent. The business projections were compared with and found to be in line with industry analysts' forecasts of growth in all of the relevant markets. These projections were based on estimates of market size and growth, expected trends in technology, and the

Table of Contents

nature and expected timing of new product introductions by the Company and those of its competitors. Projected gross margins were based on Accent Optical's historical margins, which were in line with industry averages. Estimated operating expenses used in the valuation analysis of Accent Optical included research and development expenses and selling, marketing and administrative expenses. In developing future expense estimates and evaluation of Accent Optical's overall business model, an assessment of specific product results, including both historical and expected direct expense levels and general industry metrics, was conducted. The effective tax rate utilized in the analysis of the products reflects a 40% rate for the United States Federal and state statutory income taxes. The Company applied an attrition rate of 10% per year to the estimated cash flows to account for the loss of customers based upon its historical experience. The risk adjusted discount rate used in computing the present value of net cash flows was 16%.

Amounts allocated to the identifiable intangible assets are expected to be amortized over a life of seven to 15 years. The estimates of expected useful lives are based on guidance from SFAS 141 and take into consideration the effects of competition, product lives and possible obsolescence. The useful lives of the purchased technology and brand names are based on the number of years in which net cash flows have been projected. The useful lives of customer relationships were estimated based upon Accent Optical's established and long-standing customer relationships with its major customers.

Goodwill. The merger of Nanometrics and Accent Optical will create approximately \$46.4 million of goodwill as the purchase price exceeds the fair value allocated to tangible assets and specifically identified intangible assets. There are a number of factors contributing to the significant amounts of goodwill including the expectation that the combination of Nanometrics and Accent Optical will create various synergies which will provide future value. The combination of Nanometrics and Accent Optical will create one of the largest independent metrology companies which will allow the combined company to increase sales and support of current customers by offering a broader product line. In addition, the merger will allow for a greater global presence for marketing its products due to the creation of worldwide sales and service channels. In particular, Nanometrics' strength in Japan and Accent Optical's strength in Europe should provide the combined company with greater potential sales opportunities. In addition the combined company is expected to generate other economies of scale such as combined administrative functions and efficiencies in manufacturing. In accordance with SFAS 142, *Goodwill and Other Intangible Assets*, goodwill will not be amortized but instead will be tested for impairment at least annually (more frequently if certain indicators are present). In the event the management of the combined company determines that the value of goodwill has become impaired, the combined company will incur an accounting charge for the amount of impairment during the fiscal quarter in which the determination is made.

Deferred stock-based compensation. The total estimated fair value of all unvested Accent Optical stock options assumed by Nanometrics (which is not included in the purchase consideration) was \$1.8 million. The estimated fair value of the unvested options assumed was determined using a Black-Scholes valuation model with the following weighted-average assumptions: volatility of 89.5%; risk-free interest rate of 4.1%, expected life of 5.7 years, forfeiture rate of 20% and dividend yield of zero. This balance will be amortized over the remaining vesting period of the unvested stock options.

2. Nanometrics Pro forma Statement of Operations

On March 15, 2006, Nanometrics announced it had acquired Soluris Inc., (Soluris) a privately held corporation focused on overlay and CD measurement technology and headquartered in Concord, Massachusetts. Pro forma Nanometrics results of operations for the year ended December 31, 2005 and for the quarter ended April 1, 2006 have been adjusted to give pro forma effect to the acquisition of Soluris as if that transaction had occurred on January 1, 2005. The consideration to purchase all the outstanding stock of Soluris was \$6.6 million in an all-cash transaction. Nanometrics also incurred \$0.3 million in transaction fees, including legal, valuation and accounting fees. See Form 8-K/A incorporated herein by reference and filed on May 31, 2006 for additional information.

Table of Contents

The total purchase price has been allocated based on Nanometrics management's estimate of the fair values of assets acquired and liabilities assumed as follows (in thousands):

Net liabilities assumed	(131)
Deferred income tax liabilities	(240)
Goodwill and other intangible assets:	
Goodwill	3,030
Customer relationships	2,900
Patented technology	700
Trademark	600
Total goodwill and other intangible assets	7,230
Net assets acquired	\$ 6,859

Nanometrics pro forma statement of operations for the year ended December 31, 2005:

	Historical Nanometrics	Historical Soluris	Reclassification	Pro Forma Adjustments	Pro Forma Nanometrics
Net revenues:					
Product revenues	\$ 61,012	\$ 8,673	\$ (2,494)(1)	\$	\$ 67,191
Service revenues	9,531		2,494(1)		12,025
Total revenues	70,543	8,673			79,216
Costs and expenses:					
Cost of product revenues	29,173	4,000	(1,110)(1)	70(2)	32,133
Cost of service revenues	10,695		1,110(1)		11,805
Research and development	12,533	2,778			15,311
Selling and marketing	10,945	2,479		290(2)	13,714
General and administrative	11,882	1,103			12,985
Merger termination fee	(8,300)				(8,300)
Asset impairment and disposition	2,232				2,232
Total costs and expenses	69,160	10,360		360	79,880
Income (loss) from operations	1,383	(1,687)		(360)	(664)
Other income (expense):					
Interest income	998	3			1,001
Interest expense	(73)				(73)
Other income (expense)	(579)				(579)
	346	3			349
Income (loss) before provision for income taxes	1,729	(1,684)		(360)	(315)
Provision for income taxes	218				218
Net income (loss)	\$ 1,511	\$ (1,684)	\$	\$ (360)	\$ (533)
Net income (loss) per share					

Edgar Filing: NANOMETRICS INC - Form S-4/A

Basic	\$ 0.12	\$ (2.44)	\$ (0.04)
Diluted	\$ 0.11	\$ (2.44)	\$ (0.04)
Shares used in per share computation			
Basic	12,760	690	12,760
Diluted	13,471	690	12,760

-
- (1) To reclassify Soluris service revenue and related cost of service revenue to align with Nanometrics presentation
(2) To record amortization of intangible assets

Table of Contents**Nanometrics pro forma statement of operations for the quarter ended April 1, 2006:**

	Historical Nanometrics	Historical Soluris	Pro Forma Adjustments	Pro Forma Nanometrics
Net revenues:				
Product revenues	\$ 15,972	\$ 532	\$	\$ 16,504
Service revenues	2,996	583		3,579
Total revenues	18,968	1,115		20,083
Costs and expenses:				
Cost of product revenues	7,909	351	15 (1)	8,257
			(18)(3)	
Cost of service revenues	2,534	239	(40)(3)	2,733
Research and development	2,528	470	(29)(3)	2,969
Selling and marketing	3,102	476	60 (1)	3,611
			(27)(3)	
General and administrative	4,550	534	(304)(3)	4,780
Total costs and expenses	20,623	2,070	(343)	22,350
Loss from operations	(1,655)	(955)	343	(2,267)
Other income (expense):				
Interest income	332			332
Interest expense	(13)			(13)
Other income (expense)	35	475	(500)(2)	10
	354	475	(500)	329
Loss before provision for income taxes	(1,301)	(480)	(157)	(1,938)
Provision for income taxes	21	23		44
Net loss	\$ (1,322)	\$ (503)	\$ (157)	\$ (1,982)
Net loss per share:				
Basic	\$ (0.10)			\$ (0.15)
Diluted	\$ (0.10)			\$ (0.15)
Shares used to compute net loss per share:				
Basic	13,018			13,018
Diluted	13,018			13,018

(1) To record amortization of intangible assets

(2) To eliminate the gain from debt forgiven by Soluris former parent as a result of the acquisition by Nanometrics

(3) To eliminate non-recurring charges directly attributable to Nanometrics acquisition of Soluris.

3. Reclassifications

Certain reclassification adjustments have been made to conform Nanometrics pro forma and Accent Optical's historical reported balances to the pro forma combined condensed financial statement basis of presentation. The reclassifications are as follows:

Edgar Filing: NANOMETRICS INC - Form S-4/A

- (A) To reclassify Accent Optical's line of credit to align with Nanometrics' presentation,
- (B) To reclassify Accent Optical's general and administrative expense to align with Nanometrics' presentation.

Table of Contents

(C) To reclassify Accent Optical's charge for restructuring to general and administrative expense. Pro forma adjustments are necessary to reflect the estimated purchase price, to reflect amounts related to Accent Optical's net tangible and intangible assets at an amount equal to the preliminary estimate of their fair values, to reflect the amortization expense related to the estimated amortizable intangible assets and deferred stock-based compensation, to reflect changes in depreciation and amortization expense resulting from the estimated fair value adjustments to net tangible assets and to reflect the income tax effect related to the pro forma adjustments. The pro forma combined provision for income taxes does not necessarily reflect the amounts that would have resulted had Nanometrics and Accent Optical filed consolidated income tax returns during the periods presented.

The pro forma adjustments included in the unaudited pro forma condensed combined financial statements are as follows:

- (a) to eliminate Accent Optical's historical intangible assets;
- (b) to eliminate Accent Optical's equity;
- (c) to eliminate Accent Optical's historical amortization of intangible assets;
- (d) to eliminate Accent Optical's historical amortization of deferred stock-based compensation;
- (e) to eliminate merger expenses of Accent Optical. These expenses are non-recurring and as such are not reflected in the pro forma condensed combined statement of operations.
- (f) to record the fair value of the 4,735,915 aggregate Nanometrics shares exchanged in the transaction comprised of the base consideration of 4,900,000 shares adjusted for:

shares issued under the Option Adjustment Amount estimated to be 76,681,

the reduction of shares reserved for options to be issued for in-the-money Accent Optical options estimated to be 172,283, and

the reduction in the number of shares issued in connection with the expected claim on escrow shares for Accent Optical transaction expenses in excess of \$4.2 million, estimated to be 68,483,

as described more fully in Note 1, above adjustments are subject to change based upon the Average Closing Price.

- (g) to record the fair value of vested Accent Optical stock options assumed. The number of Accent Optical options assumed and the fair value are subject to change based on the Average Closing Price;
- (h) to record Nanometrics' direct costs of the transaction not yet accrued and to eliminate Nanometrics' merger expenses paid and capitalized as of April 1, 2006 (including \$1.4 million for legal, accounting valuation and printing expenses and \$0.5 million for investment banking services);

Edgar Filing: NANOMETRICS INC - Form S-4/A

- (i) to record Accent Optical's direct costs of the transaction not yet accrued or paid (including \$2.5 million to Bio-Rad, \$2.0 million to Merrill Lynch for investment banking services and \$0.2 million for legal and accounting services);
- (j) to record the fair value of Accent Optical's identifiable intangible assets;
- (k) to record goodwill;
- (l) to adjust Accent Optical's inventory to fair value; this adjustment will result in an increase in cost of products upon the sale of the related inventory; the increase in costs is non-recurring and as such, is not reflected in the pro forma condensed combined statement of operations;
- (m) to record amortization of stock-based compensation of unvested stock options assumed;
- (n) to record amortization of intangible assets;

Table of Contents

- (o) to reflect the subordinated note payable to Bio-Rad as current as the note payable is due within two business days of a change in control;
- (p) to eliminate cumulative dividends on preferred stock; and
- (q) to eliminate Nanometrics loan to Accent Optical.

4. Pro Forma Net Loss Per Share

The pro forma basic and diluted net loss per share is based on the number of Nanometrics shares used in computing basic net loss per share plus shares of Nanometrics common stock exchanged in the transaction including shares issued under the Option Adjustment Amount, less shares held in escrow.

The following is a reconciliation of weighted average shares outstanding used to compute net loss per share (in thousands):

	Three Months Ended April 1, 2006	Year Ended December 31, 2005
Historical Nanometrics	13,018	12,760
Issuance of shares to Accent Optical capital stock holders	4,728	4,728
Option Adjustment Amount additional shares	77	77
Shares held in escrow	(498)	(498)
Pro forma combined shares	17,325	17,067

The diluted net loss per share excludes the effect of options issued to Nanometrics and Accent Optical option holders as the effect is antidilutive.

Table of Contents

THE NANOMETRICS BUSINESS

Nanometrics offers a complete line of systems to address the metrology requirements of its customers. Nanometrics' metrology systems can be categorized as follows:

Standalone, fully automated systems for high-volume manufacturing inspection;

Integrated systems built into semiconductor processing equipment that provide real-time measurements and feedback to improve process control and increase throughput; and

Tabletop systems used to provide manual or semi-automatic measurements for engineering and low-volume production environments. Nanometrics also provides systems that are used to measure the overlay accuracy of successive layers of semiconductor patterns on wafers in the photolithography process. The accurate alignment, or overlay, of successive film layers, relative to each other, across the wafer is critical for device performance and favorable production yields. Additional demands on process tool manufacturers for better film uniformity, tighter dimensional control, tool-to-tool matching and within-tool chamber uniformity is driving the need for integrated process control metrology. These new tool requirements will drive the need to place metrology inside the process tool for real-time, integrated, process control metrology, using both feed forward and feedback of the collected metrology data to control the process equipment.

Nanometrics has made several strategic changes in its business model to enable the company to further address these metrology trends. These changes include:

The sale of the company's flat panel display metrology business in Japan effective October 2005;

The introduction of a new 300 millimeter wafer platform for advanced overlay metrology;

The continued outsourcing of certain system components, such as robotics, enabling the company to leverage its technical resources;

The maximum utilization of an in-house manufacturing strategy for the company's products;

The development of new measurement technologies for advanced chemical mechanical planarization (CMP) and lithography; and

The acquisition of Soluris, Inc., a privately-held Massachusetts corporation, focused on overlay and critical dimension measurement. Demand for Nanometrics' products is driven by the increasing use of multiple thin film technology by manufacturers of electronic products and, more recently, by the increased adoption of both integrated metrology and advanced process control (APC) by semiconductor manufacturers. With feature sizes shrinking below 65 nanometers, or nm, well below the wavelength of light, the need for very tight process tolerances as well as productivity improvements in semiconductor fabrication, or fabs, are driving the need for integrated metrology and APC. Nanometrics' innovative Optical Critical Dimension (OCD) measurement system is being increasingly viewed not only as an enabling technology for APC, but also as a solution for critical dimension measurement for wafers as well as reticles and photomasks used for photolithography.

Nanometrics extended the wavelength range of the company's deep ultraviolet (DUV) reflectometry technology with the introduction of a new, integrated metrology module, the Nano9010T. The compact size and speed of this technology enables the measurement system to be fully integrated into the customer's process tool, thus providing a complete, feed forward and feedback APC solution for wafer to wafer closed loop

Edgar Filing: NANOMETRICS INC - Form S-4/A

control. By measuring the critical dimensions of developed photoresist and then adjusting the final etched dimensions of a silicon gate etch process by feeding this information back into the process and trimming the resist, the device manufacturer is able to achieve consistent gatelength and the maximum possible microprocessor speed. In

Table of Contents

addition, new semiconductor process technologies, such as copper interconnects, require that new measurement technologies be developed in order to keep pace with the latest metrology demands. This integrated metrology module also provides a method of measuring the remaining oxide film thickness as well as the loss of material over arrays of copper lines during the CMP process with the added capability of detecting residual films remaining after the polishing process.

Nanometrics' OCD technology has also proven to be applicable to the emerging requirements for advanced lithography measurements such as the characterization of critical dimensions and film thicknesses on masks and reticles which are comprised of square glass substrates. In 2005, Nanometrics successfully installed the Nanometrics Atlas-M, the first fully automated, standalone metrology system to use OCD technology for these square glass substrates at several key customer locations. This system is crucial to the suppliers and users of masks and reticles by providing the means for accurately determining line widths and analyzing complex profiles for a variety of structures found in today's mask fabrication process.

Nanometrics successfully introduced the Nanometrics Orion Overlay Control System, an advanced overlay metrology and analysis system for monitoring microlithography stepper performance. Orion provides exceptional throughput and measurement performance required by today's demanding 200mm and 300mm overlay control applications. Nanometrics has also continued the development of the Universal Defect Inspection (UDI) system in the company's facility in South Korea. The NanoUDI technology can be configured as either a standalone, fully automated 300-millimeter system or an integrated module for defect and contamination detection on a wide variety of films and surfaces. The system combines high efficiency illumination and high-resolution optics with sophisticated image processing to detect and classify particles and defects in the sub-micron range.

Additional information about Nanometrics' business and products is contained in the Nanometrics annual report on Form 10-K, filed with the SEC on March 24, 2006, and incorporated by reference into this joint proxy statement/prospectus.

Table of Contents**THE ACCENT OPTICAL BUSINESS****Industry Overview**

Semiconductor devices are enabling a wide variety of advanced computing, communications and consumer electronics products such as high-performance computing clusters, engineering workstations, routers, switches, cell phones, digital cameras, portable MP3 players, game boxes, DVD players, high-definition televisions, global positioning systems and flat panel displays. In addition, because of their enhanced energy efficiency, semiconductor devices are being used for illumination in cell phones and other mobile appliances, as well as traffic signals, automobiles and advertisement displays. The increasing demand for these sophisticated products is driving the need for lower-cost semiconductor devices that are smaller, faster and more power-efficient. In the case of light-emitting semiconductor devices, such as HBLED, manufacturers must meet additional requirements for increased brightness and the ability to emit light over a broader, more controlled spectrum of wavelengths.

The Semiconductor Device Manufacturing Process

The fabrication of silicon semiconductor devices, or integrated circuits, is accomplished through a complex, multi-step process of precisely depositing and removing layers of materials upon a silicon wafer. Each individual integrated circuit is sometimes called a die. The first layers of the device structure, known as the active region, typically consist of millions of transistors, which are formed, in part, by introducing dopants such as phosphorus and boron into the lattice. Subsequent layers form the interconnects that connect the device's transistors, capacitors and other components into an integrated circuit. Many steps in the manufacturing process are repeated multiple times. Among the most critical of these steps is photolithography, which creates the precise patterns required for each successive layer of the device. The patterning of layers requires precise alignment with previously patterned layers in order to ensure the correct formation and connection of device structures and interconnects.

The demand for smaller, faster, more power-efficient and more cost-effective semiconductor devices creates numerous semiconductor manufacturing challenges, including:

Smaller Device Geometries In order to fit more transistors into the same amount of surface area, manufacturers must produce devices with ever smaller feature sizes, including transistors as small as 50 nanometers and interconnect line diameters thinner than 250 nanometers. As the physical features of semiconductor devices continue to shrink, device sensitivity to defects in both transistor formation and layer deposition increases significantly.

More Device Layers The increasing number of transistors per device, the need to operate devices at higher speeds and the desire for greater functionality per device are requiring more interconnect layers per device. For example, today's advanced microprocessors are manufactured with seven or more interconnect layers. Each additional layer increases the potential for improper alignment during each photolithography process step.

Larger Silicon Wafers To reduce costs and enhance capital efficiencies, leading silicon semiconductor manufacturers have transitioned from 200mm to 300mm diameter wafers, which enable significantly more semiconductor device production per wafer. As a result of this transition, for a given device type, any material or process defect that affects an entire wafer represents a significantly greater financial loss for the device manufacturer.

Larger Die Sizes Semiconductor device manufacturers are incorporating greater functionality into each device, resulting in larger die sizes for certain complex applications. As an example, some manufacturers are integrating several functions, including memory, logic and analog circuitry, onto a single die. These devices, known as systems on a chip, increase the size of the die and the chance for defects or alignment errors in any one component, which can render the entire device inoperable.

Table of Contents

Process Control and Metrology

With the cost of new semiconductor manufacturing facilities (fabs) in some cases exceeding \$2 billion, manufacturers are seeking ways to improve fab throughput, or the rate of device production, while simultaneously increasing yield, or the number of functional devices per wafer. Improving fab throughput lowers the amount of in-process inventory, speeds the time to market of devices in production and spreads fixed fab overhead expenses across more devices. One means of improving throughput is to reduce the time necessary to take the many process control measurements required in the manufacturing process. Increasing yield generates more functional devices per wafer, which may increase revenues and lower costs by reducing the amount of scrapped materials. Higher yield can be achieved by identifying defects and process variations as early as possible in the manufacturing process.

As a result, semiconductor device and wafer manufacturers are investing in process control and metrology systems that improve their manufacturing efficiency by detecting process variations sooner and facilitating rapid diagnosis and corrective action. Process control and metrology systems measure and characterize the physical dimensions, material composition, optical and electrical characteristics and other critical parameters of semiconductor devices during their fabrication. For the photolithography process, overlay and critical dimension systems provide enhanced control of layer alignment and device dimensions. For lattice engineering applications, metrology systems monitor the physical, optical, electrical and material characteristics of compound semiconductor, strained silicon and silicon on insulator devices, including composition, crystal structure, layer thickness, dopant concentration, contamination and carrier mobility.

The market for process control and metrology systems, like other semiconductor capital equipment, is influenced primarily by activity in the underlying market for semiconductor devices. These markets are highly cyclical and are likely to have future periods of growth and contraction.

Lattice Engineering

Improvements to the traditional semiconductor device manufacturing process are limited in their ability to achieve higher speed, lower power and enhanced functionality for certain applications. As a result, semiconductor device manufacturers are using advanced materials such as compound semiconductors or are modifying the lattice, or basic crystal structure, of pure silicon using technologies such as strained silicon (SSI) and silicon on insulator (SOI) to enhance device performance and functionality.

Compound semiconductors, which combine elements such as gallium with arsenic or nitrogen, indium with phosphorus, or even silicon with germanium, are used in a wide variety of applications, including wireless communications, broadband data communications, HBLEDs and laser diodes. SSI and SOI technologies enable higher performance silicon semiconductor devices used in logic applications such as microprocessors. SSI is formed by depositing a thin layer of silicon over a mixture of silicon and germanium. The strain induced upon the silicon lattice increases the mobility of carriers that move through the strained silicon region, increasing the operating speed and frequency, and reducing the power consumption of the device. SOI is a form of silicon wafer on which a thin top layer of silicon is isolated from the rest of the silicon wafer by an underlying layer of silicon dioxide. This insulating layer of silicon dioxide reduces current leakage to the underlying silicon, which lowers the device's power consumption.

HBLED fabrication steps differ from traditional silicon semiconductor device fabrication steps. Because HBLEDs are discrete devices that perform the sole function of converting an electrical input into a light output, they typically do not require additional component integration, extensive use of photolithography processes or interconnection layers. HBLEDs are ordinarily manufactured through a crystal growth process in which very thin layers of compound semiconductors, known as epilayers, are grown on a dissimilar substrate. Because compound semiconductors are grown on a dissimilar substrate, HBLED manufacturers are forced to introduce additional buffer layers, sometimes comprised of altogether different materials, to minimize defect generation in the active device region. As a result, differences in crystal structure, material properties and physical stress between the layers frequently cause defects that affect device yield in HBLEDs.

Table of Contents

Devices using advanced materials or modified lattices offer significant improvements in device performance, but introduce numerous additional design and manufacturing challenges due to:

Increased Likelihood of Defects Advanced technologies such as compound semiconductors, SSI and SOI introduce new challenges with respect to defects, contamination, crystal structure and verification of material composition and thickness. In the case of compound semiconductors, such as HBLEDs, and strained silicon, defects are more prevalent due to differences in the size, spacing and shape of the atoms between the various layers.

Sophisticated Thermal Modeling Requirements The electrical properties of some advanced semiconductor devices are sensitive to heat generated by the operation of the device. Measurements during final test, however, are typically taken without operating semiconductor devices at frequencies or power levels equal to or greater than their normal operating levels. Accurate design and development of devices requires accurate measurement tools that account for the complex and non-linear variations in device performance as a function of operating frequency and power.

Increased Sensitivity to Defects Advanced devices frequently operate at lower voltages in order to further decrease their power consumption. At lower voltages, tolerance of contamination and defects in the lattice becomes smaller. This requires greater measurement and control of dopant amount and placement, contamination and atomic structure.

Accent Optical's Solutions

Accent Optical provides a broad suite of lattice engineering and photolithography process control and metrology systems to semiconductor device and semiconductor wafer manufacturers. Its lattice engineering metrology solutions address specific yield challenges that arise when device and wafer manufacturers use advanced materials such as compound semiconductors or modify the lattice, or basic crystal structure, of pure silicon, in order to achieve higher device performance characteristics. Its photolithography process control and metrology solutions are used by silicon semiconductor device manufacturers to analyze device dimensions and alignment at critical steps in the semiconductor manufacturing process in order to identify, diagnose and minimize fabrication process variations. Accent Optical believes that its process control and metrology systems enable semiconductor device and wafer manufacturers to improve manufacturing efficiency, production yields and product performance and quality.

Photolithography Process Control and Metrology Solutions

Accent Optical's photolithography process control and metrology solutions are used by silicon semiconductor device manufacturers to analyze device dimensions and alignment during the manufacturing process in order to identify, diagnose and minimize fabrication process variations. Customers use Accent Optical's overlay systems to measure alignment of the layers on silicon semiconductor wafers. Customers use Accent Optical's CD scatterometers to measure line widths, line shapes and cross-sectional profiles of device features. Accent Optical's photolithography process control and metrology solutions offer the following benefits:

Greater Precision Its overlay systems are capable of measuring alignment of layers for device structures smaller than 65-nanometers. Accent Optical believes its technology is extendible to 45-nanometer device structures. Its CD scatterometers use lasers as a light source, enabling greater precision for some applications as compared to competing scanning electron beam microscope-based critical dimension measurement (CD-SEM) solutions.

Enhanced Device Characterization By using test patterns inserted in the dead space between the die on a wafer, Accent Optical's CD scatterometers provide critical length and width measurements and, for certain applications, critical depth measurements, of device structures.

Greater Reliability It offers Linux-based CD scatterometers and overlay systems, which it believes result in greater reliability and uptime compared to competing systems based on other operating

Table of Contents

systems. In addition, its CD systems are based on laser scatterometry, permitting them to operate at atmospheric conditions. Competing CD-SEM systems only operate under vacuum conditions, increasing downtime due to vacuum equipment or pump maintenance and failure.

Advanced Analysis Software Its proprietary software collects and analyzes metrology data and generates actionable information that can help identify defect patterns caused by underlying process problems. This information helps device manufacturers eliminate unnecessary wafer rework and develop long-term yield improvement strategies.

Lattice Engineering Metrology Solutions

Accent Optical's broad suite of lattice engineering metrology solutions helps semiconductor device and wafer manufacturers address the challenges encountered when utilizing advanced technologies such as compound semiconductors, strained silicon and silicon on insulator, in many cases with greater speed and accuracy than competing systems. Accent Optical's lattice engineering metrology solutions offer the following benefits:

Accurate Measurement of Silicon Dopants Accent Optical believes it is a leading supplier of FTIR systems for semiconductor device and wafer manufacturing. Its FTIR systems enable silicon semiconductor device and wafer manufacturers to measure the effect of dopants such as boron and phosphorus incorporated into the silicon lattice and the thickness of differently-doped silicon layers used to form transistors. Its systems can also be used to measure the amount of boron, phosphorus, carbon and fluorine in insulating films.

Highly Sensitive, Automated Defect Mapping Accent Optical believes it is the first company to market a photoluminescence (PL) mapping system for silicon semiconductor devices and wafers. Its silicon photoluminescence mapping (SiPHER) system uses PL technology that analyzes light emitted from the silicon wafer surface to provide real-time, automated wafer mapping of electrically active defects and contamination in the lattice with sub-micron resolution. Its PL technology is applicable to strained silicon and silicon on insulator technologies as well as traditional integrated-circuit materials, and is able to detect minute levels of metallic contamination and other structural defects that impede device performance.

Improved Process Control Accent Optical believes it is the leading supplier of photoluminescence mapping systems for compound semiconductors. Its photoluminescence mapping systems enable manufacturers of compound semiconductors used for HBLEDs, laser diodes, photodetectors and power amplifiers to improve their manufacturing efficiency by detecting process variations sooner and facilitating rapid diagnosis and corrective action. Its systems are also non-destructive, making them well suited for production use.

Accurate Characterization of Lattice Properties Accent Optical's x-ray diffraction product line characterizes and measures properties of compound semiconductors and modified lattices. In particular, its systems accurately measure lattice strain, crystal structure, composition, alignment and layer thickness.

Table of Contents

Accent Optical's Products

Accent Optical provides a broad suite of lattice engineering metrology and photolithography process control and metrology systems to semiconductor device and wafer manufacturers. Its lattice engineering metrology systems address specific yield challenges that arise when device and wafer manufacturers use advanced materials such as compound semiconductors or modify the lattice, or basic crystal structure, of pure silicon, in order to achieve higher device performance characteristics. Its photolithography process control and metrology systems are used by silicon semiconductor device manufacturers to analyze device dimensions and alignment in the manufacturing process in order to identify, diagnose and minimize fabrication process variations. Accent Optical's current systems include:

Photolithography Process Control and Metrology Systems

Overlay Systems The overlay systems non-destructively measure the alignment of layers of an integrated circuit. Misalignment can lead to device failure, reduced yield or reduced performance. The Accent Optical caliper system runs on the Linux operating system which Accent Optical believes results in high reliability.

Critical Dimension Scatterometers The critical dimension scatterometers use laser light at various angles to illuminate test patterns inserted in the dead space between the die on a wafer. These non-destructive measurements calculate line widths, line shapes and cross-sectional profiles quickly and accurately. Accent Optical's CDS200 runs on the Linux operating system, which the company believes results in high reliability.

Lattice Engineering Metrology Systems

Photoluminescence Mapping Systems PL mapping systems are used to non-destructively measure the light emitted by a compound semiconductor wafer after illumination by a laser in order to determine composition uniformity, material quality and defects in substrates, lattices and device structures. The information obtained by the PL mapping system allows manufacturers to determine whether a wafer should be further processed or if it should be removed from production due to defects or contamination.

Silicon Photoluminescence Mapping System The SiPHER system uses a variation of Accent Optical's PL mapping technology that analyzes the light emitted from the silicon wafer surface to provide real-time, automated wafer mapping of electrically-active defects and contamination in the lattice with sub-micron resolution. PL technology is applicable to strained silicon and silicon on insulator technologies as well as traditional integrated circuit materials, and is able to detect minute levels of metallic contamination and other structural defects that impede proper device performance.

Fourier Transform Infrared Spectrometers The FTIR systems use mathematical computations relating to the separation of wavelengths of light absorbed by wafers to nondestructively measure the effect of dopants such as boron and phosphorus incorporated into the silicon lattice and the thickness of differently-doped silicon layers used to form transistors. Accent Optical's systems can also be used to measure the effect of boron, phosphorus, carbon and fluorine in insulating films.

X-Ray Diffraction Systems The Vektor product line uses x-ray diffraction to characterize and measure properties of compound semiconductors and modified lattices. In particular, Accent Optical's Vektor systems accurately measure lattice strain, crystal structure, composition, alignment, and layer thickness. Vektor is available with options optimized for use with respect to particular compound semiconductor devices, as well as strained silicon and silicon on insulator semiconductor devices.

Pulsed Current Voltage Measurement Systems Dynamic IV analyzer (DIVA) systems measure pulsed current and voltage in devices under actual operating conditions that exist in radio frequency, microwave and millimeter wave circuits. Dynamic current-voltage measurements provide accurate parameters for the design and development of these circuits.

Table of Contents

Electrochemical Capacitance Voltage Profiling System The dopant profiling systems measure the change in dopant concentration through each compound semiconductor device layer in order to verify desired composition.

Deep Level Transient Spectrometers The deep level transient spectrometers detect, identify and quantify impurities that could lead to device failure or substandard performance, such as reduced light output from LEDs.

Hall Mobility Measurement Systems The Hall mobility measurement systems use the Hall Effect to measure the mobility of electrons and other carriers within the semiconductor material. The Hall Effect is a phenomenon in which electrons change their direction under the influence of a magnetic field. By measuring this phenomenon, Accent Optical's systems help determine the purity of the material, allowing semiconductor device manufacturers to make faster and more efficient devices.

Accent Optical Customers

Accent Optical sells its systems globally to a variety of semiconductor device and wafer manufacturers, including Samsung Electronics Co. Ltd., Intel Corporation, Shin-Etsu Handotai Co. Ltd., International Business Machines Corporation, Texas Instruments Incorporated, Advanced Micro Devices, Inc., Headway Technologies Inc., Hitachi Electronics, Wacker-Chemie, Sumitomo Electric, Nichia Corporation, Micron Technology, Inc., and ST Microelectronics N.V.

Accent Optical depends on a relatively small number of customers and end users for a large percentage of its revenues. In 2005, together with its distributors, Accent Optical sold its lattice engineering metrology systems and photolithography process control and metrology systems to approximately 80 customers. Sales to its top five customers were 35.7%, 31.3% and 42.9% of its revenues in 2005, 2004 and 2003, respectively. Sales to Samsung, Accent Optical's largest customer in 2005, were 12.7%, 10.3% and 10.3% of Accent Optical's revenues for 2005, 2004 and 2003, respectively.

Sales, Marketing and Service

Sales Accent Optical believes that a direct sales and support capability is essential for developing and maintaining close customer relationships and for rapidly responding to changing customer requirements. It maintains a direct sales force of highly trained, technically sophisticated sales engineers, many of whom have Ph.D.s. These engineers are knowledgeable in the use of process control and metrology systems in general and the features and advantages of Accent Optical's systems in particular. As of December 31, 2005, Accent Optical's sales force included 34 people located in the United States, Japan, Taiwan, South Korea, Singapore, France and Germany. Accent Optical uses third-party sales representatives and distributors to supplement its direct sales force in certain geographic regions and to provide sales coverage for specific product lines where it lacks a direct sales force for such product lines. Accent Optical's largest third-party sales representative is Hermes-Epitek Corporation, an exclusive representative of most of Accent Optical's systems for silicon semiconductor device manufacturers in Taiwan, China and Singapore. Accent Optical's largest third-party distributor is Quatek Co. Ltd., which exclusively distributes its systems for compound semiconductor device manufacturers in Taiwan and China. Accent Optical also engages a variety of sales representatives in Europe and the United States to sell its DIVA product line.

Marketing Marketing functions include global marketing strategy, advertising and sales promotion, product definition and evaluation of new systems. In order to raise market awareness of its systems, Accent Optical advertises in trade publications, distribute promotional materials, publish technical articles, conduct marketing programs, issue press releases regarding new systems, employ the services of a public relations firm and participate in industry trade shows and conferences.

Service Customer service and technical support are important competitive factors and help build and maintain close long-term relationships with Accent Optical's customers. Its teams of highly trained technologists

Table of Contents

and customer service personnel are organized by the same geographical regions as its sales teams. Through these personnel, Accent Optical provides support before, during and after the delivery of its systems, including training programs, dedicated on-site service, service contracts, spare parts and technical support. Hermes-Epitek and Quatek are responsible for installation, warranty service and ongoing support for Accent Optical's systems that they sell. New system warranties typically range from 12 to 24 months for most of Accent Optical's systems. Accent Optical derives a substantial portion of its revenues by providing post-warranty service and upgrades for its growing installed base of systems. A significant portion of these services are provided pursuant to service contracts with Accent Optical's customers. In 2005, service revenues accounted for 19.0% of total revenues. As of December 31, 2005, Accent Optical employed 41 service personnel.

Manufacturing

Accent Optical performs the design, final assembly and test function for most of its systems in-house. Its main manufacturing facility is located in York, United Kingdom. To improve its manufacturing efficiency, it selectively outsources the production of subsystems and components in many cases to sole-source suppliers. In addition, a third party manufactures its DIVA systems. A portion of its FTIR product line, the QS1200, is also currently manufactured by a third party. Accent Optical believes that DIVA and QS1200 manufacturing could be brought in-house if necessary, although such transition would require a several month lead-time. A number of components and subsystems, such as factory automation and environmental control interfaces, wafer stages and monochromators, are expensive and require long lead-times. As a result, Accent Optical typically enters into purchase agreements with its suppliers and regularly update them as to its forecasted demand. Several alternate suppliers are available for most of these components and subsystems. However, if Accent Optical were required to purchase monochromators from an alternative vendor, it would expect a significant delay.

Accent Optical Competition

The market for photolithography process control and metrology systems is highly competitive with numerous large, established companies. Accent Optical's most significant competitors in this market are Hitachi, KLA-Tencor, Nanometrics, Nikon, Therma-Wave and Timbre Technologies\Tokyo Electron, and they have substantially superior distribution capabilities, larger research and development budgets and greater ability to offer bundled and integrated product offerings to customers. In addition significant competition for Accent Optical's critical dimension scatterometers has emerged from manufacturers of traditional reflectometers and ellipsometers, such as Rudolph Technologies, that have extended their technology by using new algorithms that enable their tools to perform critical dimension measurements.

Accent Optical competes in the emerging market for lattice engineering metrology systems and the more mature market for photolithography process control and metrology systems. The market for lattice engineering metrology systems is highly fragmented. Competition typically consists of privately held companies or divisions of large, established companies such as Spectris plc. and Thermo Electron Corporation. Accent Optical expects intense competition in this market to continue. Accent Optical's market share and operating results can fluctuate dramatically as a result of the introduction of new, competitive systems and the ability of competitors to secure patent and other intellectual property rights.

Accent Optical Research and Development

The markets in which Accent Optical competes are characterized by rapid technological development and product innovation. Accent Optical believes that continued and timely development of new systems and enhancements to existing systems are necessary to maintain its competitive position. Accordingly, Accent Optical devotes a significant portion of its resources to research and development and seeks to maintain close relationships with customers to remain responsive to their needs. Accent Optical's research and development costs were \$8.2 million, \$7.3 million and \$7.0 million in 2005, 2004 and 2003, respectively. As of December 31, 2005, Accent Optical had a total of 40 employees performing research and development activities in York,

Table of Contents

United Kingdom; Hemel Hempstead, United Kingdom; San Jose, California; and Bend, Oregon. Of these employees, 20 hold Ph.D.s.

Intellectual Property and Other Proprietary Rights

At December 31, 2005, Accent Optical owned 15 United States patents and exclusively licensed one United States patent as part of its ongoing research, development and manufacturing activities. Accent Optical has or has applied for foreign patents on some technologies in some of the countries where its systems are sold and used. Accent Optical filed 29 patent applications in 2005 and five patent applications in 2004. The patents it owns or exclusively licenses have expiration dates ranging from 2007 to 2020. Accent Optical's patents principally cover various aspects of process control and metrology and semiconductor materials characterization. Accent Optical's key patents relate to still emerging markets for its scatterometry and silicon photoluminescence mapping (SIPHER) products. Accordingly, at present, Accent Optical does not have one or more patents, the absence of which would materially diminish the value of Accent Optical's business.

Employees

As of December 31, 2005, Accent Optical had 203 employees. None of Accent Optical's employees is represented by a collective bargaining agreement. To date, Accent Optical has experienced no work stoppages and believes that its relationship with its employees is good.

Facilities

As of December 31, 2005, Accent Optical leased facilities in the following cities:

Location	Square Footage	Use
York, United Kingdom	40,000	Manufacturing, sales and marketing and research and development
San Jose, California	8,137	Sales and marketing and spare parts depot
Bend, Oregon (two facilities)	6,100	Corporate headquarters and advanced research and development
Cambridge, United Kingdom	877	Research and development

These leases expire between 2006 and 2008, and most of the leases have options to extend their terms. Accent Optical believes its current facilities are adequate to meet its needs for the immediate future, but when its current leases expire, it may need to find alternative facilities. Although such facilities may generally be available, Accent Optical may not be able to obtain them on commercially reasonable terms.

When Accent Optical acquired the Waterloo, Canada business of Philips Electronics, Accent Optical agreed to assume certain liabilities, including a lease on a 25,305 square foot facility that expires in 2011, with an option to buy out the lease in 2006. Accent Optical does not currently utilize this facility and has subleased approximately 13,300 square feet of this facility to a third party and is attempting to sublease the remaining portion.

Accent Optical also has offices primarily supporting sales and service activities in Japan, Switzerland, Taiwan and South Korea.

Table of Contents

**ACCENT OPTICAL MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL
CONDITION AND RESULTS OF OPERATIONS**

The following discussion of Accent Optical's financial condition and results of operations should be read in conjunction with its consolidated financial statements and the notes to those statements included elsewhere in this prospectus. This discussion contains forward-looking statements based upon current expectations that involve risks and uncertainties, such as Accent Optical's plans, objectives and intentions. As a result of many factors, such as those set forth under Risk Factors beginning on page 30 of this joint proxy statement/prospectus, Accent Optical's actual results may differ materially from those anticipated in these forward-looking statements.

Overview

Accent Optical designs, manufactures, sells and services a broad suite of process control and metrology systems used by manufacturers of semiconductor wafers and compound and silicon semiconductor devices for the advanced computing, communications and consumer electronics markets. Accent Optical's systems measure optical, electrical and material properties, including the structural composition of compound and silicon semiconductor wafers, the amount of impurities or contaminants in semiconductor devices, electron mobility and the wavelength and intensity of light emitted by LEDs and laser diodes. Accent Optical's systems also measure the degree of alignment and dimensions of semiconductor device features. Customers use Accent Optical's process control and metrology systems to lower their costs by enhancing their manufacturing efficiency and increasing their production yields, and to improve their product performance and quality. Accent Optical sells its systems globally to leading semiconductor device and wafer manufacturers, including Samsung Electronics Co. Ltd., Intel Corporation, Shin-Etsu Handotai Co. Ltd., International Business Machines, Texas Instruments Incorporated, Advanced Micro Devices, Inc., Headway Technologies Inc., Hitachi Electronics, Wacker-Chemie, Sumitomo Electric, Nichia Corporation, Micron Technology, Inc., and ST Microelectronics N.V.

Our business is principally comprised of Bio-Rad Semiconductor Measurement Division, which we acquired on July 31, 2000 for approximately \$36.4 million (excluding \$6.6 million in assumed liabilities), which consisted of \$27.2 million in cash, a subordinated note payable to Bio-Rad in the original principal amount of \$8.0 million and the issuance to Bio-Rad of 21,951,000 shares of our Common Stock valued at \$220,000 (based on the most recent issuance of Common Stock at the time of the acquisition), representing approximately 20% of our issued and outstanding Common Stock immediately after the acquisition, and incurred transaction costs of approximately \$1.0 million. We financed the acquisition with bank debt, loans from stockholders, a subordinated note issued to Bio-Rad and proceeds from the issuance of Common and Preferred Stock.

The markets that Accent Optical serves are subject to sharp cyclical changes in supply and demand. Accent Optical bases its business activities in large part upon anticipated capital spending by semiconductor industry manufacturers. These spending levels are influenced by general economic conditions affecting demand for end products, production capacity relative to existing and projected demand, the manufacturer's existing and projected profitability and cash flows, new technologies requiring replacement equipment, and other competitive changes affecting the market for semiconductor devices. Accent Optical's revenues were \$37.6 million in 2003, increased in 2004 to \$42.0 million and remained approximately the same at \$41.9 million in 2005, in large part reflecting industry wide trends.

A significant portion of Accent Optical's revenues in each quarter and year has been derived from sales to relatively few customers, and Accent Optical expects this characteristic of its business to continue. In 2005, together with its distributors, Accent Optical sold its lattice engineering metrology systems and photolithography process control and metrology systems to approximately 80 customers. Sales to Accent Optical's top five customers accounted for 35.7%, 31.3% and 42.9% of its revenues in 2005, 2004 and 2003, respectively. Sales to Samsung, Accent Optical's largest customer in 2005, accounted for 12.7%, 10.3% and 10.3% of its revenues in 2005, 2004 and 2003, respectively. Sales to IBM accounted for 14.9% of revenues in 2003. No other customer accounted for more than 10% of Accent Optical's revenues in 2005, 2004 or 2003. In addition to its system sales,

Table of Contents

Accent Optical derives a substantial portion of its revenues from service and technical support that it provides to its customers. Service and technical support represented 19.0%, 20.3% and 25.2% of Accent Optical's total revenues in 2005, 2004 and 2003, respectively. Accent Optical's service and technical support revenues have increased in absolute terms as the installed base of its systems has grown. Additional factors affecting these revenues include the proportion of Accent Optical's systems sales represented by overlay systems, which generate higher levels of service revenue than its other systems, the level of factory utilization of Accent Optical's systems by its customers, and Accent Optical's success in selling post-warranty service contracts.

Accent Optical derives a substantial portion of its total revenues from sales outside the United States. Sales in Japan, in particular, have increased as a percentage of Accent Optical's revenues due to higher demand for its lattice engineering metrology systems from Japanese customers who increased their capital spending budgets for high brightness LEDs, bare silicon wafer and semiconductor device manufacturing. Accent Optical expects demand in Japan to grow in the short-term at a rate similar to worldwide growth. During 2005, 71.8% of Accent Optical's revenues were derived from customers outside of the United States. Managing Accent Optical's global operations presents challenges and involves uncertainties that may affect its business, financial condition and results of operations. Substantially all of Accent Optical's revenues to date, except revenues in Japan, have been denominated in United States dollars.

The geographic distribution of Accent Optical's revenues is as follows:

	2005	2004	2003
United States	28.2%	21.0%	36.9%
Japan	27.7	25.5	26.2
Asia (excluding Japan)	28.0	37.7	24.6
Europe	16.1	15.8	12.3
Total	100.0%	100.0%	100.0%

Each year, as part of Accent Optical's review of its financial results, Accent Optical performs an assessment of the carrying value of its long-lived assets to be held and used, including acquired intangible assets other than goodwill.

The assessment is performed pursuant to Statement of Financial Accounting Standards, or SFAS, No. 144 and is determined using undiscounted cash flows. Accent Optical recorded an impairment charge of approximately \$156,000 for the year ended December 31, 2003 related to the assets it acquired from the Waterloo, Canada business of Philips Electronics. This impairment was primarily related to the continuing substantial development efforts required for certain product lines that Accent Optical acquired. No impairment charge was recorded for the years ended December 31, 2005 and December 31, 2004.

During 2003, Accent Optical consolidated certain operations and reduced its number of employees worldwide to enhance operational efficiencies and reduce operating costs to a level more commensurate with industry conditions at that time. In early 2003, Accent Optical reduced its workforce and closed its Waterloo, Canada facility. Also during 2003, Accent Optical closed its Albuquerque, New Mexico and Randolph, Massachusetts facilities.

Accent Optical sells its systems primarily through its direct sales force and in certain locations or for certain products through sales representatives and distributors. Accent Optical's sales cycle can range from two to 24 months. Sometimes its sales cycle can be much longer than 24 months, particularly with its international customers. Due to the length of these cycles, Accent Optical invests significantly in research and development and sales and marketing in advance of generating revenues related to these investments. Additionally, Accent Optical does not have purchase contracts with any of its customers that obligate them to continue to purchase its systems, and they could cease purchasing systems from Accent Optical at any time. Generally, Accent Optical's customers are able to delay or cancel orders, often without penalty. A delay in purchase or cancellation by any of its large customers could cause Accent Optical's quarterly revenues to vary significantly. Given the high price of

Table of Contents

certain of its systems, a small change in the number of systems Accent Optical sells or in its product mix may cause significant changes in its operating results and financial position.

Accent Optical's revenues and gross profits are significantly affected by the prices at which it can sell its systems. Accent Optical operates in an intensely competitive market and sells to customers that have significant buying power. Both of these factors can result in downward pricing pressure. Accent Optical's gross profits as a percentage of revenues are also affected from period to period by its product mix, composition of service and technical support revenues, the impact of sales volumes on its factory utilization, and inventory adjustments and changes to warranty reserves. Accent Optical's lattice engineering metrology systems, which represented 58.6% of its systems revenues during 2005, typically have higher gross margins than its photolithography process control and metrology systems. Within service and technical support, spare parts sales typically generate higher gross margins than other activities.

Results of Operations

The following describes certain of the line items appearing in Accent Optical's consolidated statements of operations.

Revenues. Accent Optical currently derives revenues from the sales of systems to semiconductor wafer and device manufacturers and by providing service and technical support to its customers. Service and technical support include non-warranty maintenance, spare parts sales and contract services.

Cost of Revenues and Gross Profit. Accent Optical manufactures most of its systems in York, United Kingdom. Accent Optical uses third party suppliers for components of its systems, the most significant of which are robotic front-ends, lasers, environmental chambers and stages. Accent Optical uses subcontractors for services such as general machining, cable assembly and electronic board and rack manufacture. Accordingly, a majority of Accent Optical's cost of revenues consists of payments to its suppliers and subcontractors. Cost of product revenues also encompasses Accent Optical's internal manufacturing, which primarily consists of direct labor, a portion of its facilities costs, and installation and warranty costs. Cost of revenues for services primarily consists of service and technical support personnel and spare parts.

Research and Development. Research and development expenses primarily consist of salaries and related personnel costs, fees paid to consultants and outside service providers, and prototype costs related to the fabrication of Accent Optical's systems. Accent Optical expenses its research and development costs as they are incurred. Several components of Accent Optical's research and development initiatives require significant expenditures, such as prototype expenses, the timing of which can cause significant quarterly variability in its expenses. Because Accent Optical's research and development is critical to its future success, Accent Optical expects to continue to incur significant research and development expenditures.

Selling, General and Administrative. Selling, general and administrative expenses consist primarily of salaries, commissions and related expenses for executives, as well as finance, accounting, information services, human resources, recruiting, professional fees and other corporate expenses, and costs associated with selling and marketing activities.

Amortization of Acquired Intangibles and Goodwill. Acquired intangibles and goodwill consist of, respectively, identifiable intangible assets and the excess of purchase price over identifiable assets, in each case arising from Accent Optical's acquisitions of the Bio-Rad SMD and the other businesses and related assets that Accent Optical has acquired. Through 2005, Accent Optical amortized acquired intangibles over three to five years. Accent Optical does not amortize goodwill since its adoption of SFAS No. 142 in 2002.

Interest Expense. Interest expense consists of interest on Accent Optical's subordinated note payable to Bio-Rad, which bears interest at 13.5% per annum, floating rate bank debt and capitalized leases. Through December 31, 2003, semi-annual interest on the Bio-Rad note was added to the outstanding principal. In November 2003, the Bio-Rad note was amended to provide for current payments of interest beginning in July

Table of Contents

2004 and continuing semiannually for the remainder of its term. On January 8, 2006, Bio-Rad agreed to amend the note to defer the January 2006 interest payment to the earlier to occur of June 30, 2006 or the closing of a merger transaction with Nanometrics.

Provision for Income Taxes. As of December 31, 2005, Accent Optical had federal, state and foreign net operating loss carry forwards before valuation allowance of \$12.2 million, \$20.4 million and \$3.5 million, respectively. These net operating loss carry forwards will expire at various dates beginning in 2007. A valuation allowance is recognized if it is more likely than not that some portion or all of the deferred tax asset will not be realized. Accent Optical recorded a valuation allowance on net deferred tax assets of \$10.1 million, \$9.0 million and \$6.6 million at December 31, 2005, 2004 and 2003, respectively.

Stock-Based Compensation Upon adoption of SFAS 123(R) on January 1, 2006, Accent Optical began estimating the value of employee stock options on the date of grant using the Black-Scholes model. Prior to the adoption of SFAS 123(R), the value of each employee stock option was estimated on the date of grant using the Black-Scholes model for the purpose of the pro forma financial disclosure in accordance with SFAS 123. The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by Accent Optical's stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The expected term of options granted is calculated based on the simplified method allowed by SAB 107. The expected volatility is based on the historical volatility of a peer group of public companies.

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****CONSOLIDATED STATEMENTS OF OPERATIONS**

The following table shows Accent Optical's consolidated statements of operations as percentage of revenues for the periods indicated.

	Three Months Ended		For the Years Ended December 31,		
	April 1, 2006	April 2, 2005	2005	2004 (in thousands)	2003
Revenues					
Product	81.6 %	86.5 %	81.0 %	79.7 %	74.8 %
Services	18.4	13.5	19.0	20.3	25.2
Total revenues	100.0	100.0	100.0	100.0	100.0
Cost of revenues					
Products (including stock compensation of \$10 (unaudited), \$8 (unaudited), \$33, \$40 and \$14)	36.6	45.7	40.0	37.8	37.6
Services (including stock compensation of \$10 (unaudited), \$10 (unaudited), \$41, \$61 and \$27)	12.4	9.6	13.0	12.6	12.5
Total cost of revenues	49.1	55.3	53.0	50.3	50.1
Gross profit	50.9	44.7	47.0	49.7	49.9
Operating expenses					
Research and development (including stock compensation of \$58 (unaudited), \$27 (unaudited), \$109, \$123 and \$56)	19.1	17.5	19.7	17.5	18.7
Selling, general and administrative (including stock compensation of \$226 (unaudited), \$93 (unaudited), \$370, \$544 and \$271)	38.5	28.2	33.6	35.9	41.7
Restructuring costs				0.1	0.3
Failed initial public offering costs				2.4	
Amortization of acquired intangibles	0.3	1.3	1.1	1.5	1.5
Impairment of acquired intangibles					0.4
Total operating expenses	57.8	47.0	54.3	57.3	62.7
Loss from operations	(6.9)	(2.3)	(7.3)	(7.7)	(12.8)
Other income and expenses					
Other income (expense)	(2.4)	(0.2)	(0.5)	1.0	(1.9)
Interest expense	(4.5)	(3.6)	(4.4)	(4.5)	(4.5)
Total other income and expenses	(6.8)	(37.7)	(4.9)	(3.5)	(6.4)
Loss before income taxes	(13.7)	(6.0)	(12.2)	(11.2)	(19.2)
(Provision) benefit for income taxes	(0.1)	(0.2)	(0.3)	(0.2)	0.4
Net loss	(13.8)	(6.3)	(12.5)	(11.4)	(18.7)
Cumulative dividends on preferred stock	(9.0)	(6.9)	(8.5)	(8.0)	(8.0)
Accretion of beneficial conversion feature				(2.1)	

Edgar Filing: NANOMETRICS INC - Form S-4/A

Net loss attributable to common stockholders	(22.8)%	(13.2)%	(21.0)%	(21.5)%	(26.8)%
--	---------	---------	---------	---------	---------

The Accent Optical Consolidated Financial Statements begin at page F-1; the related notes, which are an integral part of the consolidated statements of operations, begin at page F-8.

Table of Contents**Quarters ended April 1, 2006 and April 2, 2005**

Revenues. Accent Optical's revenues were \$10.1 million in the quarter ended April 1, 2006, a 19.9% decrease from \$12.6 million in the quarter ended April 2, 2005. Product revenues declined 24.5% primarily reflecting a \$2.3 million reduction in sales of overlay products. Overlay products tend to have high average selling prices and period to period revenues can fluctuate based upon the timing of our customer installations. Service revenues increased by 9.5% in the quarter ended April 1, 2006 as compared to the quarter ended April 2, 2005, reflecting increased revenues from service contracts and higher spare parts revenues.

Cost of Revenues and Gross Profit. Accent Optical's gross profit was \$5.1 million, or 50.9% of its revenues, in the quarter ended April 1, 2006, and \$ 5.6 million, or 44.7% of its revenues, in the quarter ended April 2, 2005. The increase in gross profit as a percentage of revenue was due a favorable product mix due to the increase in revenues from higher margin lattice engineering products and lower overlay product sales. Service gross margins increased to 32.6% in the quarter ended April 1, 2006, from 28.8% in the quarter ended April 2, 2005 due primarily to a higher utilization of service personnel due to the higher service revenues.

Research and Development. Accent Optical's research and development expenses were \$1.9 million, or 19.1% of its revenues, in the quarter ended April 1, 2006, and \$2.2 million, or 17.5% of revenues, in the quarter ended April 2, 2005. The lower expenses primarily reflect a reduction in prototype system builds.

Selling, General and Administrative. Accent Optical's selling, general and administrative expenses were \$3.9 million, or 38.5% of its revenues, in the quarter ended April 1, 2006, and \$3.5 million, or 28.2% of its revenues, in the quarter ended April 2, 2005. Selling, general and administrative costs were higher primarily due to \$261,000 in legal and accounting expenses associated with the merger, \$176,000 higher stock compensation costs associated with the adoption of SFAS 123(R) and an increase to the bad debt reserve of approximately \$100,000.

Amortization of Acquired Intangibles. Accent Optical amortized acquired intangibles of \$27,000 in the quarter ended April 1, 2006 and \$159,000 in the quarter ended April 2, 2005. Amortization costs declined as intangible assets acquired with the Waterloo acquisition became fully amortized during 2005.

Interest Expense. Interest expense was approximately \$450,000 in each of the quarters ended April 1, 2006 and April 2, 2005, as debt levels remained relatively constant between the two quarters.

Years Ended December 31, 2005 and 2004

Revenues. Accent Optical's revenues remained approximately the same in 2005 and 2004. Revenues were \$41.9 million in 2005 and \$42.0 million in 2004. Product revenues increased slightly to \$33.9 million in 2005 from \$33.5 million in 2004. Service revenues declined slightly to \$8.0 million in 2005 from \$8.5 million in 2004. Revenues from U.S. customers increased as a percentage of total revenues, primarily as a result of increased demand for photolithography systems, and to a lesser extent, increased demand for lattice systems. The increased revenue from U.S. customers was offset by a decline in revenues from customers in the Far East outside of Japan. Sales to customers in the Far East declined, both in absolute dollars and as a percentage of Accent Optical's revenues, primarily due to reduced demand for its lattice engineering metrology systems as customers decreased their capital spending budgets for high brightness LED and other compound semiconductor products.

Cost of Revenues and Gross Profit. Accent Optical's gross profit was \$19.7 million, or 47.0% of its revenues, in 2005, and \$20.9 million, or 49.7% of its revenues, in 2004. The decline in gross profit percentage from 2005 to 2004 was primarily attributable to two factors. First, revenues for two higher gross margin product lines, DIVA and RPM, declined to 11% of total revenues, a decline from 20.5% of total revenues in 2004. The decline in these products was offset by an increase in overlay revenues to 31.9% of total revenues from 24.9% on 2004. Second, the gross profit in Accent Optical's service business declined due to lower service revenues,

Table of Contents

particularly for spare parts sales, which generate higher gross profit than other service revenues. Overall service revenues declined 6.7% in 2005 from 2004. During the year ended December 31, 2005, Accent Optical recorded charges for excess and obsolete inventory of \$478,500. Accent Optical recorded these charges based on the results of its regular analysis of inventories and their net realizable value based on current market conditions and forecasted customer demand for related products. This analysis highlighted limited anticipated consumption of certain spare parts and reduced sales expectations for Accent Optical's older generation equipment due to product design changes, the industry downturn and product obsolescence. During the year ended December 31, 2004, Accent Optical recorded a credit of \$830,000 reflecting a reduction in reserves for excess and obsolete inventory. The credit was primarily the result of sales of demonstration equipment which had previously been written down.

Research and Development. Accent Optical's research and development expenses were \$8.2 million, or 19.7% of its revenues, in 2005, and \$7.3 million or 17.5% of its revenues in 2004. Research and development expenses increased during 2005 due to increased development efforts on SiPHER and scatterometry systems and improvements to overlay systems. Increased costs for these development efforts were partially offset by slightly fewer personnel engaged in research and development, primarily due to the consolidation of engineering resources in the United Kingdom. In addition, Accent Optical incurred increased legal expenses of approximately \$650,000 in 2005 over 2004, due to an increase in the filing of patent applications in 2005.

Selling, General and Administrative. Accent Optical's selling, general and administrative expenses were \$14.1 million, or 33.6% of its revenues, in 2005 and \$15.1 million, or 35.9% of its revenues, in 2004. Expenses were lower in 2005 primarily due to lower headcount and a \$250,000 reduction in agent's commission due to the reduction in revenues in Asian markets. In addition, Accent Optical incurred costs of approximately \$1.0 million in conjunction with an anticipated initial public offering during 2004. Due to market conditions, the offering was abandoned in the fourth quarter of 2004, and all costs of the offering were expensed in 2004.

Amortization of Acquired Intangibles. Accent Optical amortized acquired intangibles of \$453,000 in 2005 and \$637,000 in 2004. The reduction in 2005 primarily reflects the impact of the reduced level of amortizable intangibles.

Interest Expense. Accent Optical's interest expense in 2005 and 2004 was \$1.8 million and \$1.9 million, respectively. Most of this interest expense is related to the Bio-Rad note. Beginning in 2004, Accent Optical has been required to make semi-annual interest payments on this note in cash. Accent Optical is required to repay the note as a result of the closing of the merger. Additional interest expense is related to Accent Optical's bank borrowings. Average bank borrowings were lower in 2005 than in 2004; however, average interest rates were slightly higher on the outstanding borrowings.

Provision for Income Taxes. Accent Optical recorded an income tax expense of \$124,000 and \$93,000 in 2005 and 2004, respectively. Income tax expenses were incurred despite net losses due to taxable income in certain foreign jurisdictions and temporary differences in the recognition of expenses for tax purposes versus financial reporting purposes. As of December 31, 2005, Accent Optical had a valuation allowance against its gross deferred tax asset of \$10.1 million. The valuation allowance was provided primarily because of Accent Optical's cumulative pre-tax losses during the periods since its inception. After these periods of losses, Accent Optical has only recorded tax assets to the extent that it can recover taxes paid in prior periods.

Years Ended December 31, 2004 and 2003

Revenues. Accent Optical's revenues were \$42.0 million in 2004, an 11.7% increase from \$37.6 million in 2003. Product revenues increased by 19.4% based upon the rebound in the semiconductor and telecommunications equipment industries after a cyclical downturn in 2002 and 2003. The increase is also attributable to strong demand from high brightness LED manufacturers. To reduce excess capacity and to liquidate insolvent operations, several of Accent Optical's customers resold used systems in third-party markets.

Table of Contents

at reduced prices, causing additional competition in a period of reduced product demand. Service revenues decreased by 10.0% from 2003 to 2004, primarily reflecting a reduction in service contract revenue to one of Accent Optical's largest service customers as the customer transitioned to next generation products.

Cost of Revenues and Gross Profit. Accent Optical's gross profit was \$20.9 million, or 49.7% of its revenues, in 2004, and \$18.8 million, or 49.9% of its revenues, in 2003. The increase in gross profit as a percentage of products revenue was due to increased factory utilization resulting from lower system sale volumes and a favorable product mix due to the increase in revenues from higher margin lattice engineering products. Service gross margins declined to 38.1% in 2004 from 50.4% in 2003 due primarily to lower utilization of service personnel due to the lower service revenues. During the year ended December 31, 2004 Accent Optical recorded a credit of \$830,000 reflecting a reduction in reserves for excess and obsolete inventory. The credit was primarily the result of sales of demonstration equipment which had previously been written down. For the year ended December 31, 2003, Accent Optical recorded charges for excess and obsolete inventory of \$1.4 million. Accent Optical recorded these charges based on the results of its regular analysis of inventories and their net realizable value based on current market conditions and forecasted customer demand for related products. This analysis highlighted limited anticipated consumption of certain spare parts and sales expectations for Accent Optical's older generation equipment due to product design changes, the industry downturn and product obsolescence.

Research and Development. Accent Optical's research and development expenses were \$7.3 million, or 17.5% of its revenues, in 2004, and \$7.0 million, or 18.7% of revenues, in 2003. The higher revenues caused research and development expense to decline as a percent of revenues during 2004.

Selling, General and Administrative. Accent Optical's selling, general and administrative expenses were \$15.1 million, or 35.9% of its revenues, in 2004 and \$15.7 million, or 41.7% of its revenues, in 2003. Selling, general and administrative personnel costs were lower in 2004 due to a reduction in personnel as part of various restructuring efforts, a reduction in audit costs due to the completion of a re-audit of Accent Optical's 2000 and 2001 financial statements in 2003 and Accent Optical's decision to restrain spending due to market conditions. These costs were partially offset by higher selling commissions associated with the increased revenues and costs of approximately \$1.0 million incurred in conjunction with an anticipated initial public offering during 2004. Due to market conditions, the offering was abandoned in the fourth quarter of 2004 and all costs of the offering were expensed.

Amortization of Acquired Intangibles. Accent Optical amortized acquired intangibles of \$637,000 in 2004 and \$711,000 in 2003. Amortization costs in 2003 included an impairment charge of \$156,000 in 2003 related to the Waterloo acquisition.

Interest Expense. Interest expense was \$1.9 million in 2004 and \$1.7 million in 2003. The slight increase in interest expense resulted from higher average borrowings in 2004, as accrued interest was added to the principal on the Bio-Rad note.

Provision for Income Taxes. Accent Optical recorded an income tax expense of \$93,000 in 2004 versus an income tax benefit of \$166,000 in 2003. Income tax expenses were incurred despite net losses due to taxable income in certain foreign jurisdictions and temporary differences in the recognition of expenses for tax purposes versus financial reporting purposes. As of December 31, 2004, Accent Optical had a valuation allowance against its gross deferred tax asset of \$9.0 million. The valuation allowance was provided primarily because of Accent Optical's cumulative pre-tax losses during the periods since its inception. After these periods of losses, Accent Optical has only recorded tax assets to the extent that it can recover taxes paid in prior periods.

Table of Contents**Quarterly Results of Operations**

The following table sets forth Accent Optical's unaudited selected quarterly results of operations data for the nine quarters in the period ended April 1, 2006 and such data expressed as percentages of Accent Optical's revenues for the same periods. This information has been prepared on the same basis as the audited consolidated financial statements appearing elsewhere in this prospectus and, in Accent Optical's management's opinion, contains all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the unaudited quarterly results of operations set forth below. Results of operations for any previous quarter are not necessarily indicative of the results to be expected for the entire year or any future period.

	For the Quarters Ended								
	Mar. 30, 2004	Jun. 30, 2004	Sep. 30, 2004	Dec. 31, 2004	Apr. 2, 2005	Jul. 2, 2005	Oct. 1, 2005	Dec. 31, 2005	Apr. 1, 2006
Consolidated Statement of Operations Data:									
REVENUES									
Product	\$ 8,264	\$ 9,343	\$ 8,600	\$ 7,305	\$ 10,872	\$ 10,553	\$ 4,885	\$ 7,601	\$ 8,210
Service	2,532	2,270	1,945	1,782	1,694	2,180	2,029	2,060	1,855
Revenues	\$ 10,796	\$ 11,613	\$ 10,545	\$ 9,087	\$ 12,566	\$ 12,733	\$ 6,914	\$ 9,661	10,065
COST OF GOODS SOLD									
Product	3,706	4,057	4,471	3,651	5,738	4,910	2,657	3,437	3,688
Service	1,542	1,250	1,053	1,437	1,206	1,291	1,342	1,614	1,251
Cost of Revenues	5,248	5,307	5,524	5,088	6,944	6,201	3,999	5,051	4,939
Gross Profit	5,548	6,306	5,021	3,999	5,622	6,532	2,915	4,610	5,126
OPERATING EXPENSES									
Research and development	1,661	1,636	1,765	2,279	2,199	2,222	1,823	1,989	1,918
Selling, general and administrative	3,876	3,977	3,519	3,719	3,545	3,615	3,454	3,438	3,876
Amortization of acquired intangibles	159	159	159	160	159	159	86	49	27
Restructuring Costs		12	24	4	5	2	2	7	
Failed initial public offering costs				991					
Total Operating Expenses	5,696	5,784	5,467	7,153	5,908	5,998	5,365	5,483	5,821
Net Operating Income (loss)	(148)	522	(446)	(3,154)	(286)	534	(2,450)	(873)	(695)
OTHER INCOME									
Other Income	(4)	1	150	(141)	(5)	29	47	(26)	4
External Interest Income	(11)	12	11	24	21	17	12	22	14
Total Other Income	(15)	13	161	(117)	16	46	59	(4)	18
OTHER EXPENSE									
Other Expense						12			
External Interest Expense	465	459	449	514	450	456	468	465	449
Loan Cost Amortization	1	1	1	1	1	1	1	1	1
(Gain) Loss on Disposal of Assets						(33)	4	(24)	8
Foreign Exchange (Gain) Loss	180	115	8	(683)	38	22	150	155	246
Total Other Expense	646	575	458	(168)	489	458	623	597	704
Total Other Income (Expense)	(661)	(562)	(297)	51	(473)	(412)	(564)	(601)	(686)
Net Income (loss) Before Tax	(809)	(40)	(743)	(3,103)	(759)	122	(3,014)	(1,474)	(1,381)
Tax Provision	(27)		(13)	(53)	(27)	47	(100)	(44)	12
Net Income (Loss)	\$ (836)	\$ (40)	\$ (756)	\$ (3,156)	\$ (786)	\$ 169	\$ (3,114)	\$ (1,518)	(1,393)
As a Percentage of Revenues:									
Revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Edgar Filing: NANOMETRICS INC - Form S-4/A

Cost of Revenues	48.6%	45.7%	52.4%	56.0%	55.3%	48.7%	57.8%	52.3%	49.1%
Gross Profit	51.4%	54.3%	47.6%	44.0%	44.7%	51.3%	42.2%	47.7%	50.9%
OPERATING EXPENSES									
Research and development	15.4%	14.1%	16.7%	25.1%	17.5%	17.5%	26.4%	20.6%	19.1%
Selling, general and administrative	35.9%	34.2%	33.4%	40.9%	28.2%	28.4%	50.0%	35.6%	38.5%
Amortization of acquired intangibles	1.5%	1.4%	1.5%	1.8%	1.3%	1.2%	1.2%	0.5%	0.3%
Restructuring Costs	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%
Failed initial public offering costs	0.0%	0.0%	0.0%	10.9%	0.0%	0.0%	0.0%	0.0%	0.0%
Total Operating Expenses	52.8%	49.8%	51.8%	78.7%	47.0%	47.1%	77.6%	56.8%	57.8%
Net Operating Income (loss)	(1.4)%	4.5%	(4.2)%	(34.7)%	(2.3)%	4.2%	(35.4)%	(9.0)%	(6.9)%
Total Other Income (Expense)	(6.1)%	(4.8)%	(2.8)%	0.6%	(3.8)%	(3.2)%	(8.2)%	(6.2)%	0.2%
Net Income (loss) Before Tax	(7.5)%	(0.3)%	(7.0)%	(34.1)%	(6.0)%	1.0%	(43.6)%	(15.3)%	(13.8)%
Tax Provision	(0.3)%	0.0%	(0.1)%	(0.6)%	(0.2)%	0.4%	(1.4)%	(0.5)%	0.1%
Net Income (Loss)	(7.7)%	(0.3)%	(7.2)%	(34.7)%	(6.3)%	1.3%	(45.0)%	(15.7)%	(13.8)%

Table of Contents

Accent Optical's revenues varied between \$6.9 million and \$12.7 million during the nine quarters ended April 1, 2006. The volatility in Accent Optical's revenues during the period resulted from a variety of factors including: cyclical customer capital spending budgets, the timing of customer capacity additions, design wins for its systems, a downturn in 2005 capital spending by Accent Optical's high brightness LED customers, and seasonal factors, particularly for Accent Optical's lattice engineering systems. Certain of Accent Optical's photolithography process control and metrology systems carry a higher average selling price than its other systems and the sale of a few systems can significantly influence its level of quarterly revenue. Service revenues have varied between \$1.7 million and \$2.5 million, and are generally influenced by equipment utilization rates at Accent Optical's customers.

Accent Optical's gross profit fluctuates each quarter due to changes in product and service mix, the overall level of revenues, inventory adjustments and currency rates. Gross profit varies from product to product and occasionally varies depending upon the region in which the system is sold. For instance, Accent Optical's FTIR product line can experience gross margins in the mid-40% range, whereas its RPM product line can achieve gross margins in the mid-70% range. On an annual basis, Accent Optical's product mix has remained relatively constant; however there is often significant fluctuation on a quarterly basis. Service gross margins vary depending upon the overall utilization of Accent Optical's service personnel and the level of spare parts revenue which generally has higher gross margins than labor-based service revenue.

Accent Optical's operating expenses have varied quarter to quarter, depending upon the timing of various restructuring efforts, the level of sales and timing and level of product development efforts. Accent Optical's operating expenses declined in the latter half of 2005 as Accent Optical's ongoing restructuring efforts have resulted in a lower operating expense run rate. Research and development costs in the latter half of 2004 and the first half of 2005 were higher as Accent Optical expensed costs associated with the building of prototype systems. Accent Optical's expenses for the fourth quarter of 2004 included approximately \$1.0 million as it wrote off costs associated with its abandoned initial public offering.

Liquidity and Capital Resources

Since Accent Optical's inception in April 2000, it has financed its operations from the issuance of its common and preferred stock and incurrence of debt and capital lease obligations, and from cash generated by operating activities. Accent Optical's working capital was \$10.1 million, \$15.5 million and \$16.6 million at December 31, 2005, 2004 and 2003, respectively. Accent Optical's cash equivalents and short-term investments were \$3.6 million, \$5.1 million and \$5.5 million at December 31, 2005, 2004 and 2003, respectively. At April 1, 2006, Accent Optical's working capital was \$9.7 million and its cash equivalents and short-term investments were \$3.2 million.

Based on its operating plan, Accent Optical's management estimates that cash at December 31, 2005, existing debt financing arrangements and cash flows generated from operating activities will not be sufficient to fund operations at the current and projected levels for the next twelve months. Accordingly, in the event that the merger with Nanometrics is not completed, Accent Optical will pursue alternatives to decrease expenses and increase capital available to it. Such alternatives could include selling certain product lines, reducing costs in a manner that could affect operational activities, seeking alternative financing arrangements or pursuing additional placement of Accent Optical stock. There can be no assurance that such sources of financing and capital will be available if required or, if available, will be on terms satisfactory to Accent Optical.

Net cash generated by operating activities was \$724,000 in 2005. Cash generated by operating activities in 2005 was a result of non-cash expenses and improved use of working capital, including a decrease in accounts receivable of \$1.3 million and a decrease in inventory of \$2.3 million between December 31, 2004 and December 31, 2005. Cash used by operating activities was \$3.5 million and \$4.7 million in 2004 and 2003, respectively. Cash used by operating activities in 2004 and 2003 primarily resulted from operating losses. The operating loss in 2004 was partially offset by a tax refund of approximately \$3.6 million. Net cash used in investing activities was \$376,000, \$432,000 and \$1.5 million for 2005, 2004 and 2003, respectively. Investing

Table of Contents

activities during 2005 and 2004 consisted primarily of capital expenditures. Capital expenditures were \$604,000, \$1.6 million and \$408,000 in 2005, 2004 and 2003, respectively. Capital expenditures were primarily for the development of engineering assets for product development and training purposes, and upgrades to Accent Optical's information technology systems. Investing activities during 2003 consisted primarily of acquisition of short-term investments. Net cash used in financing activities was \$1.0 million and \$1.3 million in 2005, and 2003, respectively. Cash used in financing activities primarily consisted of payments on a term bank loan. Net cash provided by financing activities was \$4.1 million for the year ended December 31, 2004, primarily as a result of a \$4 million common stock offering completed in the fourth quarter of 2004. Net cash used by operating activities was \$1.0 million for the three months ended April 1, 2006, as compared to cash generated by operations of \$365,000 for the three months ended April 2, 2005. The reduced cash generated by operations was the result of a larger net loss, increasing inventories and account receivables, partially offset by an increase in current liabilities.

Accent Optical issued a note for \$8.0 million to Bio-Rad in connection with its acquisition of the Bio-Rad SMD in July 2000. This note bears interest at a rate of 13.5% per annum and was originally scheduled to mature on July 31, 2005. Accrued interest has been added to the principal balance on June 30 and December 31 of each year since issuance, and the principal balance of this note was \$11.8 million at December 31, 2005. In November 2003, Accent Optical renegotiated the terms of this note to extend the maturity date to July 31, 2007 and to require that cash interest payments be made semi-annually beginning on June 30, 2004. The Bio-Rad note must be repaid in full within two days of a change in control. In January 2006, Bio-Rad agreed to defer interest due of \$812,000 until the earlier of a change in control of Accent Optical or June 30, 2006.

In December 2002, Accent Optical entered into a term loan agreement with Comerica Bank. Outstanding borrowings under the loan agreement are secured by substantially all of the assets of Accent Optical and its subsidiaries. The loan agreement contains affirmative and negative covenants (including restrictions on Accent Optical entering into certain transactions and certain financial covenants including a minimum liquidity ratio and tangible net worth). In June 2004, Accent Optical amended the loan agreement with Comerica to include a revolving line of credit and a revolving equipment advance line of credit. Accent Optical may request advances under a revolving line of credit not to exceed the lesser of (1) \$7,500,000, minus the balances on all Comerica debt under the amended loan agreement, or (2) the borrowing base established by the debt covenants. Under the terms of this amendment, Accent Optical may also request advances for purchases of equipment not to exceed the lesser of (1) \$7,500,000, minus the balances on all Comerica debt under the amended agreement, or (2) the borrowing base established by the debt covenants.

In October 2004, Accent Optical amended the agreement with Comerica to convert the balance under the revolving equipment advance line of credit to a term loan. Under this amendment, approximately \$626,000 was converted to term debt on December 31, 2004 and an additional \$206,000 was converted to term debt on July 1, 2005. The loan bears interest at the lower of (1) Comerica Bank's prime rate or LIBOR plus reserve percentage (reserve percentage of 2.75% at December 31, 2005) or (2) Comerica Bank's prime rate. The first equipment term loan is payable over 36 months, beginning December 1, 2004. The second equipment term loan is payable over 36 months, beginning July 1, 2005. The equipment term loans may be prepaid in whole or in part without any penalty or premium. The outstanding balance of equipment term loans as of December 31, 2005 is \$594,309.

As of December 31, 2005 and 2004, the balances of the Comerica Bank term loan were \$1,250,000 and \$2,500,000, respectively. The loan bears interest at the lower of either Comerica Bank's prime rate or the LIBOR rate plus a reserve percentage (2.75% at December 31, 2005 and 2004.) The interest rates on the Comerica Bank term loan were 7.03% and 4.86% at December 31, 2005 and 2004, respectively. The term loan is payable in 48 equal monthly installments of principal, plus all accrued interest, beginning January 1, 2003. The term loan may be prepaid in whole or in part without any penalty or premium.

As of December 31, 2005, the balance of the Comerica Bank revolving line of credit was \$900,000. The loan bears interest at the lower of (1) Comerica Bank's prime rate or the LIBOR plus a reserve percentage

Table of Contents

(2.50% at December 31, 2005) or (2) Comerica Bank's prime rate. The interest rate on the Comerica Bank revolving line of credit at December 31, 2005 was 7.25%. The maturity date on the revolving line of credit is May 31, 2006. Amounts currently available under the revolving line of credit are limited by the borrowing base as defined in the credit agreement. As of April 1, 2006, Accent Optical could borrow approximately \$500,000 under the revolving line of credit.

As of December 31, 2005, the balance on the Comerica Bank equipment term loan was \$594,000. The loan bears interest at the lower of (1) Comerica Bank's prime rate or the LIBOR plus a reserve percentage (2.75% at December 31, 2005) or (2) Comerica Bank's prime rate. The interest rate on the Comerica Bank revolving equipment line of credit was 7.25%. The equipment term loan is payable over 36 months, beginning December 1, 2004. The equipment term loan may be prepaid in whole or in part without any penalty or premium.

As of December 31, 2005, Accent Optical was not in compliance with its liquidity ratio and net worth covenants and on February 24, 2006 entered into a Forbearance and Second Amendment with Comerica. Under this amendment, Comerica has agreed not to pursue any remedies for any default until the earlier of July 31, 2006 or completion of the merger. In addition, the minimum liquidity ratio was reduced for this period and compliance with the net worth covenant has been waived.

Pursuant to the merger agreement, Nanometrics has agreed to provide Accent Optical with a working capital loan in the aggregate amount of \$2.5 million. As of April 1, 2006, Nanometrics advanced \$750,000 to Accent Optical as part of this agreement. Subsequent to April 1, 2006, Nanometrics advanced an additional \$1,750,000.

Contractual Obligations. The following is a summary of Accent Optical's contractual commitments and obligations as of December 31, 2005 (in thousands):

	Amount of					
	Commitment					
	Maturing by					
	Year Total	2006	2007	2008	2009	Beyond
Bio-Rad Note	\$ 11,772	\$	\$ 11,772	\$	\$	\$
Comerica Bank Loan	2,744	2,744				
Purchase Order Commitments	2,141	2,141				
Operating Leases	3,060	957	447	375	354	927
Interest Payments	3,552	2,616	936			
Total	\$ 23,269	\$ 8,458	\$ 13,155	\$ 375	\$ 354	\$ 927

Accent Optical's future capital requirements will depend on many factors, including its sales growth, market acceptance of its existing and new systems, the amount and timing of its research and development expenditures, the timing of its introduction of new systems, expansion of its sales and marketing efforts, potential acquisitions and working capital. There can be no assurance that Accent Optical will not require additional financing or that additional equity or debt financing, if required, will be available on satisfactory terms.

Off-Balance Sheet Arrangements

Accent Optical has no off-balance sheet arrangements that have or are reasonably likely to have a current or future material effect on its financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

Critical Accounting Policies and Estimates

The preparation of Accent Optical's consolidated financial statements requires that it make certain estimates and judgments that affect amounts reported and disclosed in Accent Optical's consolidated financial statements

Table of Contents

and related notes. Accent Optical bases its estimates on historical experience and on other assumptions that it believes to be reasonable under the circumstances. Actual results may differ from these estimates. The following are the critical accounting policies that Accent Optical believes require significant estimation and management judgment.

Revenue Recognition. Accent Optical's revenue recognition policy complies with Staff Accounting Bulletin No. 104 and its related implementation guidance. Accent Optical's revenues are derived from the sale of its systems and from fees associated with service and technical support offered to its customers. Revenues from systems sales are recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable and collectibility is reasonably assured. For sales of standard systems to existing customers who have purchased the same equipment with the same customer-specified acceptance provisions in the past, revenues are recognized upon title transfer, which is generally upon shipment of the system to the customer. For sales of existing systems with new specifications or acceptance clauses to a new customer, and for all sales of new systems, revenues are recognized upon customer acceptance. Service and technical support for systems is provided under separate maintenance agreements. Revenues from maintenance agreements, typically from one to two years, are recognized ratably over the term of the respective agreement as the service is provided.

Product sales to distributors are recognized upon transfer of title, which is generally upon shipment of the product to the distributor or the end customer.

Revenues on the sale of spare parts are recognized when persuasive evidence of an arrangement exists (a binding purchase order is received), delivery has occurred, the price is fixed and determinable and collectibility is reasonably assured. Title and the risk and rewards of ownership transfer upon shipment of the spare parts and revenues are recognized upon shipment.

Valuation of Accounts Receivable/Doubtful Accounts. The allowance for doubtful accounts is estimated based on past collection history and known trends with current customers. The risk related to accounts receivable is mitigated by sales to well-established companies, ongoing credit evaluation of Accent Optical's customers, and frequent contact with its customers, especially its most significant customers, thus enabling Accent Optical to monitor current changes in business operations and to respond accordingly. Accent Optical's estimates for allowance for doubtful accounts are reviewed and updated on a quarterly basis. Changes to the reserve occur based upon changes in revenue levels, associated balances in accounts receivable and estimated changes in credit quality. Accent Optical's allowance for doubtful accounts totaled \$231,000 and \$367,000, respectively, at December 31, 2005 and December 31, 2004. Actual losses from accounts receivable have been within Accent Optical's estimates.

Inventory Valuation. Inventories are stated at the lower of cost (first-in, first-out method) or market. Finished goods and work-in-process include cost of materials, labor and manufacturing overhead costs. Reserves, when required, are recorded to reduce excess and obsolete inventories to their estimated net realizable values. Because of the long-lived nature of many of its systems, Accent Optical maintains a substantial supply of parts for possible use in future repairs and customer field service. As these service parts become older, Accent Optical applies a higher reserve percentage against the recorded balance, recognizing that the older the part, the less likely it will be used. If circumstances related to its inventories change, Accent Optical's estimates of the value of inventory could materially change. Accent Optical records estimated inventory write-downs quarterly as a component of cost of revenues. Inventory reserves of \$5.3 million and \$6.6 million were recorded at December 31, 2005 and December 31, 2004, respectively.

Stock-Based Compensation. Accent Optical accounts for stock-based employee compensation arrangements in accordance with the provisions of Accounting Principles Board, or APB, Opinion No. 25, *Accounting for Stock Issued to Employees*, and complies with the disclosure provisions of SFAS No. 123, *Accounting for Stock-Based Compensation*, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation Transition and*

Table of Contents

Disclosure, Amendment to SFAS No. 123. Under APB No. 25, compensation expense is based on the difference, if any, on the date of grant, between the fair value of the stock and the exercise price of the option. Accent Optical accounts for stock and stock options issued to non-employees in accordance with the provisions of Emerging Issues Task Force Consensus on Issue No. 96-18, *Accounting for Equity Instruments that are Issued to Other than Employees for Acquiring or in Conjunction with Selling, Goods or Services*. Compensation and services expense are recognized over the vesting period of the options or the periods the related services are rendered, as appropriate.

Income Taxes. Income taxes are accounted for under the asset and liability method. Deferred income taxes are recognized for the difference between the financial statement carrying amounts and the tax basis of existing assets and liabilities. Deferred income taxes are recorded at the tax rates expected to be in effect when amounts are to be included in future taxable income. Accent Optical regularly assesses the recoverability of deferred tax assets and records a valuation allowance to reduce the deferred tax assets to the amounts believed to be realizable, considering whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon carry back to prior periods, tax planning strategies, the scheduled reversal of deferred tax liabilities and the generation of future taxable income during the periods in which those temporary differences become deductible. Based upon Accent Optical's recent taxable losses and the uncertainty of future taxable income, Accent Optical has recorded, and continues to believe that it is appropriate to record, a full valuation allowance against the deferred tax assets. The valuation allowance at December 31, 2005 was \$10.1 million.

Product Installation and Warranty Expense. At the time product revenue is recognized, Accent Optical provides for estimated installation and warranty costs, typically for a period of 12 to 24 months. Accent Optical estimates the cost of installation and warranty based on historical installation costs and actual field repair rates. While Accent Optical believes that the warranty provisions are adequate over the average life of products sold, the timing of installation and warranty repairs may result in fluctuations in quarter-to-quarter costs. Accent Optical re-evaluates the adequacy of its warranty reserves on a quarterly basis.

Acquired Intangibles and Goodwill. Acquired intangibles and goodwill represent, respectively, developed technology and assembled work force and the purchase price in excess of identifiable assets arising from acquisitions. Through 2005 acquired intangibles were amortized on a straight-line basis over their remaining estimated economic lives of between three and five years.

In July 2001, the Financial Accounting Standards Board (FASB) issued SFAS No. 142, *Goodwill and Other Intangible Assets*. Under SFAS No. 142, goodwill and intangible assets with indefinite lives are no longer amortized. In addition, SFAS No. 142 no longer recognizes assembled work force as an intangible asset separate from goodwill. Assembled work force has been combined with goodwill for all periods presented. The effect of adopting SFAS No. 142 reduced Accent Optical's amortization expense by \$837,000 annually, beginning in 2001.

Upon implementation of SFAS No. 142, Accent Optical was required to evaluate goodwill for impairment. In addition, under SFAS No. 142 goodwill and intangible assets with indefinite lives are no longer amortized but are reviewed annually for impairment, or more frequently if impairment indicators arise. If Accent Optical determines that the carrying value of goodwill will not be recoverable, it calculates and records impairment losses using future discounted cash flows. Accent Optical estimates future discounted cash flows using assumptions about its expected future operating performance. Accent Optical's estimates of discounted cash flows may differ from actual cash flow due to, among other things, technological changes, economic conditions, or changes to business operations. Accent Optical completed its annual impairment test at December 31, 2005, 2004 and 2003 and determined that there was no impairment of goodwill.

Impairment of Long-Lived Assets. Property, plant and equipment are reviewed for impairment in accordance with SFAS No. 144, *Accounting for the Disposal of Long-Lived Assets*. Accent Optical assesses impairment of property, plant and equipment whenever changes in circumstances indicate that the carrying values of the assets

Table of Contents

may not be recoverable. Recoverability of an asset is measured by comparison of its carrying amount to the future undiscounted cash flows that the asset is expected to generate. Any impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeded its fair market value.

Qualitative and Quantitative Disclosures About Market Risks

Accent Optical is subject to financial market risks, including changes in foreign currency exchange rates and interest rates. A significant portion of its revenues is from customers located in Asia and Europe. With the exception of sales into Japan, nearly all of Accent Optical's sales are denominated in U.S. dollars.

Accent Optical's sales to customers in Japan, which represented 27.7% of its revenues during 2005, are denominated in Japanese yen. As a result, fluctuations in the exchange rate between the yen and the U.S. dollar can affect Accent Optical's revenues and gross profit. Weakness in the U.S. dollar as compared to the Japanese yen will have the effect of increasing Accent Optical's revenues and gross profits on the same volume of units sold.

A substantial portion of Accent Optical's operating expenses is denominated in foreign currencies, primarily the British pound and, to a lesser extent, the Japanese yen. Weakness in the U.S. dollar as compared to these currencies will have the effect of increasing Accent Optical's operating expenses. At December 31, 2005, the pound was weaker against the dollar, at an exchange rate of \$1.72 per British pound, compared to the average exchange rate of \$1.92 per British pound at December 31, 2004.

Accent Optical does not currently enter into currency hedging transactions to decrease the risk of financial exposure fluctuations in the exchange rate of the dollar against the British pound or yen.

Accent Optical's interest income will be sensitive to changes in the general level of U.S. interest rates. An increase or decrease in interest rates will cause fluctuations in Accent Optical's interest income on cash balances due to its cash being primarily invested in short-term investments.

Recently Issued Accounting Pronouncements

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs - An Amendment of ARB No. 43, Chapter 4* (SFAS 151). SFAS 151 amends the guidance in ARB No. 43, Chapter 4, Inventory Pricing, to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Among other provisions, the new rule requires that items such as idle facility expense, excessive spoilage, double freight, and re-handling costs be recognized as current period charges regardless of whether they meet the criterion of "so abnormal" as stated in ARB No. 43. Additionally, SFAS 151 requires that the allocation of fixed production overhead to the costs of conversion be based on the normal capacity of the production facilities. SFAS 151 is effective for fiscal years beginning after June 15, 2005. The adoption of SFAS 151 did not have a material effect on our results of operations or financial position.

In December 2004, the FASB issued SFAS No. 153, *Exchanges of Nonmonetary Assets - An Amendment of APB Opinion No. 29, Accounting for Nonmonetary Transactions* (SFAS 153). SFAS 153 eliminates the exception from fair value measurement for nonmonetary exchanges of similar productive assets in paragraph 21(b) of APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, and replaces it with an exception for exchanges that do not have commercial substance. SFAS 153 specifies that a nonmonetary exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. SFAS 153 is effective for the fiscal periods beginning after June 15, 2005. The adoption of SFAS 153 did not have a material effect on our results of operations or financial position.

In December 2004, the FASB issued SFAS No. 123(R), *Accounting for Stock-Based Compensation*. SFAS 123(R), which establishes standards for the accounting for transactions in which an entity exchanges its equity instruments for goods or services. This Statement focuses primarily on accounting for transactions in which an

Table of Contents

entity obtains employee services in share-based payment transactions. SFAS 123(R) requires that the fair value of such equity instruments be recognized as an expense in the historical financial statements as services are performed. Prior to SFAS 123(R), only certain pro forma disclosures of fair value were required. For nonpublic companies, the provisions of this Statement are effective as of the beginning of the first annual reporting period that begins after December 15, 2005. Accent Optical adopted SFAS 123(R) commencing with the year ending December 30, 2006.

Legal Proceedings

Accent Optical currently is not a party to any legal proceedings the effect of which would have a material adverse affect on its operations and financial condition.

Table of Contents**NANOMETRICS PRINCIPAL SHAREHOLDERS**

The following table sets forth beneficial ownership of Nanometrics common stock as of May 24, 2006, by each director, by each of the executive officers, by all directors and executive officers as a group, and by all persons known to Nanometrics to be the beneficial owners of more than 5% of Nanometrics stock. Unless otherwise indicated, the address of each executive officer or director of Nanometrics is 1550 Buckeye Drive, Milpitas, CA 95035. As of the close of business on May 24, 2006, there were 13,095,332 shares of common stock outstanding.

Name of Beneficial Owner	Amount and Nature of Beneficial Ownership(1) Shares			
	Shares	Stock Options Exercisable within 60 days of 5/24/2006	Total Shares Beneficially Owned	Percent of Class
Dimensional Fund Advisors, Inc. (2) 1299 Ocean Avenue, 11th Floor Santa Monica, CA 90401	1,100,500		1,100,500	8.4%
Royce and Associates, LLC (3) 1414 Avenue of the Americas New York, NY 10019	698,300		698,300	5.4%
The TCW Group (4) 865 South Figueroa Street Los Angeles, CA 90017	1,445,780		1,445,780	11.1%
Wasatch Advisors, Inc. (5) 150 Social Hall Salt Lake City, UT 84111	730,671		730,671	5.6%
J. Thomas Bentley		9,999	9,999	*
Vincent J. Coates (6)	3,376,154		3,376,154	25.8%
John D. Heaton		555,832	555,832	4.1%
Roger Ingalls, Jr.	9,000	33,166	42,166	*
Douglas J. McCutcheon	985			*
William G. Oldman		29,999	29,999	*
Stephen J Smith		9,999	9,999	*
Edmond R. Ward	2,000	29,999	31,999	*
Quentin B. Wright		16,666	16,666	*
Paul B. Nolan	5,000		5,000	*
Michael Weber				*
All named officers and directors as a group (10 persons)	3,392,154	652,327	4,044,481	29.6%

* Less than 1%.

(1) As determined in accordance with Rule 13d-3 under the Securities and Exchange Act of 1934.

(2) According to a 13G/A filed with the SEC on February 6, 2006, Dimension Fund Advisors, Inc. may be deemed to be the beneficial owner of 1,100,500 shares of common stock.

(3) According to a Schedule 13G filed with the SEC on January 30, 2006, Royce & Associates, LLC may be deemed to be the beneficial owner of 698,300 shares of common stock.

(4) According to a Schedule 13G/A filed with the SEC on March 10, 2006, The TCW Group, Inc., may be deemed to be the beneficial owner of 1,445,780 shares of common stock.

(5) According to a 13G/A filed with the SEC on February 14, 2006, Wasatch Advisors, Inc. may be deemed to be the beneficial owner of 730,671 shares of common stock.

(6)

Edgar Filing: NANOMETRICS INC - Form S-4/A

Includes 3,376,154 shares of common stock held of record by the Vincent J. Coates Separate Property Trust, U/D/T dated August 7, 1981, for which Mr. Coates acts as trustee.

143

Table of Contents**ACCENT OPTICAL S PRINCIPAL STOCKHOLDERS**

The following table sets forth beneficial ownership of Accent Optical Common Stock, Series A Preferred Stock, and Convertible Preferred Stock as of June 5, 2006, by each director, by each of the executive officers, by all directors and executive officers as a group, and by all persons known to Accent Optical to be the beneficial owners of more than 5% of Accent Optical stock. Unless otherwise indicated, the address of each executive officer or director of Accent Optical is 1320 SE Armour Drive, Suite B2, Bend, OR 97702. As of the close of business on June 5, 2006, there were 141,439,274 shares of Common Stock, 9,444,8334 shares of Series A Preferred Stock and 7,787,804 shares of Convertible Preferred Stock outstanding.

Beneficial Owner	Shares of Common Stock Beneficially Owned		Shares of Series A Preferred Stock Beneficially Owned		Shares of Convertible Preferred Stock Beneficially Owned	
	Number	Percent	Number	Percent	Number	Percent
Five percent stockholders:						
JFI II, L.P. ⁽¹⁾ 555 California St., Suite 5180 San Francisco, CA 94104	39,443,625	27.9%	3,608,787	38.2%		
Bio-Rad Laboratories, Inc. ⁽²⁾ Alfred Nobel Drive Hercules, CA 94547	29,451,000	20.8%				
Rhine 2000 Children s Trust [†] 298 Mt. Top Road Howard, PA 16841	13,175,000	9.3%	1,258,250	13.3%		
FleetBoston Financial Corporation ⁽⁴⁾ 100 Federal Street Boston, MA 02110	2,844,000	2.0%	271,560	2.9%	3,573,170	45.9%
Directors and executive officers:						
Bruce C. Rhine ⁽⁵⁾	44,865,458	31.6%	4,073,460	43.1%		
Peter M. Joost ⁽⁶⁾	44,687,000	31.6%	4,088,547	43.3%		
David Schwartz ⁽⁷⁾	29,451,000	20.8%				
Gregory A. Kaiser ⁽⁸⁾	2,812,000	2.0%	117,680	1.2%		
Bruce Crawford ⁽⁹⁾	2,395,396	1.7%	90,520	*		
Jeffrey J. Rosen ⁽¹⁰⁾	522,876	*	12,073	*		
Rajeev Mundhe ⁽¹¹⁾	663,875	*	13,580	*		
Joseph F. Dox ⁽¹²⁾	405,876	*	0,910	*		
Reid Langrill ⁽¹³⁾	1,029,706	*				
Robert J. Therrien ⁽¹⁴⁾	396,876	*				
William Landreth ⁽¹⁵⁾	369,272	*				
Steve Hummel ⁽¹⁶⁾	376,292	*	0,910	*		
Tony Beddard ⁽¹⁷⁾	154,895	*				
All directors and executive officers as a group (13 persons) ⁽¹⁸⁾	128,130,522	88.2%	8,397,68	88.9%		

* Less than 1%

(1) The general partner of JFI II, L.P. is Joost Enterprises Corporation. Joost Enterprises Corporation is wholly owned by Peter M. and Lindsay M. Joost, Trustees U/ T/A dated April 11, 2002, of which Peter Joost, who serves on Accent Optical s board of directors, is a Trustee. Mr. Joost is also the President of Joost Enterprises Corporation.

(2) David Schwartz, the Chairman of Bio-Rad, serves on the board of directors of Accent Optical.

Table of Contents

- (3) The beneficiaries of the Rhine 2000 Children's Trust are the minor children of Bruce Rhine, Accent Optical's President, Chief Executive Officer and Chairman. David Johnson is the Trustee and has sole voting and investment power over the stock held by the trust.
- (4) Includes 2,844,000 shares of Common Stock and 271,560 shares of Series A Preferred Stock held by FSC Corp., a wholly owned subsidiary of FleetBoston Financial Corporation, and 3,573,170 shares of Convertible Preferred Stock held by RS Coinvestment Fund, L.L.C.
- (5) Includes 13,175,000 shares of Common Stock and 1,258.25 shares of Series A Preferred Stock held by the Rhine 2000 Children's Trust, 30,729,000 shares of Common Stock and 2,815.21 shares of Series A Preferred Stock held by Bruce Charles Rhine and Martha Hawn Rhine Family Trust u/t/a dated February 6, 2002, and 625,000 shares of Common Stock held jointly with Mr. Rhine's wife. Mr. Rhine disclaims beneficial ownership with respect to the shares held by the Rhine 2000 Children's Trust; and 336,458 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (6) Includes 39,443,625 shares of Common Stock and 3,608,787 shares of Series A Preferred Stock held by JFI II, L.P. and 5,243,375 shares of Common Stock and 479.76 shares of Series A Preferred Stock held by Peter M. and Lindsay M. Joost, Trustees U/T/A dated April 11, 2002, with respect to which Mr. Joost has shared voting and dispositive powers. Mr. Joost is the President of Joost Enterprises Corporation, which is the general partner of JFI II, L.P.
- (7) Includes 29,451,000 shares of Common Stock held by Bio-Rad Laboratories, Inc., with respect to which Mr. Schwartz disclaims beneficial ownership.
- (8) Includes 118,524 shares of Common Stock and 117,680 shares of Series A Preferred Stock that are not transferable and are subject to a repurchase right in favor of Accent Optical, which restrictions will not lapse within 60 days; and 220,000 shares of Common Stock held in trust by the Kaiser Family Trust dated June 20, 2000, with respect to which Mr. Kaiser disclaims beneficial ownership.
- (9) Includes 948 shares of Common Stock and 90.520 shares of Series A Preferred Stock that are not transferable and are subject to a repurchase right in favor of Accent Optical, which restrictions will not lapse within 60 days; and 884,896 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (10) Includes 204,168 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (11) Includes 320,208 shares of Common Stock issuable upon the exercise of options exercisable within 60 days and 142 shares of Common Stock and 13,580 shares of Series A Preferred Stock that are not transferable and are subject to a repurchase right in favor of Accent Optical, which restrictions will not lapse within 60 days.
- (12) Includes 9,375 shares of Common Stock that are not transferable and are subject to a repurchase right in favor of Accent Optical, which restrictions will not lapse within 60 days; 20,000 shares of Common Stock held in trust for Mr. Dox's minor children with respect to which he disclaims beneficial ownership; and 46,876 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (13) Includes 847,409 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (14) Includes 396,876 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (15) Includes 369,272 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (16) Includes 303,334 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (17) Includes 154,895 shares of Common Stock issuable upon the exercise of options exercisable within 60 days.
- (18) Includes 3,864,392 shares of Common Stock issuable upon the exercise of options exercisable within 60 days; 128,989 shares of Common Stock and 221,780 shares of Series A Preferred Stock that are not transferable and are subject to a repurchase right in favor of Accent Optical, which restrictions will not lapse within 60 days; 13,175,000 shares of Common Stock and 1,258,250 shares of Series A Preferred Stock held by the Rhine 2000 Children's Trust with respect to which Mr. Rhine disclaims beneficial ownership, 30,729,000 shares of Common Stock and 2,815.21 shares of Series A Preferred Stock held by Bruce Charles Rhine and Martha Hawn Rhine Family Trust u/t/a dated February 6, 2002, and 625,000 shares of Common Stock held jointly with Mr. Rhine's wife; 39,443,625 shares of Common Stock and 3,608,787 shares of Series A Preferred Stock held by JFI II, L.P., and 5,243,375 shares of Common Stock and 479.76 shares of Series A Preferred Stock held by Peter M. and Lindsay M. Joost, Trustees U/T/A dated April 11, 2002, with respect to which Mr. Joost has shared voting and dispositive powers; 29,451,000 shares of Common Stock held by Bio-Rad, with respect to which Mr. Schwartz disclaims beneficial ownership; 220,000 shares of Common Stock held by the Kaiser Family Trust with respect to which Mr. Kaiser disclaims beneficial ownership; and 20,000 shares of Common Stock held in trust for Mr. Dox's minor children, with respect to which he disclaims beneficial ownership.

Table of Contents

DESCRIPTION OF NANOMETRICS CAPITAL STOCK

The following is a summary of the material terms of the capital stock of Nanometrics. Because it is only a summary, it does not contain all the information that may be important to you. Accordingly, you should read carefully the more detailed provisions of the articles of incorporation and bylaws of Nanometrics, each of which has been filed with the SEC. You should also refer to the section of this joint proxy statement/prospectus entitled *Comparison of Rights of Holders* beginning on page 147.

General

As of the date of this joint proxy statement/prospectus, the authorized capital stock of Nanometrics consists of 50,000,000 shares of common stock, no par value per share. Nanometrics common stock is listed on the Nasdaq National Market under the ticker symbol NANO.

As of the record date, 13,095,332 shares of Nanometrics common stock were issued and outstanding.

Common Stock

Holders of Nanometrics common stock are entitled to one vote for each share held of record on all matters submitted to a vote of shareholders, except that, upon giving the notice required by the bylaws of Nanometrics, shareholders may cumulate their votes for the election of directors. Holders of Nanometrics common stock do not have preemptive rights. Nanometrics common stock is neither redeemable nor convertible into other securities, and there are no sinking fund provisions. Nanometrics has never declared or paid any cash dividends on its common stock or any other securities. Nanometrics does not expect to pay cash dividends on its common stock in the foreseeable future. Nanometrics intends to retain future earnings to continue to fund the development and growth of its business as well as to repay long-term debt.

Transfer Agent

The transfer agent and registrar of the Nanometrics common stock is U.S. Stock Transfer Corporation.

Table of Contents

COMPARISON OF RIGHTS OF HOLDERS

In connection with the merger, Accent Optical stockholders will be exchanging shares of Accent Optical, a Delaware corporation, for shares of Nanometrics, a California corporation. California law and Delaware law differ in many respects. It is not practical to summarize all of the differences that could materially affect the rights of Accent Optical stockholders as holders of shares of Nanometrics common stock following the merger. However, the significant differences between the corporation laws of California and Delaware include the following:

Size of Board of Directors

Under California law, although changes in the number of directors must in general be approved by the shareholders, the board of directors may fix the exact number of directors within a stated range set forth in the articles of incorporation or bylaws, if the stated range has been approved by the shareholders. Nanometrics' bylaws fix its number of directors at seven, and Nanometrics current board has seven members.

Delaware law permits the board of directors to change the authorized number of directors by amendment to the bylaws or in the manner provided in the bylaws unless the number of directors is fixed in the certificate of incorporation, in which case a change in the number of directors may be made only by amendment to the certificate of incorporation. Accent Optical's certificate of incorporation does not currently fix or restrict the number of directors. Accent Optical's bylaws provide that the number of directors shall be determined from time to time by the Board and shall be divided into three classes designated Class I, Class II and Class III, each class to consist, as nearly as may be possible, of 1/3 of the total number of directors constituting the entire Board. Accent Optical's board of directors currently consists three Class I members, two Class II members and two Class III members for a total of seven members.

Cumulative Voting

California law provides that any shareholder is entitled to cumulate his or her votes in the election of directors upon proper notice of his or her intention to do so, except that a listed corporation may eliminate cumulative voting with shareholder approval. Nanometrics' articles of incorporation do not eliminate, and its shareholders have not eliminated, cumulative voting with respect to the election of directors and Nanometrics' bylaws provide for cumulative voting in the election of directors.

Under Delaware law, cumulative voting in the election of directors is not mandatory, and for cumulative voting to be effective it must be expressly provided for in the certificate of incorporation. In an election of directors under cumulative voting, each share of stock normally having one vote is entitled to a number of votes equal to the number of directors to be elected. A stockholder may then cast all such votes for a single candidate or may allocate them among as many candidates as the shareholder may choose. Without cumulative voting, the holders of a majority of the shares present at an annual meeting would have the power to elect all the directors to be elected at that meeting, and no person could be elected without the support of holders of a majority of the shares. Accent Optical's certificate of incorporation does not provide for cumulative voting.

Removal of Directors

Under California law, any director or the entire board of directors may be removed, with or without cause, with the approval of a majority of the outstanding shares entitled to vote; however, no directors may be removed (unless the entire board is removed) if the number of votes cast against the removal would be sufficient to elect the director under cumulative voting. Nanometrics' articles of incorporation and bylaws have neither eliminated cumulative voting nor provided for a classified board of directors.

Under Delaware law, a director of a corporation that does not have a classified board of directors or cumulative voting may be removed without cause by a majority stockholder vote. In the case of a Delaware

Table of Contents

corporation having cumulative voting, if less than the entire board is to be removed, a director may not be removed unless the shares voted against such removal would not be sufficient to elect the director under cumulative voting. A director of a corporation with a classified board of directors can be removed only for cause unless the certificate of incorporation otherwise provides. Accent Optical's bylaws provide for a classified board and its directors can be removed only for cause.

Vacancies on the Board of Directors

Under California law, any vacancy on the board of directors other than one created by removal of a director may be filled by the board of directors, unless otherwise provided in the articles of incorporation or bylaws. If the number of directors is less than a quorum, a vacancy may be filled by the unanimous written consent of the directors then in office, by the affirmative vote of a majority of the directors at a meeting held pursuant to notice or waivers of notice, or by a sole remaining director. A vacancy created by removal of a director can only be filled by the shareholders unless board approval is authorized by a corporation's articles of incorporation or by a bylaw approved by the corporation's shareholders. Neither the articles of incorporation nor the bylaws of Nanometrics permit the board of directors to fill a vacancy created by the removal of a director.

Under Delaware law, unless otherwise provided in the certificate of incorporation or the bylaws, (i) vacancies on a board of directors; and (ii) newly created directorships resulting from an increase in the number of directors, may be filled by a majority of the directors then in office. In the case of the classified board of directors of Accent Optical, directors elected to fill vacancies or newly created directorships will hold office until the next election of the class for which the directors have been chosen. The bylaws of Accent Optical provide that any vacancies on its board of directors may be filled by the affirmative vote of a majority of the remaining directors in office, even if less than a quorum, by a sole remaining director, or by the stockholders at the next duly called annual or special meeting.

Loans to Officers and Employees

Under California law, any loan or guaranty to or for the benefit of a director or officer of the corporation or any of its subsidiaries requires approval of the shareholders unless such loan or guaranty is provided under a plan approved by shareholders owning a majority of the outstanding shares of the corporation. In addition, under California law, shareholders of any corporation with 100 or more shareholders of record may approve a bylaw authorizing the board of directors alone to approve a loan or guaranty to or on behalf of an officer (whether or not a director) if the board determines that such a loan or guaranty may reasonably be expected to benefit the corporation. Nanometrics' bylaws authorize the board of directors alone to approve such loans or guaranties provided that (i) the board of directors determines that such a loan or guaranty or plan may reasonably be expected to benefit the corporation, (ii) the corporation has outstanding shares held of record by 100 or more persons on the date of approval, and (iii) the approval of the board of directors is by a vote sufficient without counting the vote of any interested director or directors.

Under Delaware law, a corporation may make loans to, guarantee the obligations of, or otherwise assist its officers or other employees and those of its subsidiaries when such action, in the judgment of the directors, may reasonably be expected to benefit the corporation. Accent Optical's certificate of incorporation and bylaws do not explicitly provide for loans or guarantees to or for the benefit of its and its subsidiaries' officers and employees.

Section 13(k) of the Securities and Exchange Act of 1934 (the Exchange Act), added pursuant to Section 402 of the Sarbanes Oxley Act of 2002, makes it unlawful for any issuer, directly or indirectly, including through any subsidiary, to extend or maintain credit, to arrange for the extension of credit, or to renew an extension of credit, in the form of a personal loan to or for any director or executive officer (or equivalent thereof) of that issuer. Rule 3b-7 under the Exchange Act defines executive officer of an issuer to include the issuer's president, any vice president . . . in charge of a principal business unit, division or function (such as sales, administration or finance), any other officer who performs a policy making function or any other person

Table of Contents

who performs similar policy making functions for the issuer. The impact of Section 13(k) is to limit loans or guarantees with respect to persons who are directors or officers subject to Section 16 of the Exchange Act.

Power to Call Special Shareholders Meeting

Under California law, a special meeting of shareholders may be called by the board of directors, the Chairman of the Board, the President, the holders of shares entitled to cast not less than 10% of the votes at such meeting or such other persons as are authorized by the articles of incorporation or bylaws. Nanometrics' bylaws provide that a special meeting of the shareholders may be called at any time by the board of directors, the Chairman of the Board, the President or by one of more shareholders holding shares in the aggregate entitled to cast not less than 10% of the votes at that meeting.

Under Delaware law, a special meeting of stockholders may be called by the board of directors or by any other person authorized to do so in the certificate of incorporation or the bylaws. Accent Optical's bylaws provide that a special meeting of the shareholders may be called only by the Board. As such, stockholders do not have the right to call a special stockholder meeting of Accent Optical.

Indemnification and Limitation of Liability

California law and Delaware law contain similar provisions and limitations on indemnification by a corporation of its officers, directors, employees and other agents. Neither Nanometrics nor Accent Optical is aware of any pending legal action against the officers, directors or employees of such company which would be covered by such indemnification provisions. Both California law and Delaware law also permit a corporation to adopt a provision in its charter eliminating the liability of a director to the corporation or its shareholders for monetary damages for breach of fiduciary duty as a director, provided such liability does not arise from certain proscribed conduct (including intentional misconduct and breach of the duty of loyalty). Accent Optical's certificate of incorporation eliminates the personal liability of a director to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. Such limitation of liability provisions also may not limit a director's liability for violation of, or otherwise relieve the company or its directors from the necessity of complying with federal or state securities laws, or affect the availability of nonmonetary remedies such as injunctive relief or rescission.

California law does not permit the elimination of monetary liability where such liability is based on: (i) intentional misconduct or knowing and culpable violation of law; (ii) acts or omissions that a director believes to be contrary to the best interests of the corporation or its shareholders or that involve the absence of good faith on the part of the director; (iii) receipt of an improper personal benefit; (iv) acts or omissions that show reckless disregard for the director's duty to the corporation or its shareholders, where the director in the ordinary course of performing a director's duties should be aware of a risk of serious injury to the corporation or its shareholders; (v) acts or omissions that constitute an unexcused pattern of inattention that amounts to an abdication of the director's duty to the corporation and its shareholders; (vi) transactions between the corporation and a director who has a material financial interest in such transaction; or (vii) liability for improper distributions, loans or guarantees. Nanometrics' articles of incorporation eliminate the liability of the directors for monetary damages to the fullest extent permissible under California law.

Inspection of Shareholders List

Both California law and Delaware law allow any shareholder to inspect the shareholders' list for a purpose reasonably related to such person's interest as a shareholder. California law provides, in addition, an absolute right to inspect and copy the corporation's shareholders' list by a person or persons holding 5% or more of a corporation's voting shares, or any shareholder or shareholders holding 1% or more of such shares who has filed a Schedule 14A with the SEC relating to the election of directors. Delaware law does not provide for any such absolute right of inspection. Delaware law also provides for inspection rights as to a list of stockholders entitled

Table of Contents

to vote at a meeting within a ten day period preceding a stockholders' meeting for any purpose germane to the meeting. However, Delaware law contains no provisions comparable to the absolute right of inspection provided by California law to certain shareholders. Accent Optical's and Nanometrics' bylaws contain provisions that confirm but that do not extend the rights granted to their shareholders in accordance with Delaware law and California law, respectively.

Dividends and Repurchases of Shares

California law dispenses with the concepts of par value of shares as well as statutory definitions of capital, surplus and the like. Under California law, a corporation may not make any distribution (including dividends, whether in cash or other property, and repurchases of its shares) unless either the corporation's retained earnings immediately prior to the proposed distribution equal or exceed the amount of the proposed distribution or, immediately after giving effect to such distribution, the corporation's assets (exclusive of good will, capitalized research and development expenses and deferred charges) would be at least equal to 125% of its liabilities (not including deferred taxes, deferred income and other deferred credits), and the corporation's current assets, as defined, would be at least equal to its current liabilities (or 125% of its current liabilities if the average pre-tax and pre-interest earnings for the preceding two fiscal years were less than the average interest expenses for such year). Under California law, there are certain exceptions to the foregoing rules for repurchases of shares in connection with certain rescission actions or pursuant to certain employee stock plans.

Delaware law recognizes the concepts of par value, capital and surplus. Delaware law permits a corporation, unless otherwise restricted by its certificate of incorporation, to declare and pay dividends out of its surplus or, if there is no surplus, out of net profits for the fiscal year in which the dividend is declared and/or for the preceding fiscal year, as long as the amount of capital of the corporation is not less than the aggregate amount of the capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets. Accent Optical's certificate of incorporation does not provide for any such restriction on the ability to declare and pay dividends. In addition, Delaware law generally provides that a corporation may redeem or repurchase its shares only if such redemption or repurchase would not impair the capital of the corporation. The ability of a Delaware corporation to pay dividends on, or to make repurchases or redemptions of, its shares is dependent on the financial status of the corporation standing alone and not on a consolidated basis. In determining the amount of surplus of a Delaware corporation, the assets of the corporation, including stock of subsidiaries owned by the corporation, must be valued at their fair market value as determined by the board of directors, regardless of their historical book value.

The holders of shares of Accent Optical's Series A Preferred Stock are entitled to receive semi-annual cumulative dividends, in preference to all other capital stock of the corporation, at a rate per share per annum of 13.5% of the liquidation preference, as defined (as adjusted for stock dividends, stock splits, combination of shares, reorganization, recapitalization, reclassification, or other similar event), when and as declared by the board of directors. The holders of shares of Accent Optical's Convertible Preferred Stock are entitled to receive cumulative dividends, in preference to the Common Stock, at a rate per share per annum of \$0.164 (as adjusted for stock dividends, stock splits, combination of shares, reorganization, recapitalization, reclassification, or other similar event), when and as declared by the board of directors. Dividends may be paid on the shares of Accent Optical Common Stock as and when declared by the board of directors, subject to the prior dividend rights of the Accent Optical Preferred Stock.

To date, Nanometrics has not paid cash dividends on its capital stock. It is the current policy of the board of directors to retain earnings for use in the business, and Nanometrics therefore does not anticipate paying cash dividends on its common stock in the foreseeable future.

Shareholder Approval of Mergers and Other Business Combinations

Both California and Delaware law generally require that a majority of the shareholders of both acquiring and target corporations approve statutory mergers. Under both California and Delaware law, with certain

Table of Contents

exceptions, any merger or sale of all or substantially all of the assets must be approved by a majority of the outstanding shares entitled to vote of the corporation transferring such assets.

California law contains an exception to its voting requirements for reorganizations where shareholders or the corporation itself, or both, immediately prior to the reorganization will own immediately after the reorganization equity securities constituting more than 83.3% of the voting power of the surviving or acquiring corporation or its parent entity. California law also provides that, except in certain circumstances, when a tender offer or a proposal for a reorganization or for a sale of assets is made by an interested party (generally, a controlling or managing party of the target corporation), an affirmative opinion in writing as to the fairness of the consideration to be paid to the shareholders must be delivered to shareholders. This fairness opinion requirement does not apply to a corporation which does not have shares held of record by at least 100 persons, or to a transaction which has been qualified under California state securities laws. Furthermore, if a tender of shares or vote is sought pursuant to an interested party's proposal and a later proposal is made by another party at least ten days prior to the date of acceptance of the interested party proposal, the shareholders must be informed of the later offer and be afforded a reasonable opportunity to withdraw any vote, consent or proxy, or to withdraw any tendered shares. Delaware law has no comparable provision.

Delaware law does not require a stockholder vote of the surviving corporation in a merger (unless the corporation provides otherwise in its certificate of incorporation) if: (i) the merger agreement does not amend the existing certificate of incorporation; (ii) each share of stock of the surviving corporation outstanding immediately before the effective date of the merger is an identical outstanding share after the merger and; (iii) either no shares of common stock of the surviving corporation and no shares, securities or obligations convertible into such stock are to be issued or delivered under the plan of merger, or the authorized unissued shares or shares of common stock of the surviving corporation to be issued or delivered under the plan of merger plus those initially issuable upon conversion of any other shares, securities or obligations to be issued or delivered under such plan do not exceed 20% of the shares of common stock of such constituent corporation outstanding immediately prior to the effective date of the merger. Accent Optical's certificate of incorporation provide that so long as 50% of the Accent Optical Convertible Preferred Stock issued as of November 2000 is issued and outstanding, a merger or sale of all or substantially all of the assets requires the approval (by vote or written consent as provided by law) of the holders of more than 50% of the outstanding shares of the Convertible Preferred Stock, voting together as a single class on an as-converted basis.

With certain exceptions, California law also requires that mergers, reorganizations, certain sales of assets and similar transactions be approved by a majority vote of each class of shares outstanding. By contrast, Delaware law generally does not require class voting, except in certain transactions involving an amendment to the certificate of incorporation which adversely affects a specific class or series of shares. California law also requires that holders of non-redeemable common stock receive non-redeemable common stock in a merger of the corporation with the holder of more than 50% but less than 90% of such common stock or its affiliate unless all of the holders of such common stock consent to the transaction. This provision of California law may have the effect of making a cash-out merger by a majority shareholder more difficult to accomplish. Delaware law has no comparable provision.

Amendment of the Articles or Certificate of Incorporation

Under California law, an amendment to the articles of incorporation requires the approval of the corporation's board of directors and a majority of the outstanding shares entitled to vote, either before or after the board approval, although certain minor amendments may be adopted by the board alone such as amendments causing stock splits (including an increase in the authorized number of shares in proportion thereto) and amendments changing names and addresses given in the articles.

Under Delaware law, an amendment to the certificate of incorporation requires the approval of the corporation's board of directors and a majority of the outstanding shares.

Table of Contents

Accent Optical's certificate of incorporation provide that Accent Optical will not amend any provision of the certificate of incorporation if such action would adversely alter the rights, preferences, privileges or restrictions of the Accent Optical Series A Preferred Stock without first obtaining the approval (by vote or written consent as provided by law) of the holders of at least a majority of the outstanding shares of Accent Optical Series A Preferred Stock, voting together as a single class on an as-converted basis. In addition, Accent Optical's certificate of incorporation provides that so long as 50% of the Accent Optical Convertible Preferred Stock issued as of November 2000 is issued and outstanding, Accent Optical may not amend any provision of the certificate of incorporation if such action would adversely alter the rights, preferences, privileges or restrictions of the Convertible Preferred Stock without first obtaining the approval (by vote or written consent as provided by law) of the holders of at a majority of the outstanding shares thereof, voting together as a single class on an as-converted basis.

Amendment of Bylaws

Under California law, a corporation's bylaws may be adopted, amended or repealed by either the board of directors or the shareholders of the corporation. Nanometrics' bylaws permit, with certain exceptions, amendment or repeal by the vote or written consent of the holders of a majority of outstanding shares entitled to vote or the board of directors.

Under Delaware law, after a corporation has received any payment for any of its stock, the power to adopt, amend or repeal bylaws is entirely with the shareholders of the corporation. However, a corporation may, in its certificate of incorporation, confer the power to adopt, amend or repeal bylaws upon the directors of the corporation. Accent Optical's certificate of incorporation expressly empowers its board of directors to adopt, amend or repeal the corporation's bylaws. The stockholders also have the power to adopt, amend or repeal the corporation's bylaws; provided, however, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the certificate of incorporation, the affirmative vote of the holders of at least a majority of the voting power of all of the outstanding shares of capital stock entitled to vote generally in the election of directors, voting together as a single class, will be required.

Shareholder Consent in Lieu of Meeting

Under California law, unless otherwise provided in the articles of incorporation, any action required to be taken or which may be taken at an annual or special meeting of shareholders may be taken without a meeting if a consent in writing is signed by the holders of outstanding shares having not less than the minimum number of votes that would be necessary to authorize such action at a meeting at which all shares entitled to vote were present and voted. If consent is sought for less than the shareholders entitled to vote, notice, as required under California law, shall be given. Nanometrics' bylaws provide for action by written consent of its shareholders consistent with California law and require that, with respect to the election of directors, a written consent shall be effective only if signed by the holders of all of the outstanding shares entitled to vote for the election of directors.

Under Delaware law, unless otherwise provided in the certificate of incorporation, any action to be taken at an annual or special meeting of stockholders may be taken without a meeting, without prior notice and without a vote if a written consent to the action shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize such action at a meeting at which all shares entitled to vote were present and voted. Accent Optical's bylaws require that any action that may be taken at any annual or special meeting of the stockholders may be taken without a meeting and without prior notice, if a consent in writing, setting forth the actions so taken, is signed by the holders of outstanding shares having not less than the minimum number of votes which would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted; provided, however, that effective upon an event in which all outstanding shares of Accent Optical's Series A Preferred Stock and Convertible Preferred Stock convert into Common Stock, any action required or permitted to be taken by the stockholders of the corporation must be effected at a duly called annual or special meeting of the stockholders of the corporation and may not be effected by any consent in writing by such stockholders.

Table of Contents

Dissenters' Rights

Under California and Delaware law, a shareholder of a corporation participating in certain major corporate transactions may, under varying circumstances, be entitled to dissenters' rights pursuant to which such shareholder may receive cash in the amount of the fair market value of the shares held by such shareholder (as determined by a court or by agreement of the corporation and the shareholder) in lieu of the consideration such shareholder would otherwise receive in the transaction.

Under California law, shareholders of a California corporation whose shares are listed on a national securities exchange or on a list of over-the-counter margin stocks issued by the Board of Governors of the Federal Reserve System generally do not have dissenters' rights unless the holders of at least 5% of the class of outstanding shares claim the right. Additionally, dissenters' rights are unavailable if the shareholders of a corporation or the corporation itself, or both, immediately prior to a reorganization will own (immediately after the reorganization) more than five-sixths of the voting power of the surviving or acquiring corporation or its parent. Under California law, a shareholder attempting to assert dissenters' rights must hold capital stock that satisfies each of the following requirements: (i) the shares must have been outstanding on the company's record date; (ii) the shares must not have been voted in favor of the merger; (iii) the holder of such shares must make a written demand that the company repurchase such shares of capital stock at fair market value; and (iv) the holder of such shares must submit certificates for endorsement. A vote by proxy or in person against the merger does not in and of itself constitute a demand for appraisal under California law. California law generally affords dissenters' rights in reorganizations that are structured as sales of assets.

The limitations on the availability of dissenters' rights under Delaware law are different from those under California law. Under Delaware law, dissenters' rights are not available to (i) stockholders with respect to a merger or consolidation by a corporation the shares of which are either listed on a national securities exchange or designated as a national market system security on an inter-dealer quotation system by the National Association of Securities Dealers, Inc. or are held of record by more than 2,000 holders if such stockholders receive only shares of the surviving corporation or shares of any other corporation which are either listed on a national securities exchange or designated as a national market system security on an inter-dealer quotation system by the National Association of Securities Dealers, Inc. or are held of record by more than 2,000 holders; or (ii) shareholders of a corporation surviving a merger if no vote of the shareholders of the surviving corporation is required to approve the merger because, among other things, the number of shares to be issued in the merger does not exceed 20% of the shares of the surviving corporation outstanding immediately prior to the merger and if certain other conditions are met. Delaware law also does not provide stockholders of a corporation with dissenters' rights when the corporation acquires another business through the issuance of its stock (a) in exchange for the assets of the business to be acquired; (b) in exchange for the outstanding stock of the corporation to be acquired; or (c) in a merger of the corporation to be acquired with a subsidiary of the acquiring corporation. California law, by contrast, treats these kinds of acquisitions in the same manner as a direct merger of the acquiring corporation with the corporation to be acquired.

Dissolution

Under California law, shareholders holding 50% or more of the voting power of a corporation may authorize its dissolution, with or without the approval of the corporation's board of directors. California law provides that this right may not be modified by the articles of incorporation. Nanometrics' articles of incorporation do not contain any provisions that contradict these provisions of California law.

Under Delaware law, a dissolution must be approved by stockholders holding 100% of the total voting power of the corporation or the dissolution must be initiated by the board of directors and approved by a simple majority of the stockholders of the corporation. In the event of such a board-initiated dissolution, Delaware law allows a Delaware corporation to include in its certificate of incorporation a supermajority voting requirement in connection with dissolutions. Accent Optical's certificate of incorporation contain no such supermajority voting

Table of Contents

requirement. As a result, a majority of the shares voting at a meeting at which a quorum is present would be sufficient to approve a dissolution of Accent Optical that had previously been approved by its board of directors.

Antitakeover Legislation

Section 203 of the Delaware General Corporation Law makes it more difficult to effect certain transactions between a corporation and a person or group that owns 15% or more of the corporation's outstanding voting stock (including any rights to acquire stock pursuant to an option, warrant, agreement, arrangement or understanding, or upon the exercise of conversion or exchange rights, and stock with respect to which the person has voting rights only), or is an affiliate or associate of the corporation and was the owner of 15% or more of such voting stock, referred to as a 15% stockholder, at any time within the previous three years (excluding persons who became 15% stockholders by action of the corporation alone). For a period of three years following the date that a stockholder became a holder of 15% or more of the corporation's outstanding voting stock, the following types of transactions between the corporation and the 15% stockholder are prohibited (unless certain conditions, described below, are met): (i) mergers or consolidations; (ii) sales, leases, exchanges or other transfers of 10% or more of the aggregate assets of the corporation; (iii) issuances or transfers by the corporation of any stock of the corporation which would have the effect of increasing the 15% stockholder's proportionate share of the stock of any class or series of the corporation; (iv) receipt by the 15% stockholder of the benefit (except proportionately as a shareholder) of loans, advances, guarantees, pledges or other financial benefits provided by the corporation; and (v) any other transaction which has the effect of increasing the proportionate share of the stock of any class or series of the corporation which is owned by the 15% stockholder. The three-year ban does not apply if either the proposed transactions or the transaction by which the 15% stockholder became a 15% stockholder is approved by the board of directors of the corporation prior to the date such stockholder became a 15% stockholder. Additionally, a 15% stockholder may avoid the statutory restriction if upon the consummation of the transaction whereby such stockholder became a 15% stockholder, the stockholder owns at least 85% of the outstanding voting stock of the corporation without regard to those shares owned by the corporation's officers and directors or certain employee stock plans. Business combinations are also permitted within the three-year period if approved by the board of directors and, at an annual or special meeting, by the holders of 66²/₃% of the voting stock not owned by the 15% stockholder.

A corporation may, at its option, exclude itself from the coverage of Section 203 by providing in its certificate of incorporation or bylaws at any time that it is exempt from Section 203, provided that a certificate or bylaws amendment cannot become effective for twelve months after such amendment is adopted. In addition, any transaction is exempt from the statutory ban if it is proposed at a time when the corporation has proposed, and a majority of certain continuing directors of the corporation have approved, a transaction with a party who is not a 15% stockholder of the corporation (or who became such with board approval) if the proposed transaction involves (i) certain mergers or consolidations involving the corporation; (ii) a sale or other transfer of over 50% of the aggregate assets of the corporation; or (iii) a tender or exchange offer for 50% or more of the outstanding voting stock of the corporation. Accent Optical's certificate of incorporation and bylaws do not exempt the corporation from the coverage of Section 203. The application of Section 203 to Accent Optical confers upon the board of directors the power to reject a proposed business combination in certain circumstances, even though a potential acquiror may be offering a substantial premium for Nanometrics' shares over the then-current market price.

Interested Director Transactions

Under both California and Delaware law, certain contracts or transactions in which one or more of a corporation's directors has an interest are not void or voidable because of such interest provided that certain conditions, such as obtaining the required approval and fulfilling the requirements of good faith and full disclosure, have been met. With certain exceptions, the conditions are similar under California and Delaware law. Under both California and Delaware law, (i) either the shareholders or the board of directors must approve any such contract or transaction after full disclosure of the material facts, and, in the case of board of director

Table of Contents

approval, the contract or transaction must also be just and reasonable (in California) or fair (in Delaware) to the corporation or (ii) the contract or transaction must have been just and reasonable or fair as to the corporation at the time it was approved. In the latter case, California law explicitly places the burden of proof on the interested director. Under California law, if shareholder approval is sought, the interested director is not entitled to vote his or her shares at a shareholder meeting with respect to any action regarding such contract or transaction. If the approval of the board of directors is sought, the contract or transaction must be approved by a majority vote of a quorum of the directors, without counting the vote of any interested directors (except that interested directors may be counted for purposes of establishing a quorum).

Derivative Suits

California law provides that a shareholder bringing a derivative action on behalf of a corporation need not have been a shareholder at the time of the transaction in question, provided that certain tests are met. Under Delaware law, a stockholder may only bring a derivative action on behalf of the corporation if the stockholder was a stockholder of the corporation at the time of the transaction in question or his or her stock thereafter devolved upon him or her by operation of law. California law also provides that the corporation or the defendant in a derivative suit may make a motion to the court for an order requiring the plaintiff shareholder to furnish a security bond. Delaware law does not have a similar bonding requirement.

Fair Price Provisions

There are no fair price or similar provisions in either Accent Optical's certificate of incorporation or Nanometrics' articles of incorporation or either companies' bylaws.

Table of Contents**MANAGEMENT****Executive Officers and Directors of Nanometrics following the Merger**

The following are the individuals who will be executive officers and directors of Nanometrics immediately following the merger and their ages as of May 24, 2006:

Name	Age	Position
Vincent J. Coates	81	Chairman of the Board, Secretary
John D. Heaton	46	President, Chief Executive Officer and Director
Douglas J. McCutcheon	57	Executive Vice President, Finance and Administration and Chief Financial Officer
Quentin B. Wright	49	Chief Accounting Officer
Roger Ingalls, Jr.	44	Senior Vice President of Standalone Sales
Bruce C. Rhine	49	Chief Strategy Officer and Director
Edmond R. Ward	67	Director
William G. Oldham	68	Director
Stephen Smith	59	Director
J. Thomas Bentley	56	Director

Mr. Vincent J. Coates has been Chairman of the Board since Nanometrics was founded in 1975. He has been our Secretary since February 1989. He has also served as our Chief Executive Officer through April 1998 and President from our founding through May 1996, except for the period of January 1986 through February 1987 when he served exclusively as Chief Executive Officer. Mr. Coates has also served as Chairman of the Board of Nanometrics Japan Ltd., one of our subsidiaries, since June 1998. Prior to his employment at Nanometrics, Mr. Coates co-founded Coates and Welter Instrument Corporation, a designer of electron microscopes, which Nanometrics was subsequently acquired by Nanometrics. Mr. Coates also spent over twenty years working in engineering, sales and international operations for the Perkin-Elmer Corporation, a manufacturer of analytical instruments. In 1995, he received an award that recognized his contribution to the industry from Semiconductor and Equipment and Materials International, an industry trade organization.

Mr. John D. Heaton has served as a director of Nanometrics since July 1995. Since May 1996, he has served as our President. Since April 1998, he has also served as our Chief Executive Officer. From May 1996 to April 1998, he served as our Chief Operating Officer. Mr. Heaton has also served as President of Nanometrics Japan Ltd., one of our subsidiaries, since January 1998. Beginning in 1978, Mr. Heaton served in various technical positions at National Semiconductor Corporation, a semiconductor manufacturer, prior to joining us in 1990.

Mr. Douglas J. McCutcheon has served as Executive Vice President, Finance and Administration, and Chief Financial Officer of Nanometrics since September 2005. From January 2003 until December 2004, he served as Managing Director, Senior Vice President Finance and Chief Financial Officer of Metron Technology N.V., a manufacturer and distributor of semiconductor capital equipment and provider of fab facility services. In 2002, he served in a consulting role to Metron Technology. He also served as Senior Vice President Finance and Chief Financial Officer of Asyst Technologies, Inc., a semiconductor capital equipment automation company, from January 1996 until September 2001. From 1977 through 1995, Mr. McCutcheon held various financial management positions at Memorex Corporation, Diasonics, Inc., Toshiba America Medical Inc. and Cadence Design Systems.

Mr. Quentin B. Wright has served as Chief Accounting Officer of Nanometrics since April 2005. From November 2003 until April 2005, Mr. Wright provided financial consulting services for various technology clients in Silicon Valley. From May 1999 until November 2003, he served as Director of Accounting of Adaptec, Inc., a manufacturer of storage access solutions. He also served as corporate controller of Vascular Therapeutics, Inc., a start-up biopharmaceutical company focused on the discovery and development of novel drugs to prevent and treat cardiovascular disease from February 1998 until May 1999.

Table of Contents

Mr. Roger Ingalls, Jr. has served as Senior Vice President of Standalone Sales for Nanometrics since January 2002. Mr. Ingalls joined Nanometrics in March 1995, serving as Vice President and Director of Sales and Marketing from October 1997 to February 1998, and as Vice President and Director of Marketing from February 1998 to January 2002. Prior to joining Nanometrics, he served as a sales engineer for Nikon Inc., a precision optical inspection and metrology company, from March 1993 to March 1995.

Mr. Bruce C. Rhine has served as Chairman and Chief Executive Officer of Accent Optical since August 2000. He served as Accent Optical's President from January 2003 to April 2005 and from August 2000 to September 2001. From February 2000 to July 2000, he was Chairman and Chief Executive Officer of Timbre Technologies, Inc., a software supplier to semiconductor manufacturers. From October 1999 to February 2000, he was a Vice President of Applied Materials, Inc., a semiconductor equipment manufacturer. In 1997, he founded Obsidian, Inc., a startup supplying chemical mechanical polishing tools to the semiconductor industry, and was its President and Chief Executive Officer until the company was sold to Applied Materials, Inc. in 1999. From 1996 to 1997, Mr. Rhine was a consultant to various semiconductor equipment and materials companies. From 1994 to 1996, Mr. Rhine served as President and Chief Operating Officer of Asyst Technologies, Inc., a manufacturer of semiconductor fabrication automation and atmospheric control solutions, and, from 1994 to 1997, as a director of Tylan General, Inc., a provider of process management equipment.

Edmond R. Ward has served as a director of Nanometrics since July 1999. Beginning in January 2002, Mr. Ward has served as Chief Technical Officer of Unity Semiconductor Corporation, a semiconductor design and manufacturing company. Since April 1999, Mr. Ward has been a General Partner of Virtual Founders, a venture capital firm. From April 1992 to June 1997, Mr. Ward was the Vice President of Technology at Silicon Valley Group, Inc., a supplier of wafer processing equipment.

William G. Oldham has served as a director of Nanometrics since June 2000. Since 1964, Mr. Oldham has been a faculty member at the University of California, Berkeley, where he researches EUV and Maskless Lithography and, since 1996, has been the Director of the DARPA/SRC Research Network for Advanced Lithography. He has served as a consultant in various intellectual property matters and serves on the board of directors of Cymer, Inc., a supplier of light sources for deep ultraviolet photolithography systems used in the manufacturing of semiconductors.

Stephen Smith has served as a director of Nanometrics since April 2004. Dr. Smith has been a professor in the Department of Molecular and Cellular Physiology at the Stanford University School of Medicine since 1989, where he researches brain development and function with special interests in the dynamic and structural aspects of synapse and circuit formation and synaptic plasticity. Dr. Smith is the author of numerous research articles in the fields of cellular and molecular neuroscience.

J. Thomas Bentley has served as a director of Nanometrics since April 2004. Mr. Bentley is a co-founder of Alliant Partners, a leading merger and acquisition firm for emerging and mid-market technology companies. For the past 10 years, Mr. Bentley has worked with some of Alliant's largest clients on their strategic acquisitions and divestitures. His expertise is in financial, tax and accounting structuring of merger transactions.

Compensation/Stock Option Committee Interlocks and Insider Participation

No member of the compensation/stock option committee of Nanometrics' board of directors serves as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of Nanometrics' board of directors or compensation/stock option committee.

Compensation of Directors

Directors who are not also employees of Nanometrics receive an annual retainer fee of \$5,000, plus \$1,000 for each board and committee meeting attended. Directors are also eligible to participate in the company's

Table of Contents

Directors Stock Option Plan. Each audit committee member receives an additional \$3,000 annual retainer and \$500 for attending quarterly earnings release conference calls. Additionally, the audit committee chairman receives an incremental \$2,000 retainer for serving in such capacity.

Compensation of Executive Officers

The following table sets forth the compensation paid by Nanometrics during the past three fiscal years to (i) the chief executive officer, (ii) each of the four most highly compensated executive officers (or such lesser number of executive officers as Nanometrics may have) of Nanometrics not serving as chief executive officer and (iii) up to an additional two individuals that would have been included under item (ii) but for the fact that the individuals were not serving as executive officers as of December 31, 2005, all of whom are collectively referred to as the Named Officers.

Summary Compensation Table

Name	Fiscal Year	Annual Compensation			Long Term Compensation Awards Securities Underlying Options (#)	All Other Compensation ⁽²⁾
		Salary	Bonus ⁽¹⁾	Other Annual Compensation		
John D. Heaton President and Chief Executive Officer	2005	\$ 364,400	\$ 51,360	\$		\$ 26,000
	2004	341,800	79,314		100,000	
	2003	342,800			572,500	
Vincent J. Coates Chairman of the Board and Secretary	2005	204,800				
	2004	204,800				
	2003	204,800				
Roger Ingalls, Jr. Senior Vice President of Standalone Sales	2005	201,876	123,355			
	2004	195,265	29,658		5,000	
	2003	198,965	46,777		31,500	
Paul B. Nolan Former Vice President and Chief Financial Officer	2005	167,819	17,648			159,046
	2004	183,055	29,864			
	2003	179,050				
Douglas J. McCutcheon Executive Vice President, Finance and Administration and Chief Financial Officer	2005	80,019	25,000		150,000	
	2004					
	2003					
Quentin B. Wright Chief Accounting Officer	2005	142,191	9,477		50,000	41,400
	2004					
	2003					
Michael Weber Former Vice President of Engineering	2005	102,580	4,297		50,000	
	2004					
	2003					

(1) Representing bonuses and/or commissions paid to the Named Officers.

(2) Representing (i) payments to Mr. Heaton of \$21,200 and \$4,800, respectively, for accrued vacation time and an auto allowance; (ii) consulting fees and a severance payment of \$52,162 and \$106,884, respectively, paid to Mr. Nolan after he stepped down as an employee and (iii) consulting fees of \$41,400 paid to Mr. Wright prior to his employment.

Table of Contents**Stock Options Granted in the Fiscal Year Ended December 31, 2005**

The following table sets forth information with respect to stock options granted during the fiscal year ended December 31, 2005 to each of the Named Officers. Options were granted under Nanometrics' 2000 Stock Option Plan and 2005 Stock Option Plan. The potential realizable value amounts in the last two columns of the following chart represent hypothetical gains that could be achieved for the respective options if exercised at the end of the option term. The assumed 5% and 10% annual rates of stock price appreciation from the date of grant to the end of the option term are provided in accordance with rules of the SEC and do not represent Nanometrics' estimate or projection of the future common stock price. Actual gains, if any, on stock option exercises are dependent on the future performance of the common stock, overall market conditions and the option holder's continued employment through the vesting period.

Option Grants in Last Fiscal Year

Name	Number of Securities Underlying Options Granted (#) (1)	Individual Grants		Expiration Date	Potential Realized Value at Assumed Annual Rates of Stock Price Appreciation for Option Term	
		% of Total Options Granted to Employees in Fiscal Year (2)	Exercise Price (\$/Sh)		5%(\$)	10%(\$)
John D. Heaton			% \$		\$	\$
Vincent J. Coates						
Roger Ingalls, Jr.						
Paul B. Nolan						
Douglas J. McCutcheon	150,000	18.89	12.03	9/14/12	734,613	1,711,690
Quentin B. Wright	50,000	6.30	11.52	4/15/12	234,490	546,461
Michael Weber	50,000	6.30	12.54	4/6/12	255,252	594,846

- (1) All options granted to the Named Officers in 2005 were granted at exercise prices equal to the fair market value of Nanometrics' common stock on the dates of grant. Historically, options granted become exercisable at the rate of 33% on the first anniversary date of the option grant and 33% of the total number of option shares each full year thereafter, such that full vesting occurs three years after the date of grant. Options (whether vested or unvested) expire after 7 years or 90 days after termination of employment.
- (2) Based on 743,900 options granted during the year ended December 31, 2005.

Table of Contents**Aggregated Option Exercises in Last Fiscal Year and Fiscal Year-End Option Values**

The following table sets forth the number of shares covered by both exercisable and unexercisable stock options held by each of the Named Officers at December 31, 2005.

Name	Shares Acquired on Exercise (#)	Value	Number of Securities Underlying		Value of Unexercised In-the-Money Options at	
		Realized (\$) (1)	Unexercised Options at Fiscal Year-End (#)		Fiscal Year-End (\$) (2)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
John D. Heaton		\$	572,499	100,001	\$ 2,768,914	\$ 132,336
Vincent J. Coates						
Roger Ingalls, Jr.			33,166	3,334	168,000	2,100
Paul B. Nolan	13,334	75,604				
Douglas J. McCutcheon						
Quentin B. Wright						
Michael Weber						

- (1) The value realized upon exercise is (i) the fair market value of Nanometrics common stock on the date of exercise, less the option exercise price per share, multiplied by (ii) the number of shares underlying the options exercised.
- (2) The value of unexercised options is (i) the fair market value of Nanometrics common stock as of the end of 2005, as quoted on The Nasdaq Stock Market, \$11.00 per share, less the option exercise price of in-the-money options, multiplied by (ii) the number of shares underlying such options.

Employment Contracts and Termination of Employment and Change-in-Control Arrangements

Pursuant to the terms of an agreement between Nanometrics and Vincent J. Coates, the Chairman of the Board of Nanometrics, dated May 1, 1985, as amended and restated in August 1996 and April 1998, Nanometrics is obligated to continue to pay Mr. Coates his salary and benefits for five years from the date of his resignation in the event Mr. Coates is required to resign as Chairman of the Board under certain circumstances, including a change of control.

In April 1998, Nanometrics entered into an agreement with John D. Heaton pursuant to which Nanometrics agreed to pay Mr. Heaton his annual salary (excluding bonuses) for a period of one year from the date that he is required or requested for any reason not involving good cause, including a change of control, to involuntarily relinquish his positions with Nanometrics as President, Chief Executive Officer and director. If Mr. Heaton leaves Nanometrics voluntarily, or if he is asked to leave under certain circumstances, no such severance payment is required.

In March 1995, Nanometrics entered into an agreement with Roger Ingalls, Jr. pursuant to which Nanometrics agreed to pay Mr. Ingalls his annual salary (excluding bonuses) for a period of 120 days from the date he is terminated without cause.

In September 2005, Douglas J. McCutcheon became Executive Vice President, Finance and Administration and Chief Financial Officer of Nanometrics. Nanometrics agreed to pay Mr. McCutcheon an annual base salary of \$285,000. Mr. McCutcheon also received a hiring bonus of \$25,000 and was granted options to purchase 150,000 shares of Nanometrics common stock. Furthermore, Nanometrics agreed to pay Mr. McCutcheon 12 months of continued salary at his then-effective annual rate if Nanometrics terminates him for any reason other than for good cause, provided that Mr. McCutcheon executes a general release. Termination for good cause, as used in the foregoing sentence, shall only occur if Mr. McCutcheon commits misconduct, unjustifiably neglects his duties, or acts in a way that has a direct, substantial and adverse effect on Nanometrics or its reputation.

Table of Contents

PROPOSAL TWO PAYMENTS TO EXECUTIVES

CERTAIN PAYMENTS TO EXECUTIVE OFFICERS

Background

The merger will constitute a change in the ownership or effective control of Accent Optical for purposes of Section 280G of the Internal Revenue Code and the Treasury Regulations promulgated thereunder (collectively, Section 280G). Pursuant to Section 280G, payments of compensation made to a disqualified individual that are contingent on a change in the ownership or effective control of a corporation and that exceed a threshold amount applicable to that particular disqualified individual may be characterized as excess parachute payments. Excess parachute payments are not deductible as a business expense by a corporation, and subject the recipient of such payments to a 20% excise tax (in addition to applicable federal and state income and employment taxes), unless such payments are approved by the requisite approval of the stockholders of the corporation. Accent Optical has determined that Bruce C. Rhine, its Chairman and Chief Executive Officer, Bruce Crawford, its President and Chief Operating Officer, and Reid Langrill, its Chief Financial Officer, (collectively, the Executives) may be treated as disqualified individuals for purposes of Section 280G and that a portion of the Potential Parachute Payments (as defined below) may be treated as excess parachute payments.

All holders of shares of outstanding capital stock of Accent Optical as of [], 2006 (other than shares held directly or indirectly by the Executives) are being asked to approve the Potential Parachute Payments. If the Accent Optical stockholders are provided with the opportunity to approve the Potential Parachute Payments, and approval is obtained by a vote of the Accent Optical stockholders holding more than 75% of the voting power of all outstanding capital stock of Accent Optical entitled to vote (the Required Approval), then the adverse tax consequences to both Accent Optical and the Executives should not occur. For purposes of determining whether the Required Approval has been obtained, the vote of individuals (and certain related persons thereto) who receive or are to receive a payment that would be a parachute payment if the stockholder approval requirements under Section 280G were not satisfied is not considered. As such, Accent Optical estimates that up to 46,221,779 of the 141,439,274 shares of Accent Optical Common Stock outstanding as of the date hereof and 4163.98 of the 9,444.83 shares of Series A Preferred stock outstanding on the date hereof may not be considered in determining whether the Required Approval has been obtained. No assurance can be given, however, that even if the Required Approval is obtained, the Internal Revenue Service will not assert that the Potential Parachute Payments are subject to Sections 280G and 4999 of the Internal Revenue Code.

For purposes of the stockholder approval rules discussed above, any stockholder that is not an individual may exercise its vote through any person authorized by the stockholder to approve the payment. However, if a substantial portion of the assets of a stockholder that is not an individual consists (directly or indirectly) of the stock of the corporation that is undergoing a change of control (i.e., the stock equals or exceeds one-third of the total fair market value of all the assets of the stockholder) and the value of such stock is greater than or equal to 1% of the total value of the outstanding stock of the corporation, the payments must be approved by persons who, immediately before the change of control, own more than 75% of the voting power of the stockholder.

Accent Optical stockholder approval of the Potential Parachute Payments is not a condition to the consummation of the merger. If the Required Approval for the Potential Parachute Payments is not obtained, it will not affect the vote of the Accent Optical stockholders with respect to the merger agreement, the merger and the related transactions.

The discussion below sets forth (i) the material facts relating to each payment that each of the Executives has the right to receive, which may be treated as a parachute payment within the meaning of Section 280G, (ii) the specific payments that are being submitted for approval by the Accent Optical stockholders and (iii) the consequences to each of the Executives if the Required Approval is not obtained.

Table of Contents

Important Notice: Please note that the actual amounts of any Potential Parachute Payments for purposes of the Section 280G rules may only be determined once the merger has closed, or upon other subsequent events.

It should also be noted that the tax rules regarding calculating the value of the Potential Parachute Payments for purposes of Section 280G are highly complex, and issues often arise as to which no authoritative guidance is available. Accordingly, the values of the Potential Parachute Payments set forth in this disclosure statement should for present purposes only be viewed as estimates based upon reasonable interpretations of the Section 280G rules, estimations of the potential Average Closing Price, and other reasonable assumptions.

The descriptions of the Potential Parachute Payments herein assume a closing date for the merger of July 1, 2006. The amounts of many of the payments described herein depend on the Average Closing Price, which will not be known until immediately prior to the closing of the merger. To give a sense of various potential results, we have calculated these Potential Parachute Payments using a number of possible Average Closing Prices. We have included information regarding the Potential Parachute Payments assuming that the Average Closing Price will be \$11.00, \$13.23 and \$15.63. We cannot predict what the actual Average Closing Price will be, and therefore, our use of these three estimates are intended to provide stockholders with a general range of the possible values of the Potential Parachute Payments. The exact value of the Potential Parachute Payments could increase or decrease based on a change in the Average Closing Price, as well as a result of a change in the closing date of the merger and/or a change in the timing of the Executive's termination of employment, a variation of the fair market value of a share of Nanometrics' common stock on the date of such termination from the Average Closing Price or changes from various other assumptions. Accordingly, the final amounts of the Potential Parachute Payments as calculated under Section 280G could be different from the numbers estimated in this proposal.

Description of Potential Parachute Payments

Bruce C. Rhine. On January 25, 2006, the Accent Optical board of directors granted Mr. Rhine nonqualified stock options to purchase 4,112,000 shares of Accent Optical Common Stock at the then fair market value of \$0.33 per share. The options are subject to vesting with one-third of the options vesting on each of the first, second and third anniversaries of the grant date. Upon consummation of the merger, these nonqualified stock options will be assumed by Nanometrics pursuant to the terms of the merger agreement.

Mr. Rhine previously received a number of other stock options to purchase Accent Optical Common Stock. At the time of the merger, approximately 317,083 shares subject to these options are expected to be unvested. Under the stock plan pursuant to which the options were granted to Mr. Rhine, the vesting of each stock option, including the options granted at the January 25, 2006 meeting, accelerates in full in the event the employment or service relationship of the holder of such options is terminated within six months of the merger, other than a termination by Accent Optical or its successor for cause or by the employee or service provider without good reason. At the time of the merger, Mr. Rhine is expected to have a total of approximately 4,429,083 unvested options subject to potential acceleration in the event he is terminated within six months of the merger, if all such options are assumed in the merger. See the section of this joint proxy statement/prospectus entitled *The Merger Interests of Accent Optical Directors and Executive Officers in the Merger Executive Officer Option Grants* beginning on page 78.

For Section 280G purposes, the potential value of the acceleration of the unvested options assumed in the merger, other than the January 2006 option, is included in the calculation of Mr. Rhine's Potential Parachute Payment. For these purposes, we have assumed he will have a termination of employment immediately following the merger that will entitle him to this acceleration. We also have assumed that the fair market value of a share of Nanometrics' common stock on the date of this termination will be the same as the Average Closing Price. For purposes of Section 280G, the January 2006 option is considered to have been granted in consideration of the merger and therefore the full value of the option is included in the calculation of Mr. Rhine's Potential Parachute Payment, instead of just the value of the acceleration. The value of the options and the potential acceleration is calculated using procedures outlined in Internal Revenue Service Revenue Procedures 2003-68 and 98-34 and the regulations promulgated under Section 280G.

Table of Contents

The total value of the January 2006 option grant and potential vesting acceleration of his other assumed options (together, the Rhine Potential Parachute Payments) is dependent on the share price of Nanometrics common stock. Based on a Average Closing Price of \$10.84, the estimated present value of the Rhine Potential Parachute Payments would be approximately \$415,000. If the Average Closing Price is \$15.63, the estimated present value of the Rhine Potential Parachute Payments would be approximately \$957,000.

Bruce Crawford. On January 25, 2006, the Accent Optical board of directors granted Mr. Crawford nonqualified stock options to purchase 800,000 shares of Accent Optical Common Stock at the then fair market value of \$0.33 per share. The options are subject to vesting with one-third of the options vesting on each of the first, second and third anniversaries of the grant date. Upon consummation of the merger, these nonqualified stock options will be assumed by Nanometrics pursuant to the terms of the merger agreement.

Mr. Crawford previously received a number of other stock options to purchase Accent Optical Common Stock. At the time of the merger, approximately 642,083 shares subject to these options are expected to be unvested. Under the stock plan pursuant to which the options were granted to Mr. Crawford, the vesting of each stock option, including the option granted at the January 25, 2006 meeting, accelerates in full in the event the employment or service relationship of the holder of such options is terminated within six months of the merger, other than a termination by Accent Optical or its successor for cause or by the employee or service provider without good reason. At the time of the merger, Mr. Crawford is expected to have a total of approximately 1,442,083 unvested options subject to potential acceleration in the event he is terminated within six months of the merger, if all such options are assumed in the merger. See the section of this joint proxy statement/prospectus entitled *The Merger Interests of Accent Optical Directors and Executive Officers in the Merger Executive Officer Option Grants* beginning on page 78.

For Section 280G purposes, the potential value of the acceleration of the unvested options assumed in the merger, other than the January 2006 option, is included in the calculation of Mr. Crawford's Potential Parachute Payment. For these purposes, we have assumed he will have a termination of employment immediately following the merger that will entitle him to this acceleration. We also have assumed that the fair market value of a share of Nanometrics' common stock on the date of this termination will be the same as the Average Closing Price. For purposes of Section 280G, the January 2006 option is considered to have been granted in consideration of the merger and therefore the full value of the option is included in the calculation of Mr. Crawford's Potential Parachute Payment, instead of just the value of the acceleration. The value of the options and the potential acceleration is calculated using procedures outlined in Internal Revenue Service Revenue Procedures 2003-68 and 98-34 and the regulations promulgated under Section 280G.

Mr. Crawford and Accent Optical have entered into an employment agreement which grants Mr. Crawford, in the event of his termination in certain circumstances, a lump-sum payment of \$213,000, company-paid health care continuation benefits under COBRA (at an estimated value of approximately \$24,000 with a potential gross-up for taxes arising from the provision of such benefits at an estimated value of approximately \$13,000), and reimbursement of relocation expenses up to \$50,000. See the section of this joint proxy statement/prospectus entitled *The Merger Interests of Accent Optical Directors and Executive Officers in the Merger Executive Officer Retention and Severance Arrangements* beginning on page 77. For purposes of calculating Mr. Crawford's Potential Parachute Payment, we have assumed that he will have a termination of employment immediately following the merger that will entitle him to these severance benefits, and that he will receive them to the fullest extent possible.

The total value of the January 2006 option grant, potential vesting acceleration of his other assumed options, and his potential severance payments and benefits pursuant to his employment agreement (together, the Crawford Potential Parachute Payments) is dependent on the Average Closing Price. Based on an Average Closing Price of \$10.84, the estimated present value of the Crawford Potential Parachute Payments would be approximately \$382,000. If the Average Closing Price is \$15.63, the estimated present value of the Crawford Potential Parachute Payments would be approximately \$510,000.

Table of Contents

Reid Langrill. On January 25, 2006, the Accent Optical board of directors authorized and approved an employment agreement with Mr. Langrill, pursuant to which Mr. Langrill is entitled to a severance payment equal to the greater of (i) \$185,000 or (ii) the difference between \$500,000 and the fair market value of Mr. Langrill's stock options assumed by Nanometrics pursuant to the terms of the merger agreement, as determined in Mr. Langrill's employment agreement. For purposes of determining Mr. Langrill's severance payment, the value of the options that are in-the-money as of the completion of the merger will be equal to the fair market value of the shares covered by such options as of the closing (including shares for which the option had previously been exercised) minus the aggregate exercise price of such options. Mr. Langrill also received a number of stock options to purchase Accent Optical Common Stock. Under the stock plan pursuant to which the options were granted to Mr. Langrill, the vesting of each stock option accelerates in full in the event the employment or service relationship of the holder of such options is terminated within six months of the merger, other than a termination by Accent Optical or its successor for cause or by the employee or service provider without good reason. At the time of the merger, approximately 414,479 shares subject to Mr. Langrill's options are expected to be unvested and, if all such options are assumed in the merger, will be subject to potential acceleration in the event he is terminated within six months of the merger, as is expected. See the section of this joint proxy statement/prospectus entitled *The Merger Interests of Accent Optical Directors and Executive Officers in the Merger Executive Officer Option Grants* beginning on page 78.

For Section 280G purposes, the potential value of the acceleration of the unvested options assumed in the merger is included in the calculation of Mr. Langrill's Potential Parachute Payments. For these purposes, we have assumed he will have a termination of employment immediately following the merger that will entitle him to this acceleration. We also have assumed that the fair market value of a share of Nanometrics common stock on the date of this termination will be the same as the Average Closing Price. Except for purposes of determining Mr. Langrill's potential severance payment, the value of the options and the potential acceleration is calculated using procedures outlined in Internal Revenue Service Revenue Procedures 2003-68 and 98-34 and the regulations promulgated under Section 280G.

The total value of the severance payment and potential vesting acceleration of his assumed options (together, the Langrill Potential Parachute Payments) is dependent on the Average Closing Price. Based on an Average Closing Price of \$10.84, the estimated present value of the Langrill Potential Parachute Payments would be approximately \$395,000. If the Average Closing Price is \$15.63, the estimated present value of the Langrill Potential Parachute Payments would be approximately \$240,000.

Payments Subject To Accent Optical Stockholder Approval

The Accent Optical stockholders are being asked to approve the following payments: (i) the Rhine Potential Parachute Payments, (ii) the Crawford Potential Parachute Payments, and (iii) the Langrill Potential Parachute Payments (collectively, the Potential Parachute Payments). Unless and until the Accent Optical stockholders approve the Potential Parachute Payments in accordance with Section 280G, each Executive has agreed, pursuant to the terms of a waiver agreement, to waive any and all rights that he would otherwise possess in that portion of his respective Potential Parachute Payment that would otherwise cause any portion of any of his respective Potential Parachute Payment to be treated as an excess parachute payment within the meaning of Section 280G, as determined by a nationally recognized public accounting firm selected by Accent Optical. In general, if a Potential Parachute Payment equals or exceeds the product of (x) the Executive's average compensation over the preceding five years (the Executive's base amount) multiplied by (y) three, the excess of the Potential Parachute Payment over the base amount is an excess parachute payment. Mr. Rhine's base amount is approximately \$210,000 and three times his base amount is approximately \$630,000. Mr. Crawford's base amount is approximately \$182,000 and three times his base amount is approximately \$547,000. Mr. Langrill's base amount is approximately \$115,000 and three times his base amount is approximately \$346,000.

Comparing the estimated value of the Potential Parachute Payments with the three times base amount of each Executive, Accent Optical estimates that the Langrill Potential Parachute Payments would constitute a

Table of Contents

parachute payment at an Average Closing Price of \$10.84 and if required approval is not obtained, Mr. Langrill would forfeit up to \$49,000 of his Potential Parachute Payments. However, if the share price of Nanometrics common stock changes and the Required Approval is not obtained, the other Executives' Potential Parachute Payments could become a parachute payment and Mr. Rhine would not have the right to receive that portion of his Potential Parachute Payments that equal or exceed a value of approximately \$630,000, Mr. Crawford would not have the right to receive that portion of his Potential Parachute Payments that equal or exceed a value of approximately \$547,000, and Mr. Langrill could forfeit an additional amount of his Potential Parachute Payments.

For example, if the Average Closing Price increases to \$15.63 and the Required Approval is not obtained, Mr. Rhine could forfeit up to approximately \$327,000 worth of his Potential Parachute Payments. As a further example, if the Average Closing Price increases to \$15.63, Mr. Langrill would not forfeit any of his Potential Parachute Payment, since their value would not equal or exceed three times his base amount. As a final example, if the Required Approval is not obtained, none of the Crawford Potential Parachute Payments would be subject to waiver unless the Average Closing Price and the share price of Nanometrics common stock at the time of accelerated vesting exceeds \$18.63.

However, in every case, if the Required Approval is obtained, each of the Executives will have any and all rights to the entire portion of his respective Potential Parachute Payment (subject to the terms and conditions associated with such payments).

Accent Optical has approved option grants and the potential for vesting acceleration under all options to certain other executive officers, in addition to the Potential Parachute Payments described above, which could be deemed parachute payments under Section 280G. However, the possibility that such payments would be deemed excess parachute payments within the meaning of Section 280G is remote, so Accent Optical has elected not to seek stockholder approval of such payments.

Vote Required

The adverse tax consequence of Sections 280G and 4999 of the Internal Revenue Code that may apply to the Potential Parachute Payments can be avoided if approval is obtained by a vote of the Accent Optical stockholders holding more than 75% of the voting power of all outstanding stock of Accent Optical entitled to vote. For this purpose, the outstanding stock of Accent Optical does not include shares owned, directly or indirectly, by anyone receiving parachute payments within the meaning of 280G. As such, Accent Optical estimates that up to 46,221,779 of the 141,439,274 shares of Accent Optical Common Stock outstanding as of the date hereof of 4163.98 of the shares of Series A Preferred Stock outstanding as of the date hereof may not be considered in determining whether the Required Approval has been obtained.

The board of directors of Accent Optical believes that the Potential Parachute Payments to Mr. Rhine, Mr. Crawford and Mr. Langrill are in the best interests of Accent Optical and its stockholders to provide incentives for retention and continuing service throughout the merger and transition period and unanimously recommends that the Accent Optical stockholders vote FOR the proposal to make these payments to the Executives.

Table of Contents

ADDITIONAL INFORMATION

Shareholder Proposals

Nanometrics

For any proposal to be considered for inclusion in the Nanometrics proxy statement and form of proxy for submission to the Nanometrics shareholders at its next annual meeting, the proposal must comply with the requirements of Rule 14a-8 under the Exchange Act and be submitted in writing by notice delivered or mailed by first-class United States mail, postage prepaid, to Nanometrics Incorporated, 1550 Buckeye Drive, Milpitas, California 95035, Attention: Office of the Secretary, and must be received by Nanometrics no later than 120 calendar days before the date the proxy statement was released to shareholders in connection with the previous year's annual meeting. If Nanometrics changes the date of its annual meeting to a date more than 30 days from the date of the previous year's annual meeting, then the deadline for receipt of shareholder proposals will be changed to a reasonable time before Nanometrics begins to print and mail its proxy. The submission of a shareholder proposal does not guarantee that it will be included in the Nanometrics proxy statement. Additionally, shareholder proposals to be considered at the Nanometrics annual meeting outside the processes of Rule 14a-8 (which are not intended to be included in the proxy materials for such annual meeting) must be delivered to or mailed and received at the executive offices of Nanometrics at least 45 days before the date that the proxy statement was released to shareholders in connection with the previous year's annual meeting.

Accent Optical

Accent Optical's bylaws limit the business that may be transacted at a special meeting of stockholders to matters relating to the purposes of the special meeting stated in the notice of the meeting. Accordingly, Accent Optical's stockholders may not submit other proposals for consideration at the special meeting.

Legal Matters

Certain legal matters, including United States federal income tax consequences of the merger, will be passed upon for Nanometrics by WSGR, Palo Alto, California and for Accent Optical by Perkins Coie, Portland, Oregon.

Experts

The financial statements and schedules of Nanometrics as of January 1, 2005 and December 31, 2005 and for each of the years then ended and management's report on the effectiveness of internal control over financial reporting as of December 31, 2005 incorporated by reference in this joint proxy statement/prospectus have been audited by BDO Seidman, LLP, an independent registered public accounting firm, to the extent and for the periods set forth in their reports incorporated herein by reference, and are incorporated herein in reliance upon such reports given upon the authority of said firm as experts in auditing and accounting.

The financial statements and the related financial statement schedule of Nanometrics for the year ended January 3, 2004 incorporated in this Joint Proxy Statement/Prospectus by reference from Nanometrics' Annual Report on Form 10-K for the year ended December 31, 2005 have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The financial statements of Accent Optical as of December 31, 2005 and 2004 and for each of the three years in the period ended December 31, 2005 included in this joint proxy statement/prospectus have been so included in reliance on the report (which contains explanatory paragraphs relating to Accent Optical's ability to continue as a going concern as described in Note 1 to the financial statements and the definitive agreement to be acquired by Nanometrics, as described in Note 15 to the financial statements) of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

Table of Contents

The consolidated financial statements of Soluris, Inc. and Subsidiaries as of and for the year ended December 31, 2005 incorporated herein by reference from the Current Report on Form 8-K/A, filed by Nanometrics on May 31, 2005, have been audited by Vitale, Caturano & Company, Ltd., independent accountants, as indicated in their report with respect thereto, and are incorporated herein in reliance upon the authority of said firm as experts in giving said report.

Where You Can Find More Information

Nanometrics files annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy these reports, statements or other information filed by Nanometrics at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. The SEC filings of Nanometrics are also available to the public from commercial document retrieval services and at the website maintained by the SEC at www.sec.gov. The Nanometrics website address is www.nanometrics.com.

Nanometrics has filed a registration statement on Form S-4 to register with the SEC the Nanometrics common stock to be issued to Accent Optical stockholders in the merger. This joint proxy statement/prospectus is a part of that registration statement and constitutes a prospectus of Nanometrics, in addition to being a proxy statement of Nanometrics and Accent Optical for their respective meetings. The registration statement, including the attached annexes, exhibits and schedules, contains additional relevant information about Nanometrics, Nanometrics common stock and Accent Optical. As allowed by SEC rules, this joint proxy statement/prospectus does not contain all the information you can find in the registration statement or the exhibits to the registration statement.

The SEC allows Nanometrics to incorporate by reference information into this joint proxy statement/prospectus. This means that Nanometrics can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be a part of this joint proxy statement/prospectus, except for any information that is superseded by information that is included directly in this joint proxy statement/prospectus or incorporated by reference subsequent to the date of this joint proxy statement/prospectus. Nanometrics does not incorporate the contents of its websites into this joint proxy statement/prospectus.

This joint proxy statement/prospectus incorporates by reference the documents listed below that Nanometrics has previously filed with the SEC. They contain important information about Nanometrics and its financial condition. The following documents, which were filed by Nanometrics with the SEC, are incorporated by reference into this joint proxy statement/prospectus:

Quarterly Report on Form 10-Q for the Quarter ended April 1, 2006, filed with the SEC on May 11, 2006;

Amendment No. 1 to Annual Report on Form 10-K for the year ended December 31, 2005, filed with the SEC on May 1, 2006;

Annual report of Nanometrics on Form 10-K for the year ended December 31, 2005, filed with the SEC on March 24, 2006;

Amendment No. 1 to current report of Nanometrics on Form 8-K/A dated January 25, 2006, originally filed with the SEC on January 26, 2006, as amended February 21, 2006;

Current report of Nanometrics on Form 8-K dated March 15, 2006, filed with the SEC on March 16, 2006, as amended May 31, 2006;

Current report of Nanometrics on Form 8-K dated March 27, 2006, filed with the SEC on March 30, 2006;

Current report of Nanometrics on Form 8-K dated May 24, 2006, filed with the SEC on May 30, 2006; and

Table of Contents

The description of the common stock of Nanometrics contained in its registration statement, filed with the SEC on Form 8-A, on April 29, 1985.

In addition, Nanometrics incorporates by reference additional documents that it may file with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act between the date of this joint proxy statement/prospectus and _____, 2006, the date of the Nanometrics shareholders meeting. These documents include periodic reports, such as annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K, excluding any information furnished pursuant to Item 7.01 of any current report on Form 8-K solely for purposes of satisfying the requirements of Regulation FD or Regulation G under the Exchange Act, as well as proxy statements.

Nanometrics and Accent Optical also incorporate by reference the agreement and plan of merger attached to this joint proxy statement/prospectus as Annex A.

Nanometrics has supplied all information contained in or incorporated by reference into this joint proxy statement/prospectus relating to Nanometrics and Accent Optical has supplied all information contained in or incorporated by reference into this joint proxy statement/prospectus relating to Accent Optical.

You can obtain any of the documents incorporated by reference into this joint proxy statement/prospectus through Nanometrics or Accent Optical, as the case may be, or from the SEC through the SEC's website at www.sec.gov. These documents are also available at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Documents incorporated by reference are available from Nanometrics and Accent Optical without charge, excluding any exhibits to those documents, unless the exhibit is specifically incorporated by reference as an exhibit in this joint proxy statement/prospectus. Nanometrics shareholders and Accent Optical stockholders may request a copy of such documents by contacting the applicable department at:

Nanometrics Incorporated
 1550 Buckeye Drive
 Milpitas, California 95035

Accent Optical Technologies, Inc.
 1320 SE Armour Drive, Suite B2
 Bend, Oregon 97702

Attn: Investor Relations

Attn: Chief Executive Officer

In addition, you may obtain copies of the information relating to Nanometrics, without charge, by sending an e-mail to investors@nanometrics.com or by calling (408) 435-9600, or contacting The Altman Group, Inc., Nanometrics proxy solicitor, at (800) 884-4969.

You may obtain copies of the information relating to Accent Optical, without charge, by calling (541) 322-2500.

IN ORDER FOR YOU TO RECEIVE TIMELY DELIVERY OF THE DOCUMENTS IN ADVANCE OF THE NANOMETRICS AND ACCENT OPTICAL MEETINGS, NANOMETRICS OR ACCENT OPTICAL, AS APPLICABLE, MUST RECEIVE YOUR REQUEST NO LATER THAN [_____], 2006.

We have not authorized anyone to give any information or make any representation about the merger or our companies that is different from, or in addition to, that contained in this joint proxy statement/prospectus or in any of the materials that we have incorporated into this joint proxy statement/prospectus. Therefore, if anyone does give you information of this sort, you should not rely on it. If you are in a jurisdiction where offers to exchange or sell, or solicitations of offers to exchange or purchase, the securities offered by this joint proxy statement/prospectus or the solicitation of proxies is unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this joint proxy statement/prospectus does not extend to you. The information contained in this joint proxy statement/prospectus is accurate only as of the date of this document unless the information specifically indicates that another date applies.

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
<u>Report of Independent Auditors</u>	F-2
Financial Statements:	
<u>Consolidated Balance Sheets</u>	F-3
<u>Consolidated Statements of Operations</u>	F-4
<u>Consolidated Statements of Stockholders' Equity</u>	F-5
<u>Consolidated Statements of Comprehensive Loss</u>	F-6
<u>Consolidated Statements of Cash Flows</u>	F-7
<u>Notes to Consolidated Financial Statements</u>	F-8

Table of Contents

Report of Independent Auditors

To the Board of Directors and Stockholders of

Accent Optical Technologies, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity, of comprehensive loss and of cash flows present fairly, in all material respects, the financial position of Accent Optical Technologies, Inc. and its subsidiaries at December 31, 2005 and 2004, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2005 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has experienced recurring losses from operations, resulting in an accumulated deficit of \$30.4 million as of December 31, 2005. These factors raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

As discussed in Note 15, on January 25, 2006, the Company entered into a definitive agreement to be acquired by Nanometrics, Inc. The accompanying financial statements do not include any adjustments relating to this matter.

/s/ PricewaterhouseCoopers LLP

Portland, Oregon

March 24, 2006

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****CONSOLIDATED BALANCE SHEETS**

	As of April 1, 2006 (unaudited)	As of December 31, 2005	2004
(in thousands, except per share data)			
ASSETS			
Current assets			
Cash and cash equivalents	\$ 3,239	\$ 3,589	\$ 5,120
Accounts receivable, net of allowance for doubtful accounts of \$349 (unaudited), \$231 and \$367, respectively	10,740	8,788	10,058
Inventories	10,961	9,754	12,005
Prepaid expenses and other current assets	1,284	1,312	1,604
Total current assets	26,224	23,443	28,787
Property and equipment, net	1,540	1,782	3,078
Goodwill, net	2,327	2,327	2,327
Acquired intangibles, net	17	44	497
Other assets	135	135	141
Total assets	\$ 30,243	\$ 27,731	\$ 34,830
LIABILITIES AND STOCKHOLDERS EQUITY			
Current liabilities			
Current portion of notes payable	\$ 3,066	\$ 2,744	\$ 2,071
Accounts payable	4,775	2,613	2,790
Accrued liabilities	7,974	7,569	8,259
Deferred revenues	686	420	120
Total current liabilities	16,501	13,346	13,240
Notes payable, net of current portion			1,668
Subordinated note payable to BioRad and related accrued interest	11,772	11,772	11,772
Other liabilities	10	13	54
Total liabilities	28,283	25,131	26,734
Commitments and contingencies (Note 9)			
Stockholders equity			
Series A preferred stock, \$0.01 par value, 9,550 shares authorized; 9,445 shares issued and outstanding as of April 1, 2006 and December, 31, 2005 and 2004; liquidation preference of \$19,680 (unaudited), \$19,102 and \$16,830, as of April 1, 2006 and December 31, 2005 and 2004			
Convertible preferred stock, \$0.01 par value, 9,756,098 shares authorized; 7,787,804 shares issued and outstanding as of April 1, 2006 and December 31, 2005 and 2004; liquidation preference of \$22,862 (unaudited), \$22,536 and \$21,259 as of April 1, 2006 and December 31, 2005 and 2004	78	78	78
Common stock, \$0.00001 par value, 300,000,000 shares authorized; 141,373,925 (unaudited), 141,233,836 and 141,140,387 shares issued and outstanding as of April 1, 2006 and December 31, 2005 and 2004	1	1	1
Additional paid-in capital	32,281	33,005	33,032
Accumulated other comprehensive income	1,359	948	1,839
Deferred compensation		(1,066)	(1,737)
Accumulated deficit	(31,759)	(30,366)	(25,117)

Edgar Filing: NANOMETRICS INC - Form S-4/A

Stockholders' equity	1,960	2,600	8,096
Total liabilities and stockholders' equity	\$ 30,243	\$ 27,731	\$ 34,830

The accompanying notes are an integral part of the consolidated financial statements.

F-3

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****CONSOLIDATED STATEMENTS OF OPERATIONS**

	For the Three Months Ended April 1,		For the Years Ended As of December 31,		
	2006 (unaudited)	April 2, 2005	2005	2004	2003
	(in thousands)				
Revenues					
Products	\$ 8,210	\$ 10,872	\$ 33,911	\$ 33,512	\$ 28,078
Services	1,855	1,694	7,963	8,529	9,477
Total revenues	10,065	12,566	41,874	42,041	37,555
Cost of revenues					
Products (including stock compensation of \$10 (unaudited), \$8 (unaudited), \$33, \$40 and \$14)	3,688	5,738	16,742	15,885	14,103
Services (including stock compensation of \$10 (unaudited), \$10 (unaudited), \$41, \$61 and \$27)	1,251	1,206	5,453	5,282	4,698
Total cost of revenues	4,939	6,944	22,195	21,167	18,801
Gross profit	5,126	5,622	19,679	20,874	18,754
Operating expenses					
Research and development (including stock compensation of \$58 (unaudited), \$27 (unaudited)), \$109, \$123 and \$56	1,918	2,199	8,233	7,341	7,035
Selling, general and administrative (including stock compensation of \$226 (unaudited), \$93 (unaudited)), \$370, \$544 and \$271	3,876	3,545	14,052	15,091	15,672
Restructuring costs		5	16	40	126
Failed initial public offering costs				991	
Amortization of acquired intangibles	27	159	453	637	555
Impairment of acquired intangibles					156
Total operating expenses	5,821	5,908	22,754	24,100	23,544
Loss from operations	(695)	(286)	(3,075)	(3,226)	(4,790)
Other income and expenses					
Other income (expense)	(237)	(23)	(211)	418	(732)
Interest expense	(449)	(450)	(1,839)	(1,887)	(1,676)
Total other income and expenses	(686)	(473)	(2,050)	(1,469)	(2,408)
Loss before income taxes	(1,381)	(759)	(5,125)	(4,695)	(7,198)
(Provision) benefit for income taxes	(12)	(27)	(124)	(93)	166
Net loss	(1,393)	(786)	(5,249)	(4,788)	(7,032)
Cumulative dividends on preferred stock	(904)	(875)	(3,549)	(3,378)	(3,022)
Accretion of beneficial conversion feature				(864)	
Net loss attributable to common stockholders	\$ (2,297)	\$ (1,661)	\$ (8,798)	\$ (9,030)	\$ (10,054)

The accompanying notes are an integral part of the consolidated statements of operations.

F-4

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands, except share data)	Series A Preferred Stock		Convertible Preferred Stock		Common Stock		Additional Paid-In	Accumulated Other Comprehensive (Loss) Income	Deferred Compensation	Accumulated Deficit	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount	Capital				
Balances at December 31, 2002	9,517	\$	7,787,804	\$ 78	127,126,851	\$ 1	\$ 26,532	\$ 570	\$ (647)	\$ (13,297)	\$ 13,237
Exercise of employee stock options					2,571,884		80				80
Repurchase of stock	(72)				(757,621)		(80)				(80)
Vesting of early exercise of stock options							80				80
Deferred stock compensation							464		(464)		
Amortization of deferred stock compensation									368		368
Foreign currency translation adjustment								821			821
Net loss										(7,032)	(7,032)
Balances at December 31, 2003	9,445	\$	7,787,804	\$ 78	128,941,114	\$ 1	\$ 27,076	\$ 1,391	\$ (743)	\$ (20,329)	\$ 7,474
Exercise of employee stock options					2,199,273		152				152
Issuance of common stock, at \$0.40 per share net of offering costs of \$18					10,000,000		3,982				3,982
Convertible preferred stock discount				(864)			864				
Accretion of preferred stock discount				864			(864)				
Vesting of early exercise of stock options							60				60
Deferred stock compensation							1,762		(1,762)		
Amortization of deferred stock compensation									768		768
Foreign currency translation adjustment								448			448
Net loss										(4,788)	(4,788)
Balances at December 31, 2004	9,445		7,787,804	78	141,140,387	1	33,032	1,839	(1,737)	(25,117)	8,096
Exercise of employee stock options					93,449		7				7
Vesting of early exercise of stock options							84				84
Cancellations of unvested stock options							(118)		118		
Amortization of deferred stock compensation									553		553
Foreign currency translation adjustment								(891)			(891)
Net loss										(5,249)	(5,249)
Balances at December 31, 2005	9,445		7,787,804	78	141,233,836	1	33,005	948	(1,066)	(30,366)	2,600

Edgar Filing: NANOMETRICS INC - Form S-4/A

Exercise of employee stock options (unaudited)	140,089	18	18
Vesting of early exercise of stock options (unaudited)		21	21
Foreign currency translation adjustment (unaudited)		411	411
Stock-based compensation expense (unaudited)		303	303
Change in accounting for stock options (unaudited)		(1,066)	1,066
Net loss (unaudited)			(1,393) (1,393)
Balances at April 1, 2006 (unaudited)	9,445 \$	7,787,804 \$	78 141,373,925 \$ 1 \$ 32,281 \$ 1,359 \$ (31,759) \$ 1,960

The accompanying notes are an integral part of the consolidated financial statements.

F-5

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS**

	For the Three Months Ended		For the Years Ended December 31,		
	April 1, 2006 (unaudited)	April 2, 2005	2005	2004	2003
	(in thousands)				
Net loss	\$ (1,393)	\$ (786)	\$ (5,249)	\$ (4,788)	\$ (7,032)
Other comprehensive income (loss), net of tax:					
Foreign currency translation adjustment	411	(313)	(891)	448	821
Comprehensive loss	\$ (982)	\$ (1,099)	\$ (6,140)	\$ (4,340)	\$ (6,211)

The accompanying notes are an integral part of the consolidated financial statements.

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****CONSOLIDATED STATEMENTS OF CASH FLOWS**

	For the Three Months Ended		For the Years Ended		
	April 1, 2006 (unaudited)	April 2, 2005	2005	2004	2003
	(in thousands)				
Cash flows from operating activities					
Net loss	\$ (1,393)	\$ (786)	\$ (5,249)	\$ (4,788)	\$ (7,032)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities					
Depreciation and amortization	327	625	2,099	1,817	2,126
Loss on disposal of property and equipment			28	120	
Impairment of acquired intangibles					156
Amortization of deferred stock compensation		149	553	768	368
Stock-based compensation	304				
Accumulated interest on BioRad note	397	398		812	1,598
Amortization of capitalized loan fees			4	4	
Payment of BioRad interest		(812)			
Deferred tax asset					2,409
Changes in assets and liabilities					
Accounts receivable	(1,952)	(864)	1,270	(1,539)	(1,194)
Income taxes payable/receivable	(26)	23	(313)	3,602	(2,347)
Inventories	(1,207)	(109)	2,251	(3,794)	908
Prepaid expenses and other current assets	51	137	292	(356)	(56)
Accounts payable	2,162	691	(177)	181	496
Accrued liabilities	22	476	(334)	(270)	(1,396)
Deferred revenues	266	437	300	(73)	(749)
Net cash provided by (used in) operating activities	(1,043)	365	724	(3,516)	(4,713)
Cash flows from investing activities					
Transaction costs paid to acquire a business					(114)
Cash used to acquire short term investments					(1,011)
Proceeds from short-term investments				1,011	
Proceeds from disposal of property and equipment			228	151	
Purchase of property and equipment	(58)	(253)	(604)	(1,594)	(408)
Net cash used in investing activities	(58)	(253)	(376)	(432)	(1,533)
Cash flows from financing activities					
Exercise of stock options	18	3	7	152	80
Net proceeds from advances on revolving credit lines			500	1,239	
Proceeds from promissory note from Nanometrics	750				
Payments on capital lease obligations					(62)
Loan origination fee					(5)
Repayment of note payable	(428)	(486)	(1,495)	(1,250)	(1,250)
Proceeds from sale of common stock				4,000	
Issuance costs on sale of common stock				(18)	
Repurchase of Series A preferred stock and common stock					(80)

Edgar Filing: NANOMETRICS INC - Form S-4/A

Net cash provided by (used in) financing activities	340	(483)	(988)	4,123	(1,317)
Effect of foreign currency exchange rates on cash	411	(313)	(891)	448	821
Net increase (decrease) in cash and cash equivalents	(350)	(684)	(1,531)	623	(6,742)
Cash and cash equivalents at beginning of period	3,589	5,120	5,120	4,497	11,239
Cash and cash equivalents at end of period	\$ 3,239	\$ 4,436	\$ 3,589	\$ 5,120	\$ 4,497

Supplemental disclosure of non-cash investing and financing activities

Vested portion of early exercise of stock options	\$ 14	\$ 21	\$ 84	\$ 60	\$ 80
Cancellations of unvested stock options		19	118		
Deferred compensation				1,762	464
Demonstration inventory transferred to fixed assets				1,190	
Convertible preferred stock discount				864	
Accretion of preferred stock discount				(864)	

Supplemental disclosure of cash flow information

Cash paid for interest	34	882	1,840	1,863	183
Cash paid for taxes					401

The accompanying notes are an integral part of the consolidated financial statements.

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 The Organization and Nature of Operations

Accent Optical Technologies, Inc. (Accent Optical) was incorporated in Delaware on April 6, 2000. On July 31, 2000, Accent Optical and its wholly owned subsidiaries acquired certain assets and liabilities of Bio-Rad Laboratories, Inc. s (Bio-Rad) Semiconductor Measurement Division (SMD).

Prior to the acquisition of Bio-Rad SMD (the SMD Acquisition), Accent Optical was a holding company that was formed to investigate and pursue the SMD Acquisition. Since the SMD Acquisition, all of the operations of Accent Optical have been conducted through its wholly owned subsidiaries. Accent Optical designs, manufactures and services a broad suite of process control and metrology systems used by manufacturers of semiconductor wafers and compound and silicon semiconductor devices for the advanced computing, communications and consumer electronics markets. Accent Optical s primary manufacturing facilities are located in the United Kingdom.

Risks and Uncertainties

Accent Optical is subject to certain risks and uncertainties including, among others: fluctuation of operating results; cyclical nature of the industries in which it operates; new product introductions and rapid technological change; market acceptance of its products; competition from companies with greater resources; dependence on key personnel; customer concentrations; variations in the length of the sales cycles; dependence on key suppliers; limited protection of intellectual property rights; reliance on a single manufacturing location; international operations and currency fluctuations; control by existing stockholders and the need for future financing to fund working capital, repayment of long-term debt and expansion of the business.

Merger Agreement

In January 2006, Accent Optical entered into a definitive agreement to be acquired by Nanometrics Incorporated (Nanometrics) for approximately five million shares of Nanometrics common stock and the assumption of certain liabilities (the merger). The merger is expected to close in the second quarter of 2006, subject to shareholder approval, customary closing conditions and regulatory approvals (Note 15).

Liquidity and Financing Requirements

Accent Optical has experienced net losses of \$1.4 million (unaudited), \$786 thousand (unaudited), \$5.2 million, \$4.8 million and \$7.0 million for the three month periods ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004, and 2003, respectively. Despite the net losses, Accent Optical has been able to fulfill its working capital and capital expenditure needs due, in part, to equity financing, available cash resources and maintaining adequate debt financing arrangements. Based on its operating plan, management estimates that cash at April 1, 2006, existing debt financing arrangements, and cash flows generated from operating activities will not be sufficient to fund operations at the current and projected levels for the next twelve months. In the event that the merger is not completed, or for other reasons, management will pursue actions to sell product lines, reduce costs, or seek alternative financing arrangements and pursue additional placement of Company stock. There can be no assurance that such sources of financing and capital will be available if required or, if available, will be on terms satisfactory to Accent Optical (Note 15).

Note 2 Summary of Significant Accounting Policies

Unaudited interim results

The accompanying consolidated balance sheet as of April 1, 2006, the consolidated statements of operations, comprehensive loss and cash flows for the three months ended April 1, 2006 and April 2, 2005 and

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

the consolidated statement of stockholders' equity for the three months ended April 1, 2006 are unaudited. The unaudited interim financial statements have been prepared on the same basis as the annual financial statements and in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary to present fairly Accent Optical's financial position and results of operations and cash flows for the three months ended April 1, 2006 and April 2, 2005. The financial data and other information disclosed in these notes to financial statements related to the three-month periods are unaudited. The results for the three months ended April 1, 2006 are not necessarily indicative of the results to be expected for the year ending December 30, 2006 or for any other interim period or for any other future year.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Accent Optical and its wholly owned subsidiaries and branches in the United States, France, Germany, Israel, South Korea, Taiwan, Switzerland, Japan, Canada, and the United Kingdom. All inter-company accounts and transactions have been eliminated in consolidation.

Foreign Currency Translation

Where the functional currency is the local currency, Accent Optical translates the balance sheet of its foreign subsidiaries using the period end exchange rates and the statement of operations using the average exchange rates for the period. The cumulative effect of these translation adjustments are reported in accumulated other comprehensive income (loss) in stockholders' equity. Exchange gains and losses arising from transactions denominated in a currency other than the functional currency of the entity involved and re-measurement adjustments for foreign operations where the U.S. dollar is the functional currency are included in other income (expense) in the accompanying consolidated statements of operations.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the balance sheet dates and the reported amounts of revenues and expenses during the reporting periods. Accent Optical bases its estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. Actual results could differ from these estimates. Significant estimates made in preparing the consolidated financial statements include depreciation and amortization periods of long-lived and intangible assets, allowance for doubtful accounts, provisions to reduce inventories to their estimated net realizable values, warranty accruals, impairments of goodwill and other long-lived assets, incurred but not reported (IBNR) health claims and the realizability of deferred tax assets.

Concentration of Credit Risk

Financial instruments, which potentially subject Accent Optical to concentrations of credit risk, consist primarily of cash and cash equivalents and accounts receivable. Accent Optical maintains its cash and cash equivalents in bank accounts, which at times may exceed federally insured limits. Accent Optical has not experienced any losses on these accounts. The risk related to accounts receivable is mitigated by sales to well-established companies, ongoing credit evaluation of its customers, and frequent contact with its customers, especially its most significant customers, thus enabling Accent Optical to monitor for current changes in business operations and to respond accordingly. The allowance for doubtful accounts is management's best estimate of the amount of probable credit losses in the existing accounts receivable. Accent Optical determines the allowance based

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

on historical write-off experience. Accent Optical reviews the allowance for doubtful accounts quarterly. Past due balances over 120 days are reviewed individually for collectibility. All other balances are reviewed on a pooled basis by aging category. Account balances are charged off against the allowance when it is probable the receivable will not be recovered. Accent Optical does not have any off-balance sheet credit exposure related to its customers.

As of April 1, 2006, ten customers accounted for 54.8% (unaudited) of accounts receivable, with one customer accounting for approximately 10.3% (unaudited). As of December 31, 2005, ten customers accounted for 58.1% of accounts receivable with one customer accounting for approximately 9.1%. As of December 31, 2004, ten customers accounted for 62.7% of accounts receivable with one customer accounting for approximately 21.9%. Percentages of accounts receivable balances in each of the geographical regions are as follows:

	April 1, 2006 (unaudited)	December 31, 2005	2004
U.S.	19.8%	26.8%	12.8%
Europe	21.8%	16.5%	38.6%
Japan	41.1%	35.8%	29.4%
Rest of World	17.3%	20.9%	19.2%
Total	100.0%	100.0%	100.0%

Fair Value of Financial Instruments

The carrying amounts of Accent Optical's financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximates fair value due to their short maturities. The carrying amount of Accent Optical's debt approximates fair value as the components of the debt are either short-term in nature, or bear interest at rates that approximate prevailing market rates.

Cash and Cash Equivalents

Accent Optical considers all highly liquid investments with an original maturity of three months or less from the date of purchase to be cash and cash equivalents.

Inventories

Inventories are stated at the lower of cost (first-in, first-out method) or market using a standard cost system. Finished goods and work-in-process include cost of materials, labor and manufacturing overhead costs. Reserves, when required, are recorded to reduce excess and obsolete inventories to their estimated net realizable values. Inventory reserves of \$4.7 million (unaudited), \$5.3 million, and \$6.6 million were recorded at April 1, 2006, December 31, 2005 and 2004, respectively.

Property and Equipment

Property and equipment are stated at cost, less accumulated depreciation and amortization. Property and equipment acquired from Bio-Rad are stated at their estimated fair values based upon the allocated purchase price at the acquisition date. Accent Optical depreciates property and equipment over their estimated useful lives of two to seven years using the straight-line method. Leasehold improvements are amortized over the shorter of the useful lives of the assets or the lease term. Costs incurred to maintain property and equipment that do not increase the useful life of the underlying assets are expensed as incurred. At the time of retirement or other

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

disposal, the cost and related accumulated depreciation and amortization are removed from the respective accounts and any resulting gain or loss is included in operations.

Goodwill

Goodwill represents the purchase price in excess of identifiable assets arising from acquisitions. Goodwill is reviewed for impairment annually, or more frequently if impairment indicators arise, in accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*. Accent Optical calculates the fair value of goodwill using a discounted cash flow model. Goodwill is tested for impairment at the reporting unit level. If the fair value of the reporting unit exceeds its carrying amount including goodwill, goodwill is not considered to be impaired. Accent Optical estimates future discounted cash flows using assumptions about the expected future operating performance of Accent Optical. Accent Optical's estimates of discounted cash flows may differ from actual cash flow due to, among other things, technological changes, economic conditions, or changes to its business operations. Management completed its annual impairment test on December 31, 2005 and determined there was no impairment of goodwill (Note 6).

Impairment of Long-Lived Assets

Long-lived assets, such as property and equipment and intangible assets with definite lives, are reviewed for impairment in accordance with SFAS No. 144, *Accounting for the Disposal of Long-Lived Assets*. Accent Optical assesses possible impairment whenever changes in circumstances indicate that the carrying value of the assets may not be recoverable. Recoverability of an asset is measured by comparison of its carrying amount to the future undiscounted cash flows that the asset is expected to generate. Any impairment to be recognized is measured by the amount by which the carrying amount of the asset exceeds its fair market value.

Financing Costs

Costs related to obtaining debt financing are capitalized when incurred and amortized over the life of the applicable loan. These are included in other noncurrent assets. Unamortized loan costs related to debt that is extinguished early are written off. Incremental costs directly attributable to a proposed or actual offering of Accent Optical securities are deferred and charged against the gross proceeds of the offering. Costs incurred for an aborted offering are charged to expense when the decision to abort the offering is made. In 2004, Accent Optical incurred \$991,000 of costs related to an aborted initial public offering of Accent Optical's Common Stock.

Revenue Recognition

Accent Optical's revenues are derived from the sale of its products and from fees associated with maintenance and technical support offered to its customers. Revenues from product sales are recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed and determinable and collectibility is reasonably assured. For sales of standard products to existing customers who have purchased the same equipment with the same customer-specified acceptance criteria in the past, revenue is recognized upon title transfer, which is generally upon shipment of the product to the customer. For sales of new products or existing products with unique acceptance criteria to a new customer, revenue is deferred and is recognized only upon customer acceptance, which is generally upon receipt of final payment of the purchase price. Service and technical support for products is provided under separate maintenance agreements. Revenue from maintenance agreements is deferred and is recognized ratably over the term of the agreement as the service is provided.

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Product sales to distributors are recognized upon transfer of title, which is generally upon shipment of the product to the distributor or the end customer.

Revenue on the sale of spare parts is recognized when persuasive evidence of an arrangement exists (a binding purchase order is received), delivery has occurred, the price is fixed and determinable and collectibility is reasonably assured. Title and the risk and rewards of ownership transfer upon shipment of the spare parts and revenue is recognized upon shipment.

Deferred Revenues

Deferred revenues represent amounts billed to customers for product sales and maintenance agreements for which the earnings process is incomplete. The portions of maintenance services, which will be provided for more than one year in the future, if applicable, are classified as noncurrent deferred revenues.

Shipping and Handling Costs

Accent Optical incurs shipping, handling and other related costs for shipment of goods to customers. The costs are recognized in the period in which the expenses are incurred and are included in cost of revenues. Amounts billed to customers for shipping, handling, and related costs are included as a component of revenues.

Product Installation and Warranty Costs

At the time product revenue is recognized, Accent Optical accrues for estimated product installation costs and costs associated with warranty on its products, which typically range from a period of between 12 to 24 months. Accent Optical estimates the cost of providing product installation and warranty based on historical costs of installing the products and actual field repair rates (Note 7).

Research and Development

Research and development costs are expensed as incurred and are related to developing new products and improving existing products or processes. These costs primarily include salaries, fees paid to consultants, supplies, legal costs related to patents and design costs. Accent Optical incurred research and development costs of \$1.9 million (unaudited) and \$2.2 million (unaudited) for the three-month periods ended April 1, 2006 and April 2, 2005, respectively, and \$8.2 million, \$7.3 million and \$7.0 million for the years ended December 31, 2005, 2004 and 2003, respectively.

Advertising

Costs related to advertising are charged to selling, general and administrative expense as incurred. Advertising expense was \$35,320 (unaudited) and \$43,726 (unaudited) for the three-month periods ended April 1, 2006 and April 2, 2005, respectively, and \$84,881, \$105,514 and \$390,000 for the years ended December 31, 2005, 2004 and 2003, respectively.

Income Taxes

Accent Optical accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the book and tax bases of Accent Optical's assets and liabilities. Valuation allowances are provided if based upon the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)***Comprehensive Income*

SFAS No. 130, *Reporting Comprehensive Income*, establishes standards for reporting and display of comprehensive income and its components. SFAS No. 130 requires companies to report comprehensive income that includes unrealized gains and losses and other items that have been previously excluded from net income or loss and reflected instead in stockholders' equity. Comprehensive loss for Accent Optical consists of net loss and the effect of foreign currency translation adjustments.

Stock-Based Compensation

Accent Optical has a stock-based compensation program that provides equity incentives for employees, consultants and directors. This program includes incentive and non-statutory stock options granted under a Stock Incentive Plan. Prior to January 1, 2006, all stock options granted were time-based with vesting over four years and generally expire ten years from the grant date.

During the three months ended April 1, 2006, Accent Optical granted options which vest over a three year period and expire ten years from the grant date. The vesting of these options is contingent upon the completion of the merger with Nanometrics.

On January 1, 2006, Accent Optical adopted the provisions of Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment* (SFAS No. 123(R)), requiring Accent Optical to recognize expense related to the fair value of its stock-based compensation awards. Accent Optical has elected to use the modified prospective transition method as permitted by SFAS No. 123(R) and therefore has not restated the financial results for prior periods.

Under the modified prospective transition method, stock-based compensation expense is recognized for the remaining requisite service of all stock-based compensation awards granted prior to January 1, 2006, (determined under SFAS No. 123, *Accounting for Stock-based Compensation*) and all stock-based compensation awards granted subsequent to January 1, 2006, based on the grant date estimated fair value (determined under SFAS No. 123(R)). Accent Optical uses the Black-Scholes option pricing model to estimate the fair value of all stock-based compensation awards on the date of grant, except for deferred stock awards which are valued at the fair market value on the date of grant. Accent Optical recognizes the compensation expense for options on a straight-line basis over the requisite service period of each award.

The following table sets forth the stock-based compensation expense recognized in the consolidated statement of operations:

	Three Months Ended April 1, 2006 (unaudited)
Cost of goods sold	\$ 20,239
Research and development	57,924
Selling, general and administrative	225,641
 Total stock-based compensation expense	 \$ 303,804

The additional compensation expense recorded for the three months ended April 1, 2006 was \$175,888. There was no income tax benefit as a result of recording stock-based compensation under SFAS No. 123(R). Implementation of SFAS No. 123(R) resulted in an increase in net loss of \$175,888 for the three months ended

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

April 1, 2006. No stock-based compensation costs were capitalized as of April 1, 2006 as they were not material. As of April 1, 2006, Accent Optical had \$2,376,000 of total unrecognized stock-based compensation costs, net of estimated forfeitures, to be recognized over a weighted average period of 2.63 years.

Prior to the adoption of SFAS No. 123(R), Accent Optical accounted for stock-based compensation under the recognition and measurement provisions of Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*. Stock-based compensation expenses were recognized prior to the adoption of SFAS No. 123(R) for certain options which had been granted under Accent Optical's option plan that had an exercise price less than the market value of the underlying stock on the date of grant.

The following table illustrates the effect on net loss as if Accent Optical had applied the fair value recognition provisions of SFAS No. 123 to stock-based employee compensation in prior periods:

	Three Months Ended April 2, 2005 (unaudited)	Years Ended December 31,		
		2005	2004	2003
		(in thousands)		
Net loss attributable to common stockholders as reported	\$ (1,661)	\$ (8,798)	\$ (9,030)	\$ (10,054)
Add: total stock-based compensation expense included in reported net loss attributable to common stockholders	138	553	768	368
Deduct: total stock-based compensation expense determined under fair value method	(234)	(1,140)	(1,226)	(538)
Net loss attributable to common stockholders pro forma	\$ (1,757)	\$ (9,385)	\$ (9,488)	\$ (10,224)

The fair value of the stock-based awards, as determined under the Black-Scholes model, was estimated using the following weighted-average assumptions:

	Three Months Ended		Years Ended December 31,		
	April 1, 2006 (unaudited)	April 2, 2005 (unaudited)	2005	2004	2003
Risk-free interest rate	4.4%	4.1%	4.1%	3.5%	3.4%
Volatility	70.0%	68.0%	68.0%	80.5%	77.0%
Dividend Yield					
Expected lives (years)	6.0	7.8	7.8	7.8	7.8
Weighted average fair value on date of grant	\$ 0.22	\$ 0.28	\$ 0.28	\$ 0.72	\$ 0.27

Accent Optical uses the 7-year U.S. Treasury interest rate on the date of grant as the risk-free interest rate and uses historical volatility reported by peer companies as the expected volatility. Accent Optical's determination of expected term is calculated using the simplified method under SEC Staff Accounting Bulletin Topic 14.D.2, *Expected Term* (SAB 107). Prior to the adoption of SFAS 123(R), the expected term was based on historical experience of similar awards, giving consideration to the contractual terms, vesting schedules and expectations of future employee behavior.

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The weighted-average fair value of stock-based compensation awards granted and vested, and the intrinsic value of options exercised during the period were (in thousands except per share amount):

	Three Months Ended April 1, 2006 (unaudited)
Stock Option Awards:	
Grant date fair value per share	\$ 0.22
Total fair value of awards granted	\$ 1,387
Total intrinsic value of options exercised	\$ 280

Information with respect to stock option activity is as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value (in thousands)
Outstanding at December 31, 2005	10,547,573	\$ 0.23		
Granted (unaudited)	6,387,000	0.33		
Exercised (unaudited)	(140,089)	0.13		
Forfeited or expired (unaudited)	(75,687)	0.24		
Outstanding at April 1, 2006 (unaudited)	16,718,797	\$ 0.28	8.35	\$ 1,255,150
Exercisable at April 1, 2006 (unaudited)	6,207,369	\$ 0.18	6.85	\$ 974,170

Reclassifications

Certain prior year amounts have been reclassified to conform to the current year presentation. These changes had no impact on the previously reported net loss or stockholders' equity.

Recent Accounting Pronouncements

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs: An Amendment of ARB No. 43, Chapter 4 (SFAS No. 151)*. SFAS No. 151 amends the guidance in ARB No. 43, Chapter 4, Inventory Pricing, to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Among other provisions, the new rule requires that items such as idle facility expense, excessive spoilage, double freight, and re-handling costs be recognized as current period charges regardless of whether they meet the criterion of "so abnormal" as stated in ARB No. 43. Additionally, SFAS No. 151 requires that the allocation of fixed production overhead to the costs of conversion be based on the normal capacity of the production facilities. SFAS No. 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. The adoption of SFAS No. 151 did not have a material effect on Accent Optical's results of operations or financial position.

Edgar Filing: NANOMETRICS INC - Form S-4/A

In December 2004, the FASB issued SFAS No. 153, *Exchanges of Nonmonetary Assets - An Amendment of APB Opinion No. 29, Accounting for Nonmonetary Transactions (SFAS No. 153)*. SFAS No. 153 eliminates the exception from fair value measurement for nonmonetary exchanges of similar productive assets in paragraph 21(b) of APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, and replaces it with an exception for exchanges that do not have commercial substance. SFAS No. 153 specifies that a nonmonetary exchange has

F-15

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. SFAS No. 153 is effective for nonmonetary asset exchanges occurring in fiscal periods beginning after June 15, 2005. The adoption of SFAS No. 153 did not have a material effect on Accent Optical's results of operations or financial position.

In December 2004, the FASB issued SFAS No. 123(R), *Accounting for Stock-Based Compensation*. SFAS No. 123(R), which establishes standards for the accounting for transactions in which an entity exchanges its equity instruments for goods or services. This Statement focuses primarily on accounting for transactions in which an entity obtains employee services in share-based payment transactions. SFAS No. 123(R) requires that the fair value of such equity instruments be recognized as an expense in the historical financial statements as services are performed. Prior to SFAS No. 123(R), only certain pro forma disclosures of fair value were required. For nonpublic companies, the provisions of this Statement are effective as of the beginning of the first annual reporting period that begins after December 15, 2005. Accent Optical adopted SFAS No. 123(R) as of January 1, 2006.

Note 3 Compensating Balances

A maximum of \$5.0 million was available to Accent Optical under a revolving credit agreement. Under the terms of the agreement, Accent Optical is required to maintain, on deposit with Comerica Bank (Note 8), a compensating balance, the greater of \$1,000,000 or 50% of the aggregate amount of all outstanding advances plus 50% of the aggregate amount of all outstanding equipment advances, but excluding the term loan. At April 1, 2006 and December 31, 2005 and 2004, \$1,000,000 of the cash balance shown in the balance sheet was maintained as a compensating balance.

Note 4 Inventories

Inventories, net of reserves, consist of the following:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Raw materials	\$ 5,828	\$ 5,154	\$ 5,963
Work in process	3,196	2,424	3,260
Finished goods and demonstration equipment	1,937	2,176	2,782
	\$ 10,961	\$ 9,754	\$ 12,005

Note 5 Property and Equipment

Property and equipment consist of the following:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Leasehold improvements	\$ 599	\$ 596	\$ 444
Equipment	7,140	7,064	7,185

Edgar Filing: NANOMETRICS INC - Form S-4/A

	7,739	7,660	7,629
Less accumulated depreciation and amortization	(6,199)	(5,878)	(4,551)
	\$ 1,540	\$ 1,782	\$ 3,078

F-16

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Depreciation and amortization related to property and equipment was approximately \$300,269 (unaudited) and \$464,370 (unaudited) for the three months ended April 1, 2006 and April 2, 2005, respectively, and \$1.6 million, \$1.2 million and \$1.3 million for the years ended December 31, 2005, 2004, and 2003, respectively.

As of April 1, 2006 and December 31, 2005 and 2004, equipment under capital leases totaled \$328,000 with related accumulated amortization of \$328,000 (unaudited), \$328,000, \$263,000, respectively.

Note 6 Goodwill and Acquired Intangibles

As of December 31, 2005, Accent Optical, as part of its review of financial results, performed an assessment of the carrying value of Accent Optical's long-lived assets to be held and used including the acquired intangible assets other than goodwill. The assessment was performed pursuant to SFAS No. 144. Fair value was determined using the income approach. No impairment charge was required as of December 31, 2005 and 2004. During 2003, as a result of the significant negative industry and economic trends affecting both Accent Optical's current operations and expected future sales as well as the general decline of technology valuations, Accent Optical concluded that the carrying value of its acquired intangibles, primarily developed technology, was impaired and as such took an impairment charge of approximately \$156,000 to reduce the carrying value of the assets to fair value at December 31, 2003.

Acquired intangibles consist of the following:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Developed technology	\$ 13,230	\$ 13,230	\$ 13,230
Less accumulated amortization	(13,213)	(13,186)	(12,733)
Acquired intangibles, net	\$ 17	\$ 44	\$ 497

Amortization expense for amortizable intangible assets was approximately \$26,493 (unaudited) and \$156,363 (unaudited) for the three months ended April 1, 2006 and April 2, 2005, respectively, and \$453,000, \$637,000, and \$555,000 for 2005, 2004, and 2003 respectively.

Estimated amortization expense for amortizable intangible assets for the year ending December 30, 2006 is \$44,000.

Goodwill consists of the following at April 1, 2006 and December 31, 2005 and 2004:

	(in thousands)
Goodwill	\$ 3,369
Less accumulated amortization	(1,042)
Goodwill, net	\$ 2,327

There was no amortization expense for goodwill for the three months ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004 and 2003.

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****Note 7 Accrued and Other Liabilities**

Accrued and other liabilities consist of the following:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Accrued payroll and payroll related expenses	\$ 2,097	\$ 2,062	\$ 1,987
Accrued installation and warranty	1,076	1,069	1,706
Accrued interest	1,216	828	812
Accrued agent commission	235	241	343
Income taxes payable			208
Other accrued liabilities	3,350	3,369	3,203
	\$ 7,974	\$ 7,569	\$ 8,259

Accent Optical's warranty obligations are as follows:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Beginning obligation	\$ 1,069	\$ 1,706	\$ 2,172
Accruals for warranties issued during the period	475	1,973	2,399
Settlements for pre-existing warranties	(121)	(174)	128
Settlements during the period	(347)	(2,436)	(2,993)
Ending obligation	\$ 1,076	\$ 1,069	\$ 1,706

Note 8 Debt

Long-term debt consists of the following:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Term loans with Comerica Bank	\$ 1,461	\$ 1,844	\$ 3,127
Revolving debt with Comerica Bank	855	900	612
Promissory note to Nanometrics	750		
Subordinated note payable to Bio-Rad	11,772	11,772	11,772

Edgar Filing: NANOMETRICS INC - Form S-4/A

Subtotal	14,838	14,516	15,511
Less current portion	(3,066)	(2,744)	(2,071)
Long-term debt	\$ 11,772	\$ 11,772	\$ 13,440

F-18

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The noncurrent portion of long-term debt is included in the consolidated balance sheets as follows:

	April 1, 2006 (unaudited)	December 31, 2005	December 31, 2004
	(in thousands)		
Notes payable, net of current portion	\$	\$	\$ 1,668
Subordinated note payable to Bio-Rad, net of current portion	11,772	11,772	11,772
	\$ 11,772	\$ 11,772	\$ 13,440

Aggregate future principal maturities of all debt are as follows:

	April 1, 2006 (unaudited)	December 31, 2005
	(in thousands)	
2006	\$ 3,066	\$ 2,744
2007	11,772	11,772
	\$ 14,838	\$ 14,516

Loans with Comerica Bank

In December 2002 Accent Optical entered into a term loan agreement with Comerica Bank (the Agreement). Outstanding borrowings under the Agreement are secured by substantially all of the assets of Accent Optical and its subsidiaries. The Agreement contains affirmative and negative covenants (including restrictions on Accent Optical entering into certain transactions and certain financial covenants including a minimum liquidity ratio and tangible net worth). As of December 31, 2005, Accent Optical was not in compliance with certain financial covenants related to the loan and Security Agreement entered into on March 31, 2005.

On February 14, 2006, Accent Optical entered into a Forbearance Agreement and Second Amendment to the Agreement (the Revised Agreement) which provided that Comerica would not exercise any remedies available to the Bank for such defaults until the earlier of May 31, 2006 or such date in which further events of default were to occur. In addition, the Revised Agreement provided for (1) a reduction in the total amount available under the revolving line of credit to \$1,355,000; (2) Accent Optical is not required to comply with any net worth covenant; and (3) a reduction in the liquidity ratio covenant from 1.7 to 1.5. Accent Optical was in compliance with the debt covenants as of April 1, 2006.

In June 2004 Accent Optical amended the Agreement with Comerica to include a revolving line of credit and a revolving equipment advance line of credit. Accent Optical may request advances under a revolving line of credit not to exceed the lesser of (1) \$7,500,000 minus the balances on all Comerica debt under the amended agreement, or (2) the borrowing base established by the debt covenants. Under the terms of this amendment, Accent Optical may also request advances for purchases of equipment not to exceed the lesser of (1) \$7,500,000 minus the balances on all Comerica debt under the amended agreement, or (2) the borrowing base established by the debt covenants. As of April 1, 2006 and December 31, 2005, the amount available under the revolving line of credit was limited to approximately \$590,000 (unaudited) and \$785,000, respectively, based upon U.S. eligible accounts receivable and amounts previously borrowed.

In October 2004, Accent Optical amended the Agreement with Comerica to convert the balance under the revolving equipment advance line of credit to a term loan. Under this amendment, approximately \$838,000 was

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

converted to term debt as of April 1, 2006 and December 31, 2005. The loan bears interest at the lower of (1) Comerica Bank's prime rate or LIBOR plus reserve percentage (reserve percentage of 2.75% at December 31, 2005) or (2) Comerica Bank's prime rate. The first equipment term loan is payable over 36 months, beginning December 1, 2004. The second equipment term loan is payable over 36 months, beginning July 1, 2005. The equipment term loans may be prepaid in whole or in part without any penalty or premium. The outstanding balance of equipment term loans at April 1, 2006 and December 31, 2005 was \$524,437 (unaudited) and \$594,309, respectively.

As of April 1, 2006 and December 31, 2005 and 2004, the balance of the Comerica Bank term loan was \$937,500 (unaudited), \$1,250,000 and \$2,500,000, respectively. The loan bears interest at the lower of either Comerica Bank's prime rate or LIBOR rate plus reserve percentage (reserve percentage of 2.75% at December 31, 2005.) The interest rate on the Comerica Bank term loan was 7.03% (unaudited) at April 1, 2006. The term loan is payable in 48 equal monthly installments of principal, plus all accrued interest, beginning January 1, 2003. The term loan may be prepaid in whole or in part without any penalty or premium.

As of April 1, 2006 and December 31, 2005 and 2004, the balance of the Comerica Bank revolving line of credit was \$855,313 (unaudited), \$900,000 and \$400,000, respectively. The loan bears interest at the lower of (1) Comerica Bank's prime rate or LIBOR plus reserve percentage (reserve percentage of 2.50% at December 31, 2005) or (2) Comerica Bank's prime rate. The interest rate on the Comerica Bank revolving line of credit at April 1, 2006 and December 31, 2005 was 7.75% (unaudited) and 7.25%, respectively. The maturity date on the revolving line of credit is May 31, 2006 under the Revised Agreement.

Subordinated Note Payable to Bio-Rad

In connection with the SMD Acquisition, Accent Optical issued an \$8 million subordinated note payable to Bio-Rad (the Bio-Rad Note), which had an original due date of July 31, 2005 and accrues interest at 13.5 percent per annum on the principal. Under a penalty clause in the Bio-Rad Note, any principal, interest, premium or other amount due under the Bio-Rad Note that is not paid when due will accrue interest payable on demand at 17.5 percent per annum. Accent Optical shall have the right at any time to prepay the principal of the note without penalty. However, Accent Optical must repay the Bio-Rad Note in full within two business days of a change in control or the completion of an initial public offering resulting in gross proceeds of at least \$35.0 million. For the three-month periods ended April 1, 2006 and April 2, 2005, Accent Optical recorded interest expense of \$397,292 (unaudited) on this note. For the years ended December 31, 2005, 2004 and 2003, Accent Optical recorded interest expense of approximately \$1,611,000, \$1,671,000 and \$1,560,000, respectively on this note.

In November 2003, Accent Optical amended the Bio-Rad Note to extend the principal due date to July 31, 2007. Accent Optical also agreed that interest payments would be paid each June 30 and December 31. In January 2006, BioRad agreed to defer the interest payment of \$812,000 which was due on December 31, 2005, to the earlier of June 30, 2006 or the closing of the merger (Note 15).

Nanometrics Promissory Note

To facilitate Accent Optical's working capital needs, as part of the definitive merger agreement Nanometrics agreed to provide up to \$2.5 million under promissory notes. The terms of the promissory notes make the entire \$2.5 million available to Accent Optical at any time prior to closing. In the event that the merger is terminated, Nanometrics will have no further obligations under the promissory notes. Any amounts outstanding will convert into shares of Accent Optical Common Stock on the one year anniversary of the termination of the agreement. The number of shares will be determined by the lesser of (i) the fair market value of Accent Optical Common Stock at the time of such conversion as determined in good faith by the Board of

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Directors of Accent Optical or (ii) \$0.40 per share. The notes accrue interest at a rate of 6.5% per annum. As of April 1, 2006, \$750,000 (unaudited) had been drawn on this note, and \$2,708 (unaudited) of interest had been accrued. Subsequent to April 1, 2006, Nanometrics advanced an additional \$1,750,000 (unaudited) to Accent Optical.

Note 9 Commitments and Contingencies*Commitments*

Prior to the SMD Acquisition, all facilities were either owned by Bio-Rad or leased by Bio-Rad from third parties under non-cancelable operating leases. As part of the SMD Acquisition, Accent Optical entered into agreements with Bio-Rad to lease, sublease or assume leases for certain facilities at fair market value (Note 12). Lease expense under all operating leases was approximately \$205,687 (unaudited) and \$337,657 (unaudited) for the three months ended April 1, 2006 and April 2 2005, respectively, and \$1,059,000, \$1,348,000 and \$1,693,000 for the years ended December 31, 2005, 2004, and 2003, respectively.

Future minimum lease payments under all non-cancelable operating lease agreements are as follows:

	April 1, 2006 (unaudited)	December 31, 2005
	(in thousands)	
2006	\$ 711	\$ 957
2007	447	447
2008	375	375
2009	354	354
2010	327	327
Beyond	600	600
	\$ 2,814	\$ 3,060

At April 1, 2006 and December 31, 2005 and 2004, Accent Optical had outstanding \$4.9 million (unaudited), \$2.1 million and \$3.5 million of purchase commitments for inventory and supplies, respectively.

Contingencies

Accent Optical is involved in lawsuits, claims, investigations and other proceedings that arise in the ordinary course of business. There are no matters pending that Accent Optical expects to be material in relation to its financial position or results of operations and cash flows.

Note 10 Stockholders Equity

On July 26, 2000, Accent Optical's Board of Directors approved, and on July 27, 2000 certain stockholders signed a Subscription and Recapitalization Agreement, pursuant to which all of the issued and outstanding shares of Accent Optical Common Stock, originally issued at \$7,000 per share, were converted into 2,729 shares of Accent Optical Series A Preferred Stock at \$1,000 per share and 88,152,000 shares of new Accent Optical Common Stock at \$0.01 per share.

On July 31, 2000, in connection with the SMD Acquisition, Accent Optical issued 21,951,000 shares of its Common Stock to Bio-Rad.

Edgar Filing: NANOMETRICS INC - Form S-4/A

In September 2000, Accent Optical completed a private placement of 11,848,000 shares of its Common Stock at \$0.01 per share and 1,132 shares of Series A Preferred Stock at \$1,000 per share, generating gross

F-21

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

proceeds to Accent Optical of approximately \$1.3 million. The proceeds from the private placement were used to repay the principal amounts of the loans of \$1.3 million provided to Accent Optical by certain stockholders of Accent Optical.

In November 2000, Accent Optical completed a private placement of 7,787,804 shares of its Convertible Preferred Stock at \$2.05 per share, generating net proceeds to Accent Optical of approximately \$14.5 million.

In November 2004, Accent Optical completed a private placement of 10,000,000 shares of its Common Stock at \$0.40 per share generating gross proceeds to Accent Optical of \$4,000,000. The proceeds were used for working capital, capital expenditures, payment of debt and general corporate purposes.

Accent Optical has a security holder's agreement that restricts its stockholders' ability to transfer their shares of Accent Optical Common Stock and Series A Preferred Stock without Accent Optical's approval. The security holder's agreement contains tag-along rights, drag-along rights, and a right of first refusal for Accent Optical's founders and Accent Optical on certain permitted sales of stock by a stockholder. In addition, it also contains anti-dilution protection for Bio-Rad and gives Bio-Rad the right to consent to certain issuances of shares of Accent Optical Preferred Stock.

Preferred Stock

As of April 1, 2006 and December 31, 2005 and 2004, Accent Optical has authorized the issuance of 9,765,648 shares of preferred stock (Preferred Stock), par value \$0.01 per share, 9,550 shares of which are designated Series A preferred stock (Series A Preferred Stock) and 9,756,098 shares of which are designated convertible preferred stock (Convertible Preferred Stock).

The rights and preferences of the Series A Preferred Stock are indicated below.

Dividends Series A Preferred Stock

The holders of shares of Series A Preferred Stock shall be entitled to receive semi-annual dividends, payable on June 30 and December 31 of each year (the Dividend Date), when and as declared by the Board of Directors, in an amount per share equal to 13.5% per annum of the liquidation preference per share. Each semi-annual dividend shall be fully cumulative, shall accrue, whether or not declared, on a daily basis from the last Dividend Date, and shall be added to the liquidation preference. Dividends on the Series A Preferred Stock shall be paid prior to the payment of any dividend on the Convertible Preferred Stock and the Common Stock. If the declaration or payment of any dividend would cause Accent Optical or its subsidiaries to be in default under any credit agreement, the amount of such dividend shall instead be added to the liquidation preference. No dividends were declared for the three-month periods ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004, and 2003. For the three-month periods ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004 and 2003, dividends in arrears on Series A Preferred Stock were \$578,890 (unaudited), \$559,948 (unaudited), \$2.3 million, \$2.1 million and \$1.7 million, respectively. At April 1, 2006 and December 31, 2005 and 2004, the cumulative dividends in arrears were \$10.2 million (unaudited), \$9.7 million and \$7.4 million, respectively.

Liquidation Preference Series A Preferred Stock

In the event of any voluntary or involuntary liquidation, dissolution or winding up of Accent Optical, each holder of shares of Series A Preferred Stock then outstanding shall be entitled to be paid out of assets of Accent Optical available for distribution to its stockholders an amount in cash per share equal to (1) \$1,000 per share, plus (2) the amount of all dividends that have been added to the liquidation preference plus an amount in cash

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

equal to all accrued but unpaid dividends not yet added to the liquidation preference through the date fixed for liquidation, dissolution or winding up. This liquidation preference is to be paid to holders of the Series A Preferred Stock before any payment is made of any assets distributed to the holders of Common Stock. See Note 15 Subsequent Event.

Optional Conversion Series A Preferred Stock

At the holder's option, the Series A Preferred Stock will convert into shares of Common Stock only (in an amount equal to the sum of \$1,000 plus the amount of all dividends that have been added to the liquidation preference plus an amount equal to all accrued but unpaid dividends not yet added to the liquidation preference through the date fixed for conversion) (1) upon an initial public offering resulting in gross proceeds of at least \$35 million at a price per share of Common Stock equal to the initial offering price of the Common Stock; (2) upon a change of control at a price per share of Common Stock equal to the price per share of Common Stock (determined after giving effect to the conversion of the Series A Preferred Stock to be converted as a result of such change of control) paid in the transaction resulting in the change of control; or (3) at any time on or after July 28, 2005 at a price per share of Common Stock equal to the fair market value of the Common Stock on the date selected by the holder for conversion. The fair market value shall mean the current market value of such Common Stock or if the current market value cannot be determined because the Common Stock is not quoted or listed, the fair market value shall be determined by an investment bank of national reputation determined by Accent Optical. Accent Optical, in its sole discretion, can subject the conversion of the Series A Preferred Stock to the condition that all holders of Series A Preferred Stock exercise their conversion rights, in which case the vote of a majority of the holders of Series A Preferred Stock will bind all holders of Series A Preferred Stock. As of December 31, 2005 and April 1, 2006, no shares of Series A Preferred Stock have been converted.

Voting Rights Series A Preferred Stock

The holders of record of the shares of Series A Preferred Stock are not entitled to any voting rights except as provided by the General Corporation Law of the State of Delaware and by Accent Optical's Amended and Restated Certificate of Incorporation, which provides, among other things, that a class vote of the majority of the outstanding shares of Series A Preferred Stock is required to amend the Certificate of Incorporation so as to adversely affect the rights of the Series A Preferred Stock.

The rights and preferences of the Convertible Preferred Stock are indicated below.

Dividends Convertible Preferred Stock

The holders of Convertible Preferred Stock shall be entitled to receive dividends, when and as declared by the Board of Directors, at a rate of 8 percent per annum of the original purchase price per share of \$2.05. Such dividends are fully cumulative, shall accrue if not paid, whether or not declared, and shall be payable at the option of Accent Optical (1) in shares of Common Stock upon the closing of an initial public offering, or (2) in cash prior to an initial public offering as determined by Accent Optical. Dividends on the Convertible Preferred Stock will be paid prior to the payment of any dividend on the Common Stock. If the declaration or payment of any dividend would cause Accent Optical or its subsidiaries to be in default under any credit agreement, the amount of such dividend shall instead be added to the liquidation preference. No accrued but unpaid dividends on the Series A Preferred Stock shall be paid in cash unless a proportionate amount of the accrued but unpaid dividend on the Convertible Preferred Stock is also paid. No dividends were declared for the three-month periods ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004 and 2003. For the three month periods ended April 1, 2006 and April 2, 2005, dividends in arrears on Convertible Preferred Stock were \$314,926 (unaudited) and \$325,424 (unaudited), respectively. For the years ended December 31, 2005, 2004 and

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

2003, dividends in arrears on Convertible Preferred Stock were \$1.3 million. At April 1, 2006 and December 31, 2005 and 2004, the cumulative dividends in arrears were \$6.9 million (unaudited), \$6.6 million and \$5.3 million respectively.

Liquidation Preference Convertible Preferred Stock

In the event of any liquidation, dissolution or winding up of the corporation, whether voluntary or involuntary, the holders of Convertible Preferred Stock shall be entitled to receive prior and in preference to any distribution of any assets of Accent Optical to the holders of Common Stock, an amount equal to the original purchase price for each share of Convertible Preferred Stock, plus (1) the amount of all dividends that have been added to the liquidation preference, and (2) an amount in cash equal to all accrued but unpaid dividends. If the assets of Accent Optical are not sufficient to pay in full the liquidation payments to holders of the outstanding shares of Preferred Stock, the assets shall be distributed among the holders of Preferred Stock ratably and in proportion to the amount of liquidation preference each such holder is entitled to receive if the amounts to which holders of the outstanding shares of Preferred Stock are entitled were paid in full.

Optional Conversion Convertible Preferred Stock

Each share of Convertible Preferred Stock is convertible, at the option of the holder, at any time after the issuance of such share, into such number of fully paid and nonassessable shares of Common Stock only as is determined by dividing the original purchase price by the conversion price applicable to such share. The initial conversion price per share was equal to the original purchase price. With the issuance of shares pursuant to the November 2004 offering, the conversion price was adjusted to reflect the anti-dilution provisions of the Convertible Preferred Stock. The current conversion price is \$1.95 per share.

Automatic Conversion Convertible Preferred Stock

Each share of Convertible Preferred Stock is automatically converted into shares of Common Stock upon the earlier of (1) the election of the holders of a majority of the then outstanding Convertible Preferred Stock voting as a single class; (2) immediately prior to the closing of an initial public offering of the Common Stock, which results in gross proceeds to Accent Optical of at least \$35.0 million; or (3) the election of the Board of Directors upon the consolidation, merger or sale of Accent Optical or other transaction in which control of Accent Optical is transferred.

Voting Rights Convertible Preferred Stock

Each holder of Convertible Preferred Stock is entitled to the number of votes equal to the number of shares of Common Stock into which such Convertible Preferred Stock could be converted.

Anti-Dilution Protection Convertible Preferred Stock

The holders of the Convertible Preferred Stock are protected from dilution. The conversion price of the Convertible Preferred Stock shall be adjusted using the formula designated in the Amended and Restated Certificate of Incorporation. With the issuance of shares pursuant to the November 2004 sale of Common Stock, Accent Optical recorded \$863,600 as an adjustment to Convertible Preferred Stock and additional paid-in capital for the value of this beneficial conversion feature. Since the Convertible Preferred Stock is convertible at the option of the holder at any time, the beneficial conversion feature was immediately amortized.

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

Common Stock

As April 1, 2006 and December 31, 2005, Accent Optical was authorized to issue 300,000,000 shares of \$0.00001 par value Common Stock. The holders of Common Stock are entitled to one vote per share on all matters to be voted on by Accent Optical.

Acquisition of the Semiconductor Measurements Division of Bio-Rad

Accent Optical financed the SMD Acquisition with bank debt, loans from stockholders, a subordinated note issued to Bio-Rad and proceeds from the issuance of Common and Preferred Stock. The purchase price of SMD was approximately \$36.4 million, which consisted of \$27.2 million in cash, the issuance by Accent Optical of a subordinated note payable to Bio-Rad in the principal amount of \$8.0 million (Note 8), and the issuance by Accent Optical to Bio-Rad of 21,951,000 shares of Accent Optical's Common Stock valued at \$220,000 (based on the most recent issuance of Common Stock at the time of the SMD Acquisition), which represented approximately 20% of the issued and outstanding Common Stock of Accent Optical immediately after the SMD Acquisition. Accent Optical incurred transaction costs of approximately \$1.0 million in connection with the SMD Acquisition.

Pursuant to the Transaction Agreement, Accent Optical must pay additional purchase price consideration to Bio-Rad if any of Accent Optical's stockholders, Accent Optical or its subsidiaries or affiliates receive, or are entitled to receive at a later date or dates, gross consideration in connection with a change of control which has a fair value of not less than \$50.0 million as of the date of such change of control. Subject to limitations contained in the Transaction Agreement, the amount of such additional purchase price consideration may range from \$3.0 million to \$13.0 million depending on the consideration received by Accent Optical upon such change of control. See Note 15. No additional purchase price consideration is payable as a result of or after an initial public offering resulting in gross proceeds of at least \$35.0 million. As of April 1, 2006 and December 31, 2005, such additional amounts have not been accrued.

Stock Incentive Plan

In October 2000, Accent Optical's Board of Directors and stockholders approved the Accent Optical Technologies, Inc. Stock Incentive Plan (the Plan), which authorizes the issuance of up to 17,500,000 shares of Common Stock as either incentive stock options, nonqualified stock options or restricted stock awards to eligible employees, directors and consultants. In January 2004, the Board of Directors and stockholders approved an increase to the Plan to allow for the issuance of options to purchase up to 27,500,000 shares of Common Stock. The exercise price for incentive stock options may not be less than 100% of the fair market value of the Common Stock at the date of grant. The exercise price for nonqualified stock options may not be less than 85% of the fair market value of the Common Stock at the date of grant. Prior to the adoption of SFAS No. 123(R), if a grant was priced at a level below the then current market value for accounting purposes on the date of grant, Accent Optical recorded the corresponding deferred compensation.

Unless otherwise determined by the Board of Directors or a committee thereof, options generally vest over 48 months and expire 10 years after the date of grant. The Plan provides, among other things, that in the event of a merger or other change in control, all options and other awards outstanding under the Plan shall become fully vested unless the Board of Directors determines prior to the event, that vesting will not accelerate. If an option holder's employment by or service to Accent Optical is terminated by Accent Optical for cause, his or her option terminates, whether or not vested. If an option holder's employment by or service to Accent Optical is terminated other than for cause, he or she has a period of time, ranging from 30 days to 12 months depending on the type of termination, in which to exercise the portion of his or her option that has vested prior to such termination. If the

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

employment or service of a restricted stock award recipient is terminated for any reason, the unvested shares subject to the award may be repurchased by Accent Optical at the lesser of the fair market value or the original purchase price of such shares. In August 2002, the Plan was amended to permit early exercise of stock options prior to vesting subject to repurchase by Accent Optical of unvested shares should the employee terminate employment.

The following is a summary of stock option activity for the three months ended April 1, 2006 and the years ended December 31, 2005, 2004 and 2003:

	Options Outstanding		Weighted-Average Exercise Price
	Options Available	Options Outstanding	
Balances at December 31, 2002	2,749,731	9,230,418	\$ 0.07
Granted	(2,794,500)	2,794,500	0.15
Cancelled	1,936,500	(1,936,500)	0.11
Exercised		(2,571,884)	0.03
Balances at December 31, 2003	1,891,731	7,516,534	\$ 0.11
Authorized addition to plan	10,000,000		
Granted	(3,260,500)	3,260,500	0.21
Cancelled	758,565	(758,565)	0.14
Exercised		(2,199,273)	0.07
Balances at December 31, 2005	9,389,796	7,819,196	\$ 0.16
Granted	(3,281,000)	3,281,000	0.40
Cancelled	459,174	(459,174)	0.17
Exercised		(93,449)	0.07
Balances at December 31, 2005	6,567,970	10,547,573	\$ 0.23
Granted (unaudited)	(6,387,000)	6,387,000	0.33
Cancelled (unaudited)	75,687	(75,687)	0.24
Exercised (unaudited)		(140,089)	0.13
Balances at April 1, 2006 (unaudited)	256,657	16,718,797	\$ 0.28

The status of stock options outstanding as of April 1, 2006 (unaudited) is as follows:

Range of Exercise Prices	Number of Options	Options Outstanding		Options Vested and Exercisable	
		Weighted-Average Remaining Life	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
\$ 0.01	1,207,599	4.64	\$ 0.01	1,207,599	\$ 0.01

Edgar Filing: NANOMETRICS INC - Form S-4/A

0.15	2,412,341	7.18	0.15	1,726,079	0.15
0.20	2,496,333	7.84	0.20	1,331,752	0.20
0.21	915,899	5.62	0.21	913,284	0.21
0.25	90,000	7.96	0.25	45,885	0.25
0.33	6,387,000	9.82	0.33		0.33
0.35	118,000	8.28	0.35	51,063	0.35
0.40	3,091,625	8.92	0.40	931,707	0.40
\$ 0.01-0.40	16,718,797	8.35	\$ 0.28	6,207,369	\$ 0.18

F-26

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The status of stock options outstanding as of December 31, 2005 is as follows:

Range of Exercise Prices	Number of Options	Options Outstanding		Options Vested and Exercisable	
		Weighted-Average Remaining Life	Weighted-Average Exercise Price	Number of Options	Weighted-Average Exercise Price
\$ 0.01	1,258,001	4.89	\$ 0.01	1,258,001	\$ 0.01
0.15	2,436,090	7.43	0.15	1,578,774	0.15
0.20	2,572,333	8.09	0.20	1,209,902	0.20
0.21	967,899	5.86	0.21	956,910	0.21
0.25	90,000	8.21	0.25	39,479	0.25
0.35	118,000	8.53	0.35	43,625	0.35
0.40	3,105,250	9.17	0.40	692,713	0.40
\$0.01-0.40	10,547,573	7.67	\$ 0.23	5,779,404	\$ 0.17

Shares of Common Stock Reserved for Future Issuance

As of April 1, 2006 and December 31, 2005, Accent Optical had shares of Common Stock reserved for future issuance, respectively, as follows:

	April 1, 2006 (unaudited)	December 31, 2005
Stock incentive plan	16,975,454	17,115,543
Conversion of Series A Preferred Stock	59,637,637	47,753,825
Conversion of Convertible Preferred Stock	28,939,085	24,496,145
	105,552,176	89,365,513

Shares of Common Stock Subject to Repurchase under Stock Incentive Plan

At April 1, 2006 and December 31, 2005, 2004 and 2003, 222,084 (unaudited) 262,501, 731,459 and 1,045,045 shares, respectively, of Common Stock issued in connection with the early exercise of the options are subject to repurchase by Accent Optical under the Plan. Included in accrued liabilities and other long term liabilities is \$31,213 (unaudited), \$51,904 and \$147,129, related to the shares of unvested Common Stock subject to repurchase at April 1, 2006 and December 31, 2005 and 2004, respectively.

Deferred Stock Compensation

In connection with the grant of stock options to employees under the Plan for the three month periods ended April 1, 2006 and April 2 2005, Accent Optical recorded no deferred stock compensation. In connection with the grant of stock options to employees under the Plan for the years ended December 31, 2005, 2004 and 2003, Accent Optical recorded deferred stock compensation of approximately \$0, \$1,762,000 and \$464,000, respectively. This represents the difference between the estimated fair value of the Common Stock and the aggregate exercise price of such options at the date of grant. This amount of deferred compensation was presented as a reduction of stockholders' equity and was being amortized over the shorter of the period in which the employee or director provides services or the applicable vesting period, which is typically

Edgar Filing: NANOMETRICS INC - Form S-4/A

48 months subject to certain exceptions. Amortization expense related to deferred stock compensation was approximately \$553,000, \$768,000, \$368,000 and \$138,000 (unaudited) for the years ended December 31, 2005, 2004 and 2003, and the three month period ended April 2, 2005, respectively. With the adoption of SFAS No. 123 (R), effective

F-27

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

January 1, 2006 Accent Optical no longer amortized deferred stock compensation but instead records the expense calculated under SFAS No. 123 reduced by estimated prevesting forfeitures.

Note 11 Geographic Information

Revenues to the two largest customers accounted for approximately 10.4% (unaudited) and 10.3% (unaudited) for the three-month period ended April 1, 2006. Revenues to the two largest customers accounted for approximately 22.9% (unaudited) and 12.4% (unaudited) for the three months ended April 2, 2005. Revenues to the largest customer accounted for approximately 12.7% and 10.4% of total revenue for the years ended December 31, 2005 and 2004, respectively. Revenues to the two largest customers accounted for approximately 14.9% and 10.3%, respectively, of total revenue for the year ended December 31, 2003. No other customer represented more than 10 percent of total revenue for the three-month periods ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004 and 2003.

Revenues from third parties by geographical location are as follows:

	For the Three Month Periods Ended		For the Years Ended December 31,		
	April 1, 2006 (unaudited)	April 2, 2005	2005	2004	2003
	(in thousands)				
United States	\$ 2,085	\$ 2,163	\$ 11,807	\$ 8,826	\$ 13,861
Japan	3,936	3,294	11,587	10,725	9,848
Asia (excluding Japan)	1,440	4,728	11,724	15,834	9,215
Europe	2,604	2,381	6,756	6,656	4,631
Total	\$ 10,065	\$ 12,566	\$ 41,874	\$ 42,041	\$ 37,555

Net property and equipment by geographical location consisted of the following:

	April 1, 2006 (unaudited)	December 31,	
		2005	2004
	(in thousands)		
United States	\$ 928	\$ 1,073	\$ 1,746
United Kingdom	598	695	1,302
Europe (excluding United Kingdom)	2	1	4
Asia	12	13	26
Total	\$ 1,540	\$ 1,782	\$ 3,078

Note 12 Related-Party Transactions

In 2000, Accent Optical entered into agreements with Bio-Rad to lease certain facilities in the United Kingdom. For the three-month periods ended April 1, 2006 and April 2, 2005, Accent Optical recorded expense of approximately \$33,000 (unaudited) and \$105,750 (unaudited) related to the Bio-Rad facility leases, respectively. For the years ended December 31, 2005, 2004, and 2003, Accent Optical recorded expense of approximately \$132,000, \$384,000, and \$423,000 related to the Bio-Rad facility leases, respectively. The lease for the one remaining facility

Edgar Filing: NANOMETRICS INC - Form S-4/A

expires in February 2007. The lease commitment related to this lease was approximately \$235,000 (unaudited) and \$268,000 as of April 1, 2006 and December 31, 2005, respectively, which is included in total operating lease commitments (Note 9).

F-28

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

In 2000, Accent Optical entered into an agreement with an officer of Accent Optical to lease office space in Oregon on an annual lease, currently through September 2006, at a monthly rate of approximately \$1,504 per month (\$2,752 and \$3,750 per month in 2004 and 2003, respectively). Rental expense paid in relation to this agreement for the three-month periods ended April 1, 2006 and April 2, 2005 and the years ended December 31, 2005, 2004, and 2003 was approximately \$7,000 (unaudited), \$8,000 (unaudited), \$32,000, \$45,000 and \$45,000, respectively.

Note 13 Retirement Plans

In connection with the SMD Acquisition, certain employees of Accent Optical located in the United Kingdom (UK) continued to participate in the existing Bio-Rad sponsored UK Pension Plan, through January 31, 2001. In December 2000, Accent Optical formed its own sponsored retirement plans, which call for discretionary contributions by Accent Optical that are subject to established limits and vesting schedules. Contributions to the UK defined contribution plan amounted to \$221,000, \$229,000, and \$218,000 for the years ended December 31, 2005, 2004 and 2003, respectively.

Accent Optical's Profit Sharing 401(k) Plan was adopted in December 2000 and allows eligible participants to contribute a portion of their compensation to the Plan. Accent Optical may choose to make a discretionary matching employer contribution. During 2005, Accent Optical made discretionary matching contributions for employees participating in the plan. Accent Optical contributed 50% of each participating employee's deferral up to \$1,000 per year. Matching contributions for the year ended December 31, 2005 amounted to approximately \$45,000. There was no matching contribution for the years ended December 31, 2004 and 2003.

Note 14 Income Taxes

Loss before provision (benefit) for income taxes for the year ended December 31 is based on the following components:

	2005	2004	2003
	(in thousands)		
United States loss	\$ (5,849)	\$ (6,569)	\$ (4,771)
Foreign income	724	1,874	(2,427)
	\$ (5,125)	\$ (4,695)	\$ (7,198)

United States income taxes have not been provided on undistributed earnings of foreign operations, which are considered to be permanently invested. The provision (benefit) for income taxes for the years ended December 31, 2005, 2004, and 2003 consists of the following:

	2005	2004	2003
	(in thousands)		
Current provision (benefit)			
Federal	\$ (15)	\$ (65)	\$ 156
State	(2)	2	(21)
Foreign	141	156	(301)
	124	93	(166)

Deferred provision (benefit)
Federal and state
Foreign

Total provision (benefit) for income taxes	\$ 124	\$ 93	\$ (166)
--	--------	-------	----------

F-29

Table of Contents**ACCENT OPTICAL TECHNOLOGIES, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Accent Optical's provision (benefit) for income taxes differs from the amount computed by applying the US federal statutory rate to loss before provision for income taxes for the years ended December 31 as follows:

	2005	2004	2003
	(in thousands)		
Tax at federal statutory rate	\$ (1,743)	\$ (1,596)	\$ (2,310)
State tax net of federal benefit	(158)	(228)	(135)
Net effect of foreign taxes	119	(314)	(458)
Section 956 income		48	
Research and development credits	(319)	(99)	(170)
Change in valuation allowance	1,078	2,460	3,064
Non-deductible stock compensation	188	170	68
Foreign net operating loss adjustment	897		
Other less than 5%	62	(348)	(225)
Provision (benefit) for income taxes	\$ 124	\$ 93	\$ (166)

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the deferred tax asset as of December 31 are as follows:

	2005	2004
	(in thousands)	
Current deferred tax assets		
Inventory reserve and related items	\$ 218	\$ 322
Warranty reserve	62	78
Accrued vacation	189	161
Other	95	143
Fixed assets	279	56
Accounts receivable	21	36
	864	796
Long-term deferred tax assets (liabilities)		
Intangible assets	3,354	3,650
Fixed assets	30	(88)
Net operating loss carryforward	5,723	4,711
Other	147	(29)
	9,254	8,244
Gross deferred tax asset	10,118	9,040
Less valuation allowance	(10,118)	(9,040)
Net deferred tax assets	\$	\$

Edgar Filing: NANOMETRICS INC - Form S-4/A

Realization of the deferred tax asset is dependent on generating sufficient future taxable income. Management believes that it is more likely than not that the net deferred tax asset will not be realized.

Accent Optical has recorded a valuation allowance at December 31, 2005 and 2004, primarily for deferred tax assets related to IPR&D, intangible assets and net operating loss carry-forwards. As of December 31, 2005, Accent Optical had federal, state and foreign net operating loss carry-forwards before valuation allowance of

F-30

Table of Contents

ACCENT OPTICAL TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

\$12.2 million, \$20.4 million, and \$3.5 million, respectively, which expire between 2007 and 2013. Utilization of these net operating loss carry-forwards may be limited due to future ownership changes of Accent Optical.

Note 15 Subsequent Events

Merger Agreement

On January 25, 2006, Accent Optical entered into a definitive agreement to be acquired by Nanometrics, Inc. The transaction is expected to close in the second quarter of 2006, subject to stockholder approval, customary closing conditions and regulatory approvals. Under the terms of the merger agreement Nanometrics will issue approximately 5.0 million shares of their common stock in exchange for all of the capital stock of Accent Optical. In addition, Nanometrics will assume all of the net debt of Accent Optical. At the time of the agreement the transaction was valued at approximately \$80.9 million.

Series A Preferred Stock

As more fully described in Note 10, the holders of Series A Preferred Stock are entitled to a liquidation preference of (1) \$1,000 per share, plus (2) the amount of all dividends that have been added to the liquidation preference plus an amount in cash equal to all accrued but unpaid dividends not yet added to the liquidation preference through the date fixed for liquidation. To facilitate the merger, a majority of the holders of Series A Preferred Stock signed a voting agreement which, among other things, provided for a liquidation preference of \$1,000 of Nanometrics common stock for each share of Series A Preferred Stock. The value of the shares will be determined by the average closing price of Nanometrics stock for the 10 trading days 2 days prior to the closing date. In the event that the proceeds are not sufficient to pay the revised liquidation preference, the amount will be reduced pro rata with the amount payable to the holders of Convertible Preferred Stock.

Convertible Preferred Stock

As more fully described in Note 10, the holders of Convertible Preferred Stock are entitled to a liquidation preference of the original purchase price for each share of Convertible Preferred Stock, plus (1) the amount of all dividends that have been added to the liquidation preference, and (2) an amount in cash equal to all accrued but unpaid dividends. To facilitate the merger, stockholders representing a majority of the Convertible Preferred Stock outstanding signed a voting agreement which, among other things, provided for a liquidation preference of \$1.13 per share. The value of the shares will be determined by the average closing price of Nanometrics stock for the 10 trading days 2 days prior to the closing date. In the event that the proceeds are not sufficient to pay the revised liquidation preference, the amount will be reduced pro rata with the amount payable to the holders of Series A Preferred Stock.

BioRad Additional Consideration

As more fully described in Note 10, BioRad is entitled to receive additional consideration of \$13 million in connection with a change of control with a value in excess of \$65 million. To facilitate the merger, BioRad agreed to accept a payment upon closing equal to \$2.5 million and to waive any other rights to additional consideration.

Table of Contents

Annex A

The attached copy of the merger agreement has been included to provide the reader with information regarding its terms. It is not intended to provide any other factual information about Nanometrics or Accent Optical. Such information can be found elsewhere in this joint proxy statement/prospectus and in other public filings that Nanometrics makes with the Securities and Exchange Commission, which are available without charge at www.sec.gov.

The merger agreement contains representations and warranties that Nanometrics and Accent Optical made to one and other in the context and at the time of the merger. The assertions embodied in those representations and warranties are qualified by information in confidential disclosure schedules that Nanometrics and Accent Optical have exchanged in connection with signing the merger agreement. The disclosure schedules do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached merger agreement. Accordingly, you should not rely on the representations and warranties as characterizations of the actual state of facts, since they are modified by the underlying disclosure schedules and were made as of the time of the merger. These disclosure schedules contain information that has been included in Nanometrics' prior public disclosures, as well as potential additional non-public information. Neither Nanometrics nor Accent Optical believe that the disclosure schedules contain information that the securities laws require either or both of them to publicly disclose. Moreover, information concerning the subject matter of the representations and warranties may have changed since the date of the agreement, which subsequent information may or may not be fully reflected in Nanometrics' public disclosures.

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

by and among

NANOMETRICS INCORPORATED,

ALLOY MERGER CORPORATION,

ACCENT OPTICAL TECHNOLOGIES, INC.

and

SANFORD S. WADLER,

as STOCKHOLDER AGENT

Dated as of January 25, 2006

Table of Contents**TABLE OF CONTENTS**

	Page
<u>ARTICLE I THE MERGER</u>	2
Section 1.1 <u>The Merger</u>	2
Section 1.2 <u>Effective Time of Merger</u>	2
Section 1.3 <u>Effects of Merger</u>	2
Section 1.4 <u>Certificate of Incorporation & Bylaws of Surviving Corporation</u>	2
Section 1.5 <u>Board of Directors & Officers of the Surviving Corporation</u>	2
Section 1.6 <u>Effects of Merger on Capital Stock</u>	2
<u>ARTICLE II THE CLOSING</u>	7
Section 2.1 <u>Closing</u>	7
Section 2.2 <u>Exchange of Certificates</u>	7
<u>ARTICLE III REPRESENTATIONS AND WARRANTIES OF THE COMPANY</u>	9
Section 3.1 <u>Organization and Qualification; Subsidiaries</u>	9
Section 3.2 <u>Certificate of Incorporation and Bylaws</u>	9
Section 3.3 <u>Capitalization</u>	9
Section 3.4 <u>Authority Relative to this Agreement; Shareholder Approval</u>	11
Section 3.5 <u>No Conflict; Required Filings and Consents</u>	11
Section 3.6 <u>Compliance; Permits</u>	12
Section 3.7 <u>Financial Statements</u>	12
Section 3.8 <u>Internal Controls and Procedures</u>	13
Section 3.9 <u>Absence of Certain Changes or Events</u>	13
Section 3.10 <u>No Undisclosed Liabilities</u>	13
Section 3.11 <u>Absence of Litigation; Investigations</u>	14
Section 3.12 <u>Agreements, Contracts and Commitments</u>	14
Section 3.13 <u>Employee Benefit Plans, Options and Employment Agreements</u>	15
Section 3.14 <u>Labor Matters</u>	18
Section 3.15 <u>Properties and Assets</u>	19
Section 3.16 <u>Taxes</u>	20
Section 3.17 <u>Environmental Matters</u>	21
Section 3.18 <u>Intellectual Property</u>	22
Section 3.19 <u>Insurance</u>	25
Section 3.20 <u>Interested Party Transactions</u>	25
Section 3.21 <u>Brokers</u>	25
Section 3.22 <u>Opinion of Financial Advisor of the Company</u>	25
Section 3.23 <u>Anti-Takeover Statute Not Applicable</u>	25
Section 3.24 <u>Disclosure</u>	25
<u>ARTICLE IV REPRESENTATIONS AND WARRANTIES OF PARENT</u>	26
Section 4.1 <u>Organization and Qualification; Merger Sub</u>	26
Section 4.2 <u>Certificate of Incorporation and Bylaws</u>	26
Section 4.3 <u>Capitalization</u>	26
Section 4.4 <u>Authority Relative to this Agreement; Shareholder Approval</u>	28
Section 4.5 <u>No Conflict, Required Filings and Consents</u>	29
Section 4.6 <u>Compliance; Permits</u>	29
Section 4.7 <u>SEC Filings; Financial Statements</u>	30
Section 4.8 <u>Disclosure Controls and Procedures</u>	30
Section 4.9 <u>Absence of Certain Changes or Events</u>	31

Table of Contents

	<u>Page</u>
Section 4.10	<u>No Undisclosed Liabilities</u> 31
Section 4.11	<u>Absence of Litigation; Investigations</u> 31
Section 4.12	<u>Agreements, Contracts and Commitments</u> 32
Section 4.13	<u>Employee Benefit Plans, Options and Employment Agreements</u> 32
Section 4.14	<u>Labor Matters</u> 35
Section 4.15	<u>Properties; Encumbrances</u> 36
Section 4.16	<u>Taxes</u> 37
Section 4.17	<u>Environmental Matters</u> 38
Section 4.18	<u>Intellectual Property</u> 39
Section 4.19	<u>Insurance</u> 40
Section 4.20	<u>Interested Party Transactions</u> 40
Section 4.21	<u>Brokers</u> 40
Section 4.22	<u>Opinion of Financial Advisor of Parent</u> 40
Section 4.23	<u>Anti-Takeover Statute Not Applicable</u> 40
 <u>ARTICLE V INTERIM CONDUCT OF BUSINESS</u> 40	
Section 5.1	<u>Affirmative Covenants</u> 40
Section 5.2	<u>Restrictive Covenants on Company</u> 40
Section 5.3	<u>Restrictive Covenants on Parent</u> 43
 <u>ARTICLE VI ADDITIONAL AGREEMENTS</u> 43	
Section 6.1	<u>Access to Information; Notice of Certain Matters</u> 43
Section 6.2	<u>No Solicitation</u> 44
Section 6.3	<u>Board Recommendations</u> 45
Section 6.4	<u>Joint Proxy Statement/Prospectus; Registration Statement</u> 45
Section 6.5	<u>Merger Shareholders Actions</u> 46
Section 6.6	<u>Reasonable Best Efforts to Complete</u> 47
Section 6.7	<u>Public Announcements</u> 48
Section 6.8	<u>Company Employee Benefits; Company 401(k) Plan</u> 48
Section 6.9	<u>Company Stock Plan</u> 49
Section 6.10	<u>Indemnification and Insurance</u> 49
Section 6.11	<u>Company Affiliates</u> 50
Section 6.12	<u>Tax Matters</u> 51
Section 6.13	<u>Takeover Statutes</u> 51
Section 6.14	<u>Directorships</u> 51
Section 6.15	<u>Termination of Company Investor Rights</u> 51
Section 6.16	<u>Financial Statements and Consents of Accountants</u> 51
Section 6.17	<u>Working Capital Loan</u> 51
 <u>ARTICLE VII CONDITIONS TO THE MERGER</u> 52	
Section 7.1	<u>Conditions to Obligations of Each Party to Effect the Merger</u> 52
Section 7.2	<u>Additional Conditions to Obligations of Parent and Merger Sub to Effect the Merger</u> 53
Section 7.3	<u>Additional Conditions to Obligation of the Company to Effect the Merger</u> 55
 <u>ARTICLE VIII TERMINATION</u> 55	
Section 8.1	<u>Termination</u> 55
Section 8.2	<u>Effect of Termination</u> 56
Section 8.3	<u>Fees and Expenses</u> 56

Table of Contents

	Page
<u>ARTICLE IX SURVIVAL & INDEMNIFICATION</u>	57
Section 9.1 <u>Survival of Representations, Warranties, Covenants and Agreements</u>	57
Section 9.2 <u>Indemnification</u>	58
Section 9.3 <u>Limitations on Indemnification Recoveries</u>	58
Section 9.4 <u>Creation of Escrow Fund; Period for Indemnification Claims Against Escrow Fund</u>	60
Section 9.5 <u>Indemnification Claim Procedures During the Escrow Period</u>	60
Section 9.6 <u>Resolution of Objections to Indemnification Claims</u>	61
Section 9.7 <u>Stockholder Agent</u>	61
Section 9.8 <u>Third Party Claims</u>	62
<u>ARTICLE X GENERAL PROVISIONS</u>	64
Section 10.1 <u>Nonsurvival of Representations, Warranties and Covenants</u>	64
Section 10.2 <u>Notices</u>	64
Section 10.3 <u>Certain Definitions</u>	65
Section 10.4 <u>Certain Interpretations</u>	69
Section 10.5 <u>Amendment</u>	69
Section 10.6 <u>Extension; Waiver</u>	69
Section 10.7 <u>Severability</u>	69
Section 10.8 <u>Entire Agreement; No Third Party Beneficiaries</u>	70
Section 10.9 <u>Parties</u>	70
Section 10.10 <u>Assignment</u>	70
Section 10.11 <u>Failure or Indulgence Not Waiver; Remedies Cumulative</u>	70
Section 10.12 <u>Governing Law</u>	70
Section 10.13 <u>Counterparts</u>	70
Section 10.14 <u>WAIVER OF JURY TRIAL</u>	70
Section 10.15 <u>Specific Performance</u>	70
Section 10.16 <u>Disclosure Schedules</u>	71

Table of Contents**DEFINED TERMS**

	Page
1991 Director Plan	41
1991 Plan	41
2000 Director Plan	41
2000 Employee Plan	41
2002 Parent NSO Plan	40
401(k) Plan	75
Acquisition Proposal	100
Acquisition Transaction	100
Action or Proceeding	100
Affiliate	100
Aggregate Company Common Stock	4
Aggregate Merger Consideration	4
Aggregate Residual Amount	4
Agreement	1
Aluminum Nickel Inc.	3
Antitrust Law	100
Assumed Option	8
Audited Company Financial Statements	19
Average Closing Price	4
Beneficial Owner	101
Blue Sky	43
Business Day	101
Canceled Options	8
Capitalization Certificate	83
CCC	101
Certificate of Merger	3
Certificates	10
Change of Recommendation	69
Closing	10
Closing Date	10
Closing Date Payment Schedule	83
COBRA	101
Code	2
Company	1
Company Affiliate	78
Company Affiliates	78
Company Balance Sheet	19
Company Board	16
Company Bylaws	14
Company Capital Stock	4
Company Charter	14
Company Common Stock	5
Company Convertible Preferred Stock	5
Company Director	78
Company Disclosure Schedule	13
Company Employee Plans	23
Company Employees	75
Company Environmental Claims	33

Table of Contents

	Page
Company Financial Statements	101
Company Intellectual Property	101
Company IP Contract	34
Company Material Adverse Effect	101
Company Material Contracts	21
Company NDAs	34
Company Permits	18
Company Preferred Stock	5
Company Product(s)	102
Company Real Property Leases	30
Company Registered Intellectual Property	33
Company Restricted Stock	9
Company Series A Preferred Stock	5
Company Stock Options	15
Company Stock Plan	102
Company Stockholder Meeting	44
Company Termination Fee	87
Company Voting Agreements	1
Company Voting Proposal	17
Confidentiality Agreement	68
Consultant Proprietary Information Agreement	36
Control	102
D&O Indemnified Parties	76
D&O Policy	76
Deductible Limitation	90
Depository Agent	92
DGCL	1
Effective Time	3
Effective Time Company Stockholders	1
Employee Benefit Plan	102
Employee Proprietary Information Agreement	36
Environmental Laws	32
ERISA	102
ERISA Affiliate	102
Escrow Agreement	1
Escrow Amount	5
Escrow Fund	92
Escrow Period	92
Exchange Act	16
Exchange Agent	10
Exchange Fund	10
Expenses	86
Expiration Date	88
FMLA	102
GAAP	19
Governmental Entity	18
HSR Act	18
HSR Expenses	86
Include	102
Indemnifying Parties	89
Indemnifying Party	89

Table of Contents

	Page
Intellectual Property	103
Intellectual Property Rights	103
Joint Proxy Statement/Prospectus	69
Key Employment Agreement	2
Key Employment Agreements	2
knowledge	103
Later Company Financial Statements	19
Law	103
Liens	16
Loss	103
Materials of Environmental Concern	32
Maximum Annual Premium	77
Merger	1
Merger Consideration	5
Merger Shareholders Actions	44
Merger Sub	1
Merger Sub Bylaws	3
Merger Sub Charter	3
Merger Sub Charter Documents	40
Merger Sub Common Stock	9
Merrill Lynch	38
Nasdaq	4
Officer s Certificate	93
Open Source	37
Option Adjustment Amount	5
Option Exchange Amount	5
Outside Date	85
Parent	1
Parent 2005 Plan	41
Parent Balance Sheet	46
Parent Board	43
Parent Bylaws	40
Parent Charter	40
Parent Director	79
Parent Disclosure Schedule	39
Parent Employee Plans	50
Parent Environmental Claims	59
Parent ESPP	41
Parent Indemnified Parties	89
Parent Indemnified Party	89
Parent Material Adverse Effect	103
Parent Material Contracts	49
Parent Permits	45
Parent Real Property Leases	56
Parent Registered Intellectual Property	59
Parent SEC Reports	45
Parent Shareholder Voting Agreement	1
Parent Shareholder Voting Agreements	1
Parent Shareholders Meeting	44
Parent Stock Options	41

Table of Contents

	Page
Parent Stock Plans	41
Parent Sub Documents	40
Parent Termination Fee	87
Parent Voting Proposal	43
Per Share Common Amount	5
Per Share Convertible Preferred Amount	6
Per Share Series A Preferred Amount	5
Person	104
Product Agreements	37
Qualified Plan	24
Registered Intellectual Property	104
Registration Statement	45
Regulation M-A Filing	70
Requisite Company Stock Approval	17
Requisite Parent Shareholder Approval	44
SEC	18
Section 280G Payments	71
Securities Act	42
September Company Financial Statements	19
SG Cowen	61
Shareholder Agreement	2
Shareholder Agreements	2
Shrink-Wrap Code	104
Special Representation	88
Statement of Company Expenses	83
Stockholder Agent	1, 95
Subsidiary	104
Subsidiary Documents	14
Superior Proposal	105
Surviving Corporation	2
Takeover Statute	39
Tax	105
Tax Returns	105
Taxes	105
Technology	105
Third Party Claim	96
Third Party Recovery Limitation	91
Transaction Agreements	88
Transaction Documents	95
TUPE	29
UK Subsidiary	106
WARN Act	29
WSGR	10

Table of Contents

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

THIS AGREEMENT AND PLAN OF MERGER AND REORGANIZATION is entered into as of January 25, 2006 (this *Agreement*) by and among Nanometrics Incorporated, a California corporation (*Parent*), Alloy Merger Corporation, a Delaware corporation and a wholly owned subsidiary of Parent (*Merger Sub*), Accent Optical Technologies, Inc., a Delaware corporation (the *Company*), and, solely with respect to *Article IX*, Sanford S. Wadler (the *Stockholder Agent*).

WHEREAS, the respective Boards of Directors of Parent, Merger Sub and the Company have each unanimously approved, and deemed it to be advisable and in the best interests of their respective shareholders to consummate the business combination transaction provided for in this Agreement in which Merger Sub will merge with and into the Company (the *Merger*) in accordance with the terms and conditions of this Agreement and the applicable provisions of the Delaware General Corporation Law (*DGCL*);

WHEREAS, concurrently with the execution of this Agreement and as an inducement to the Company to enter into this Agreement, certain shareholders of Parent have agreed to enter into voting agreements with the Company, substantially in the form attached hereto as *Exhibit A* (each, a *Parent Shareholder Voting Agreement* and collectively, the *Parent Shareholder Voting Agreements*), pursuant to which such shareholders have agreed, among other things, to vote their shares of Parent Common Stock (as defined below) in favor of the Merger and the other transactions contemplated by this Agreement;

WHEREAS, concurrently with or prior to the execution and delivery of this Agreement by each of the parties hereto, certain stockholders of the Company are executing and delivering voting agreements, in the forms delivered to Parent prior to the execution of this Agreement (each a *Company Voting Agreement* and collectively, the *Company Voting Agreements*), pursuant to which each such Company stockholder has agreed, among other things, to vote their shares of Company Capital Stock (as defined below) in favor of the Merger and the other transactions contemplated by this Agreement;

WHEREAS, on the terms and subject to the conditions set forth herein, a portion of the aggregate consideration otherwise payable to the holders of the Company's capital stock at the Effective Time (the *Effective Time Company Stockholders*) pursuant hereto will be deposited with the Depositary Agent, to be held and disbursed to Parent or such Effective Time Company Stockholders on the terms and subject to the conditions set forth in the Escrow Agreement, in the form attached hereto as *Exhibit B* (the *Escrow Agreement*), to be executed and delivered by Parent and the Stockholder Agent, as representative of the Effective Time Company Stockholders, concurrently with the execution and delivery of this Agreement.

WHEREAS, as a condition and inducement to the willingness of Parent to enter into this Agreement, concurrently with the execution and delivery of this Agreement by each of the parties hereto, the persons listed on *Schedule A*, each of whom is an employee of the Company, are entering into an Employment Agreement (each, a *Key Employment Agreement*) and collectively, the *Key Employment Agreements*), with Parent and/or the Surviving Corporation, each of which will become effective at the Effective Time.

WHEREAS, as a condition and inducement to the willingness of Parent to enter into this Agreement, concurrently with the execution and delivery of this Agreement by each of the parties hereto, the persons listed on *Schedule B*, each of whom is a stockholder of the Company, are entering into a Shareholder Agreement in the form attached hereto as *Exhibit C* (each, a *Shareholder Agreement*) and collectively, the *Shareholder Agreements*), with Parent.

Edgar Filing: NANOMETRICS INC - Form S-4/A

WHEREAS, for United States federal income tax purposes, it is intended that the Merger shall qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the *Code*), and that this Agreement shall be, and is hereby, adopted as a plan of reorganization for purposes of Section 368(a) of the Code.

A-1

Table of Contents

NOW, THEREFORE, in consideration of the foregoing and the respective representations, warranties, covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I

THE MERGER

Section 1.1 *The Merger*. On the terms and subject to the conditions of this Agreement and in accordance with the DGCL, at the Effective Time (as defined in *Section 1.2*), Merger Sub shall merge with and into the Company, the separate corporate existence of Merger Sub shall cease and the Company shall continue as the surviving corporation in the Merger as a wholly owned Subsidiary of Parent. The Company, in its capacity as the corporation surviving the Merger, is hereinafter sometimes referred to as the *Surviving Corporation*).

Section 1.2 *Effective Time of Merger*. On the Closing Date (as defined in *Section 2.1*), Parent and the Company shall cause the Merger to be consummated by filing a duly executed and delivered Certificate of Merger as required by the DGCL (the *Certificate of Merger*) with the Secretary of State of the State of Delaware, in such form as required by, and executed in accordance with the relevant provisions of, the DGCL (the time of such filing, or such other time as Parent and the Company shall specify in the Certificate of Merger, being the *Effective Time*).

Section 1.3 *Effects of Merger*. At the Effective Time, the effect of the Merger shall be as provided in this Agreement and the Certificate of Merger and as specified in the DGCL.

Section 1.4 *Certificate of Incorporation & Bylaws of Surviving Corporation*.

(a) At and after the Effective Time, the certificate of incorporation of the Surviving Corporation, subject to the provisions of *Section 6.10*, shall be amended and restated in its entirety to be identical to the certificate of incorporation of Merger Sub (the *Merger Sub Charter*), as in effect immediately prior to the Effective Time, until amended in accordance with the DGCL, except that the name of the Surviving Corporation shall be *Accent Optical Technologies Nanometrics Inc.* (or such other name as the parties mutually agree).

(b) At and after the Effective Time, the bylaws of the Surviving Corporation, subject to the provisions of *Section 6.10*, shall be amended and restated in its entirety to be identical to the bylaws of Merger Sub (the *Merger Sub Bylaws*), as in effect immediately prior to the Effective Time until amended in accordance with the DGCL, except that the name of the Surviving Corporation shall be *Accent Optical Technologies Nanometrics Inc.*

Section 1.5 *Board of Directors & Officers of the Surviving Corporation*.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(a) The directors of Merger Sub immediately prior to the Effective Time shall be the initial directors of the Surviving Corporation and shall hold office from the Effective Time until their respective successors are duly elected or appointed and qualified in the manner provided in the certificate of incorporation or bylaws of the Surviving Corporation or as otherwise provided by the DGCL.

(b) The officers of Merger Sub immediately prior to the Effective Time shall be the initial officers of the Surviving Corporation and shall hold office from the Effective Time until their respective successors are duly elected or appointed and qualified in the manner provided in the certificate of incorporation or bylaws of the Surviving Corporation or as otherwise provided by the DGCL.

Section 1.6 *Effects of Merger on Capital Stock.*

(a) *Certain Definitions.* For all purposes of and under this Agreement, the following capitalized terms shall have the following respective meanings:

A-2

Table of Contents

(i) *Aggregate Company Common Stock* means the aggregate number of shares of Company Common Stock that are outstanding (or deemed to be outstanding pursuant to this definition) as of immediately prior to the Effective Time, including (solely for purposes of this definition) all shares of Company Common Stock that are issuable upon the exercise in full of all unvested and vested Company Stock Options that are outstanding immediately prior to the Effective Time and assumed by Parent pursuant to *Section 1.6(c)(i)* but excluding for purposes of the calculation Company Stock Options granted between January 23, 2006 and the Closing Date inclusive.

(ii) *Aggregate Merger Consideration* means 4,900,000 shares of Parent Common Stock (as adjusted for any stock dividends, combinations, splits, recapitalizations and the like, with respect to such shares after the date hereof) *plus* the number of shares of Parent Common Stock equal to the Option Adjustment Amount.

(iii) *Aggregate Residual Amount* means the Aggregate Merger Consideration *minus* (A) the Per Share Series A Preferred Amount multiplied by the number of shares of Company Series A Preferred Stock outstanding immediately prior to the Effective Time and (B) the Per Share Convertible Preferred Amount multiplied by the number of shares of Company Convertible Preferred Stock outstanding immediately prior to the Effective Time.

(iv) *Average Closing Price* means the average of the closing prices of the Parent Common Stock on Nasdaq National Market (*Nasdaq*) for the ten (10) trading days ending two (2) days prior to the Closing Date.

(v) *Company Capital Stock* means the Company Common Stock and Company Preferred Stock.

(vi) *Company Common Stock* means the Common Stock, \$0.00001 par value per share, of the Company.

(vii) *Company Preferred Stock* means the Preferred Stock, \$0.01 par value per share, of the Company, which is comprised of the Company Series A Preferred Stock and the Company Convertible Preferred Stock.

(viii) *Company Series A Preferred Stock* means the Series A Preferred Stock, \$0.01 par value per share, of the Company.

(ix) *Company Convertible Preferred Stock* means the Convertible Preferred Stock, \$0.01 par value per share, of the Company.

(x) *Escrow Amount* means that number of shares of Parent Common Stock equal to 10% of the Aggregate Merger Consideration, rounded to the nearest whole share.

(xi) *Merger Consideration* means the Per Share Common Amount, the Per Share Series A Preferred Amount or the Per Share Convertible Preferred Amount, as applicable.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(xii) *Option Adjustment Amount* means the aggregate exercise price of all Company Stock Options (other than Company Stock Options granted between January 23, 2006 and the Closing Date) that are either (A) exercised after the date hereof or (B) assumed by Parent pursuant to Section 1.6(c)(i), divided by the Average Closing Price, and rounded to the nearest whole share of Parent Common Stock.

(xiii) *Option Exchange Amount* means the Per Share Common Amount multiplied by the Average Closing Price.

(xiv) *Per Share Common Amount* means the number of shares of Parent Common Stock equal to the quotient obtained by dividing (x) the Aggregate Residual Amount by (y) the Aggregate Company Common Stock.

(xv) *Per Share Series A Preferred Amount* means the number of shares of Parent Common Stock equal to the quotient obtained by dividing (x) \$1,000 by (y) the Average Closing Price; provided

A-3

Table of Contents

that the Per Share Series A Preferred Amount and the Per Share Convertible Preferred Amount shall be reduced proportionately to the extent the sum of (A) the Per Share Series A Preferred Amount multiplied by the number of shares of Company Series A Preferred Stock outstanding immediately prior to the Effective Time and (B) the Per Share Convertible Preferred Amount multiplied by the number of shares of Convertible Preferred Stock outstanding immediately prior to the effective time, exceeds the Aggregate Merger Consideration.

(xvi) *Per Share Convertible Preferred Amount* means the number of shares of Parent Common Stock equal to the quotient obtained by dividing (x) \$1.13 by (y) the Average Closing Price; provided that the Per Share Series A Preferred Amount and the Per Share Convertible Preferred Amount shall be reduced proportionately to the extent the sum of (A) the Per Share Series A Preferred Amount multiplied by the number of shares of Company Series A Preferred Stock outstanding immediately prior to the Effective Time and (B) the Per Share Convertible Preferred Amount multiplied by the number of shares of Convertible Preferred Stock outstanding immediately prior to the effective time, exceeds the Aggregate Merger Consideration.

(b) *Treatment of Company Capital Stock.*

(i) On the terms and subject to the conditions of this Agreement, at the Effective Time, without any action on the part of Parent, Merger Sub, the Company or the holder of any shares of the Company Series A Preferred Stock, each share of Company Series A Preferred Stock that is issued and outstanding immediately prior to the Effective Time shall be cancelled and extinguished and shall be converted automatically into the right to receive that number of shares of Parent Common Stock equal to the Per Share Series A Preferred Amount. For purposes of calculating the aggregate number of shares of Parent Common Stock issuable to each Effective Time Company Stockholder pursuant to this *Section 1.6(b)(i)*, all shares of Company Series A Preferred Stock that are held by each such Effective Time Company Stockholder shall be aggregated and the number of shares of Parent Common Stock issuable to each such Effective Time Company Stockholder shall be rounded down to the nearest whole share.

(ii) On the terms and subject to the conditions of this Agreement, at the Effective Time, without any action on the part of Parent, Merger Sub, the Company or the holder of any shares of the Company Convertible Preferred Stock, each share of Company Convertible Preferred Stock that is issued and outstanding immediately prior to the Effective Time shall be cancelled and extinguished and shall be converted automatically into the right to receive that number of shares of Parent Common Stock equal to the Per Share Convertible Preferred Amount. For purposes of calculating the aggregate number of shares of Parent Common Stock issuable to each Effective Time Company Stockholder pursuant to this *Section 1.6(b)(ii)*, all shares of Company Convertible Preferred Stock that are held by each such Effective Time Company Stockholder shall be aggregated and the number of shares of Parent Common Stock issuable to each such Effective Time Company Stockholder shall be rounded down to the nearest whole share.

(iii) On the terms and subject to the conditions of this Agreement, at the Effective Time, without any action on the part of Parent, Merger Sub, the Company or the holder of any shares of Company Common Stock, each outstanding share of Company Common Stock issued and outstanding at the Effective Time shall be cancelled and extinguished and shall be converted automatically into the right to receive that number of shares of Parent Common Stock equal to the Per Share Common Amount. For purposes of calculating the aggregate number of shares of Parent Common Stock issuable to each Effective Time Company Stockholder pursuant to this *Section 1.6(b)(iii)*, all shares of Company Common Stock that are held by each such Effective Time Company Stockholder shall be aggregated and the number of shares of Parent Common Stock issuable to each such Effective Time Company Stockholder shall be rounded down to the nearest whole share.

Table of Contents

(iv) *Fractional Shares*. No fraction of a share of Parent Common Stock will be issued at the Effective Time, but in lieu thereof, each holder of shares of Company Capital Stock who would otherwise be entitled to a fraction of a share of Parent Common Stock (after aggregating all fractional shares of Parent Common Stock to be received by such holder) shall be entitled to receive from Parent an amount of cash (rounded to the nearest whole cent) equal to the product of (i) such fraction multiplied by (ii) the Average Closing Price.

(v) Notwithstanding anything to the contrary in this Agreement, any shares of Company Capital Stock that are held by an Effective Time Company Stockholder who has demanded and perfected appraisal or dissenters' rights for such shares in accordance with applicable Law and who, as of the Effective Time, has not effectively withdrawn or lost such appraisal or dissenters' rights (*Dissenting Shares*) shall not be converted into or represent a right to receive the applicable consideration for Company Capital Stock contemplated by this *Section 1.6* and in lieu thereof, any such Effective Time Company Stockholder shall only be entitled to such rights as are granted by applicable Law. Notwithstanding the foregoing, if any Effective Time Company Stockholder who has demanded appraisal of shares of Company Capital Stock under applicable Law shall effectively withdraw or lose (through failure to perfect or otherwise) the right to such appraisal, then, as of the later of (i) the Effective Time or (ii) the occurrence of such event, such Effective Time Company Stockholder's shares of Company Capital Stock shall automatically be converted into and represent only the right to receive the applicable consideration for Company Capital Stock contemplated by this *Section 1.6*, without interest thereon, upon surrender to the Company of the certificate or certificates representing such shares in accordance with *Section 2.2*. The Company shall give Parent (i) prompt notice of its receipt of any written demands for appraisal of any shares of Company Capital Stock, withdrawals of such demands and any other instruments relating to the Merger served pursuant to applicable Law and received by the Company relating to appraisal or dissenters' rights and (ii) the opportunity to participate in all negotiations and proceedings with respect to demands for appraisal or dissenters' rights under applicable Law. The Company shall not, except with the prior written consent of Parent or as may be required under applicable Law, voluntarily make any payment with respect to any demands for appraisal of Company Capital Stock or offer to settle or settle any such demands.

(c) *Treatment of Company Stock Options*.

(i) At the Effective Time, each Company Stock Option that is outstanding immediately prior to the Effective Time, whether or not then vested or exercisable (x) with a per share exercise price less than the Option Exchange Amount or (y) granted between January 23, 2006 and the Closing to the optionees and covering the number of shares indicated in *Section 1.6(c)(i)* of the Company Disclosure Schedule (each Company Stock Option meeting the criteria in (x) or (y), an *Assumed Option*), shall be assumed by Parent. Each such Assumed Option shall continue to have, and be subject to, the same terms and conditions as are in effect immediately prior to the Effective Time, except that (x) such Assumed Option shall be exercisable for that number of whole shares of Parent Common Stock equal to the product (rounded down to the next whole number of shares of Parent Common Stock) of (A) the number of shares of Company Common Stock that were issuable upon exercise of such Assumed Option immediately prior to the Effective Time and (B) the Per Share Common Amount, and (y) the per share exercise price for the shares of Parent Common Stock issuable upon exercise of such Assumed Option shall be equal to the quotient (rounded up to the next whole cent) obtained by dividing (A) the exercise price per share of Company Common Stock at which such Assumed Option was exercisable immediately prior to the Effective Time by (B) the Per Share Common Amount. It is the intention of the parties that each Assumed Option that qualified as an incentive stock option (as defined in Section 422 of the Code) shall continue to so qualify, to the maximum extent permissible, following the Effective Time.

(ii) No Company Stock Option with a per share exercise price that is greater than or equal to the Option Exchange Amount, other than Company Stock Options granted between January 23, 2006 and the Closing, (such Company Options referred to as the *Canceled Options*) shall be assumed or

Table of Contents

otherwise replaced by Parent. Any Canceled Option that is outstanding immediately prior to the Effective Time shall be terminated at the Effective Time and no consideration or other payment shall be provided in lieu of such Canceled Options and the Canceled Options shall not represent any rights to purchase any capital stock of the Parent or the Company after the Effective Time.

(iii) If and to the extent necessary or required by the terms of any of the Company Stock Plans or any Company Stock Option, the Company shall, prior to the Effective Time, (i) provide any notices to and obtain any consents from holders of Company Stock Options and (ii) amend the terms of its equity incentive plans or arrangements, to give effect to the provisions of *Section 1.6(c)*. Except as set forth on *Section 1.6(c)(iii)* of the Company Disclosure Schedule, the Company shall take no action, other than those actions contemplated by this Agreement, that will cause or result in the accelerated vesting of the Assumed Options and shall take such actions prior to the Effective Time as are reasonably necessary to provide that the Assumed Options will not accelerate in connection with the Merger pursuant to Section 4 of the Company Stock Plan.

(iv) Notwithstanding the foregoing, except as set forth on *Section 1.6(c)(iv)* of the Company Disclosure Schedule, each share of Company Common Stock issued upon exercise of a Company Stock Option prior to vesting or purchased subject to a right of repurchase (*Company Restricted Stock*) issued and outstanding immediately prior to the Effective Time that is unvested as of the Effective Time shall be cancelled and extinguished and will be converted automatically into the right to receive the Common Per Share Amount pursuant to *Section 1.6(b)(iii)* hereof, which amount shall continue to be subject to the same rights of repurchase by Parent as the Company had prior to the Effective Time and shall be subject to permanent retention by Parent (i.e., repurchase at cost from the stockholder) in accordance with the terms of the agreement pursuant to which such Company Stockholder purchased such shares of Company Restricted Stock.

(d) *Cancellation of Treasury Stock and Parent-Owned Stock.* All shares of Company Common Stock that are (i) held by the Company as treasury shares or (ii) owned by Parent or any wholly owned Subsidiary (as defined below) of Parent, in each case immediately prior to the Effective Time, shall be cancelled and retired and shall cease to exist, and no securities of Parent or other consideration shall be delivered in exchange therefor.

(e) *Capital Stock of Merger Sub.* Each share of common stock, \$0.001 par value per share, of Merger Sub (*Merger Sub Common Stock*) issued and outstanding immediately prior to the Effective Time shall be converted into and become one fully paid and nonassessable share of common stock, \$0.00001 par value per share, of the Surviving Corporation.

(f) *Escrow.* Of the Aggregate Merger Consideration to be issued at the Effective Time pursuant to *Section 1.6(b)* (none of which shares of Parent Common Stock shall be unvested, subject to any right of repurchase, risk of forfeiture or other condition in favor of the Surviving Corporation), the number of whole shares equal to the Escrow Amount shall be held in escrow pursuant to *Article IX* of this Agreement to compensate Parent and its affiliates (including the Surviving Corporation) for any Losses (as defined in *Section 10.3* of this Agreement) incurred in connection with this Agreement and the transactions contemplated hereby.

Table of Contents

ARTICLE II

THE CLOSING

Section 2.1 *Closing*. Subject to the provisions of this Agreement, the closing of the Merger (the *Closing*) shall take place sequentially beginning at 10:00 a.m. Pacific Time, at the offices of Wilson Sonsini Goodrich & Rosati, Professional Corporation (*WSGR*), 650 Page Mill Road, Palo Alto, California, on a date to be specified by Parent and the Company which shall be no later than the second business day after satisfaction or waiver of each of the conditions set forth in *Article VII* or on such other date and such other time and place as Parent and the Company shall agree. The date on which the Closing shall occur is hereinafter referred to as the *Closing Date*.

Section 2.2 *Exchange of Certificates*.

(a) *Exchange Agent*. Prior to the Closing Date, Parent shall designate a bank or trust company to act as Exchange Agent hereunder (the *Exchange Agent*). As soon as practicable after the Effective Time, Parent shall deposit with or for the account of the Exchange Agent, for the benefit of the holders of Company Capital Stock, the shares of Parent Common Stock and an amount of cash sufficient to deliver to the holders of Company Capital Stock any cash in lieu of fractional shares payable pursuant to *Section 1.6(b)(iv)* and any dividends or other distributions to which such holders are entitled pursuant to *Section 2.2(d)* (such shares of Parent Common Stock together with cash in lieu of fractional shares and dividends or other distributions being hereinafter referred to as the *Exchange Fund*) deliverable pursuant to *Section 1.6* in exchange for outstanding shares of Company Capital Stock.

(b) *Exchange Procedures*. As soon as practicable after the Effective Time, Parent shall instruct the Exchange Agent to mail to each holder of record of a certificate or certificates which immediately prior to the Effective Time represented outstanding shares of Company Capital Stock (the *Certificates*) that were converted pursuant to *Section 1.6(b)* into the right to receive the Merger Consideration (i) a letter of transmittal (which shall specify that delivery shall be effected, and risk of loss and title to the Certificates shall pass, only upon proper delivery of the Certificates to the Exchange Agent and shall be in such form and have such other provisions as Parent may reasonably specify that are not inconsistent with the terms of this Agreement) and (ii) instructions for use in effecting the surrender of the Certificates in exchange for the Merger Consideration, the cash amount in lieu of any fractional shares pursuant to *Section 1.6(b)(iv)* and any dividends or distributions payable pursuant to *Section 2.2(d)*. Upon surrender of a Certificate for cancellation to the Exchange Agent together with such letter of transmittal, duly executed, and such other customary documents as may be required pursuant to such instructions, the holder of such Certificate shall be entitled to receive (A) certificates evidencing the Merger Consideration which such holder has the right to receive pursuant to *Section 1.6(b)* in respect of the shares of Company Capital Stock formerly evidenced by such Certificate, (B) cash in lieu of any fractional shares of Parent Common Stock to which such holder is entitled pursuant to *Section 1.6(b)(iv)*, and (C) any dividends or other distributions to which such holder is entitled pursuant to *Section 2.2(d)*, after giving effect to any tax withholdings required by applicable Law, and the Certificate so surrendered shall forthwith be cancelled. In the event of a transfer of ownership of shares of Company Capital Stock which is not registered in the transfer records of the Company as of the Effective Time, a certificate representing the proper number of shares of Parent Common Stock may be issued to a transferee if the Certificate evidencing such Company Capital Stock is presented to the Exchange Agent, accompanied by all documents required to evidence and effect such transfer pursuant to this *Section 2.2(b)* and by evidence that any applicable stock transfer taxes have been paid. Until so surrendered, each outstanding Certificate that, prior to the Effective Time, represented shares of Company Capital Stock will be deemed, from and after the Effective Time, for all corporate purposes, to represent only the right to receive upon surrender the Merger Consideration and any cash in lieu of any fractional shares of Parent Common Stock payable pursuant to *Section 1.6(b)(iv)*, in accordance with the terms of this Agreement.

(c) *No Further Ownership Rights in Company Capital Stock*. At the Effective Time, the stock transfer books of the Company shall be closed and thereafter there shall be no further registration of transfers on the stock transfer books of the Company or the Surviving Corporation of the shares

of Company Capital Stock

A-7

Table of Contents

which were outstanding immediately prior to such time. If, after such time, Certificates are presented to the Surviving Corporation for any reason, they shall be cancelled and exchanged as provided in *Section 2.2(b)*.

(d) *Distributions with Respect to Unexchanged Shares.* No dividends or other distributions declared or made after the Effective Time with respect to Parent Common Stock with a record date after the Effective Time shall be paid to the holder of any unsurrendered Certificate with respect to the shares of Parent Common Stock represented thereby, and no cash payment in lieu of fractional shares shall be paid to any such holder pursuant to *Section 1.6(b)(iv)*, unless and until the holder of such Certificate shall surrender such Certificate. Subject to the effect of escheat, tax or other applicable Laws, following surrender of any such Certificate, there shall be paid to the holder of the certificates representing whole shares of Parent Common Stock issued in exchange therefor, in addition to the Parent Common Stock deliverable therefore pursuant to *Section 1.6(b)*, without interest, (A) the amount of any cash payable with respect to a fractional share of Parent Common Stock to which such holder is entitled pursuant to *Section 1.6(b)(iv)* and the amount of dividends or other distributions with a record date after the date hereof theretofore paid with respect to such whole Shares of Parent Common Stock and (B) at the appropriate payment date, the amount of dividends or other distributions, with a record date after the date hereof but prior to surrender and a payment date occurring after surrender, payable with respect to such whole shares of Parent Common Stock.

(e) *Lost, Stolen or Destroyed Certificates.* In the event any Certificates shall have been lost, stolen or destroyed, the Exchange Agent shall issue in exchange for such lost, stolen or destroyed Certificates, upon the making of an affidavit of that fact by the holder thereof, such shares of Parent Common Stock as may be required pursuant to *Section 1.6(b)* as well as the other Merger Consideration as provided in this *Section 2.2(e)* and any dividends or other distributions to which the holders thereof are entitled pursuant to *Section 2.2(d)*; *provided, however*, that Parent may, in its discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed Certificates to deliver an agreement of indemnification in form satisfactory to Parent, or a bond in such reasonable sum as Parent may direct as indemnity against any claim that may be made against Parent or the Exchange Agent with respect to the Certificates alleged to have been lost, stolen or destroyed.

(f) *Transfers of Ownership.* If any certificate for shares of Parent Common Stock is to be issued in a name other than that in which the Certificate surrendered in exchange therefor is registered, it will be a condition to the issuance thereof that the Certificate so surrendered will be properly endorsed and otherwise be in proper form for transfer and that the person requesting such exchange will have paid to Parent or any agent designated by it any transfer or other taxes required by reason of the issuance of a certificate for shares of Parent Common Stock in any name other than that of the registered holder of the Certificate surrendered, or will have established to the satisfaction of Parent or any agent designated by it that such tax has been paid or is not payable.

(g) *Termination of Exchange Fund.* At any time following the six (6) month anniversary of the Effective Time, Parent shall be entitled to require the Exchange Agent to deliver to Parent any portion of the Exchange Fund not disbursed to holders of Certificates, and thereafter such holders shall be entitled to look only to Parent (subject to abandoned property, escheat or other similar Law) with respect to the Merger Consideration to which such holders are entitled pursuant to *Section 1.6(b)* any cash in lieu of fractional shares payable to such holders pursuant to *Section 1.6(b)(iv)* and any dividends or other distributions to which such holders are entitled pursuant to *Section 2.2(d)*, upon due surrender of their Certificates, without any interest thereon.

(h) *No Liability.* Neither Parent, Merger Sub, nor the Company shall be liable to any holder of Company Capital Stock or Parent Common Stock, as the case may be, for such shares (or dividends or distributions with respect thereto) delivered to a public official pursuant to any applicable abandoned property, escheat or other similar Law following the passage of time specified therein.

(i) *Withholding Rights.* Parent, the Surviving Corporation or the Exchange Agent shall be entitled to deduct and withhold from the consideration otherwise payable pursuant to this Agreement to any person who was a holder of Company Capital Stock immediately prior to the Effective Time such amounts as

Table of Contents

Parent, the Surviving Corporation or the Exchange Agent is required to deduct and withhold with respect to the making of such payment under the Code, or any provision of state, local or foreign tax Law. To the extent that amounts are so withheld by Parent, the Surviving Corporation or the Exchange Agent, such withheld amounts shall be treated for all purposes of this Agreement as having been paid to the holder of the shares of Company Capital Stock in respect of which such deduction and withholding was made by Parent, the Surviving Corporation or the Exchange Agent.

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

Except as set forth in the written disclosure schedule prepared by the Company which is dated as of the date hereof and has been delivered by the Company to Parent in connection herewith (the *Company Disclosure Schedule*), the Company represents and warrants to Parent and Merger Sub as follows:

Section 3.1 *Organization and Qualification; Subsidiaries*. The Company and each of its Subsidiaries is an entity duly organized, validly existing and in good standing under the Laws of the jurisdiction of its organization and has the requisite corporate or other power and authority necessary to own, lease and operate the properties it purports to own, lease or operate and to carry on its business as it is now being conducted. Each of the Company and its Subsidiaries is duly qualified or licensed as a foreign corporation to do business, and is in good standing, in each jurisdiction where the character or location of the properties owned, leased or operated by it or the nature of its activities makes such qualification or licensing necessary, except for such failures to be so duly qualified or licensed and in good standing that would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. A true, complete and correct list of all of the Company's Subsidiaries, together with the jurisdiction of incorporation of each Subsidiary, the authorized capitalization of each Subsidiary, and the percentage of each Subsidiary's outstanding capital stock owned by the Company or another Subsidiary or affiliate of the Company, is set forth in Section 3.1 of the Company Disclosure Schedule. The Company does not directly or indirectly own any equity or similar interest in, or any interest convertible into or exchangeable or exercisable for any equity or similar interest in, any corporation, partnership, limited liability company, joint venture or other business association or entity, excluding securities in the Company's Subsidiaries and securities in any publicly traded company held for investment by the Company and comprising less than one percent (1%) of the outstanding stock of such company.

Section 3.2 *Certificate of Incorporation and Bylaws*. The Company has heretofore made available to Parent a true, complete and correct copy of its certificate of incorporation, as amended to date (the *Company Charter*), and bylaws, as amended to date (the *Company Bylaws*), and has furnished to Parent true, complete and correct copies of the charter and bylaws (or equivalent organizational documents), each as amended to date, of each of its Subsidiaries (the *Subsidiary Documents*). The Company Charter, Company Bylaws and the Subsidiary Documents are in full force and effect. The Company is not in violation of any of the provisions of the Company Charter or Company Bylaws and the Company's Subsidiaries are not in violation of any of the provisions of their respective Subsidiary Documents.

Section 3.3 *Capitalization*.

(a) The authorized capital stock of the Company consists only of 300,000,000 shares of Company Common Stock, of which 141,233,836 shares of Common Stock are issued and outstanding, and 9,765,648 shares of Company Preferred Stock, of which 9,550 shares are designated as Company Series A Preferred Stock, 9,444,8334 shares of which are issued and outstanding, and 9,756,098 shares of which are designated as Company Convertible Preferred Stock, 7,787,804 shares of which are issued and outstanding. The Company has reserved 27,500,000 shares of Company Common Stock for issuance under the Company Stock Plan, 16,892,844 of which are subject to outstanding options and 322,699 of

Edgar Filing: NANOMETRICS INC - Form S-4/A

which remain available for issuance under the Company Stock Plan. No shares of Company Common Stock or Company Preferred

A-9

Table of Contents

Stock are held in treasury or reserved for issuance except for shares of Company Stock reserved in connection with the Company Stock Plan and reserved for issuance upon conversion of any shares of Company Preferred Stock.

(b) The capitalization of the Company is as set forth on *Section 3.3(b)* of the Company Disclosure Schedule, which lists the name and state of residence of each holder of Company Common Stock and each holder of Company Preferred Stock and the numbers of shares of Company Common Stock and Company Preferred Stock held by each holder, as well as the total number of shares of Company Common Stock and Company Preferred Stock outstanding.

(c) No shares of Company Capital Stock are restricted or otherwise subject to a repurchase option, risk of forfeiture or other vesting or similar condition in favor of the Company under any applicable stock restriction agreement or other similar agreement with the Company.

(d) *Section 3.3(d)* of the Company Disclosure Schedule sets forth a true, complete and correct list of all persons who, as of January 25, 2006 held outstanding options to acquire shares of Company Common Stock (the *Company Stock Options*) under the Company Stock Plans or under any other equity incentive plan or arrangement of the Company and its Subsidiaries, indicating, with respect to each Company Stock Option then outstanding, the tax status of such option under Section 422 of the Code, the number of shares of Company Common Stock subject to such Company Stock Option, the name of the plan under which such Company Stock Option was granted and the exercise price, date of grant, vesting schedule and expiration date thereof, including to the extent to which any vesting has occurred as of the date of this Agreement and whether (and to what extent) the vesting of such Company Stock Option will be accelerated in any way by the consummation of the transactions contemplated by this Agreement or by the termination of employment or engagement or change in position of any holder thereof following or in connection with the consummation of the Acquisition Merger. The Company has made available to Parent true, complete and correct copies of all Company Stock Plans and the forms of all stock option agreements evidencing outstanding Company Stock Options.

(e) There are no outstanding debt securities of the Company, whether or not convertible into shares of Company Capital Stock.

(f) Except as described in *Section 3.3(a)* or *Section 3.3(d)*, no capital stock of the Company or any of its Subsidiaries or any security convertible or exchangeable into or exercisable for such capital stock, is issued, reserved for issuance or outstanding as of the date of this Agreement. Except as described in *Section 3.3(a)* or *Section 3.3(d)*, there are no options, preemptive rights, warrants, calls, rights, commitments, agreements, arrangements or understandings of any kind to which the Company or any of its Subsidiaries is a party, or by which the Company or any of its Subsidiaries is bound, obligating the Company or any of its Subsidiaries to issue, deliver or sell, or cause to be issued, delivered or sold, additional shares of capital stock of the Company or any of its Subsidiaries or obligating the Company or any of its Subsidiaries to grant, extend or accelerate the vesting of or enter into any such option, warrant, call, right, commitment, agreement, arrangement or understanding. There are no shareholder agreements, voting trusts, proxies or other similar agreements, arrangements or understandings to which the Company or any of its Subsidiaries is a party, or by which it or they are bound, obligating the Company or any of its Subsidiaries with respect to any shares of capital stock of the Company or any of its Subsidiaries or any cash amounts based on the value or appreciation in value of such capital stock. There are no rights or obligations, contingent or otherwise (including rights of first refusal in favor of the Company), of the Company or any of its Subsidiaries, to repurchase, redeem or otherwise acquire any shares of capital stock of the Company or any of its Subsidiaries or to provide funds to or make any investment (in the form of a loan, capital contribution or otherwise) in any such Subsidiary or any other entity. There are no registration rights or other similar agreements, arrangements or understandings to which the Company or any of its Subsidiaries is a party, or by which it or they are bound, obligating the Company or any of its Subsidiaries with respect to any shares of Company Common Stock or shares of capital stock of any such Subsidiary or any cash amounts based on the value or appreciation in value of such capital stock.

Table of Contents

(g) All outstanding shares of the Company's capital stock are, and all shares of Company Common Stock reserved for issuance as specified above will be, upon issuance on the terms and conditions specified in the instruments pursuant to which they are issuable, duly authorized, validly issued, fully paid and nonassessable and not subject to or issued in violation of any purchase option, call option, right of first refusal, preemptive right, subscription right or any similar right under any provision of the DGCL, the Company Charter or the Company Bylaws or any agreement to which the Company is a party or is otherwise bound. None of the outstanding shares of Company Common Stock have been issued in violation of any federal or state securities Laws. All of the outstanding shares of capital stock of each of the Company's Subsidiaries are duly authorized, validly issued, fully paid and nonassessable, and all such shares are owned by the Company or a Subsidiary of the Company free and clear of all security interests, liens, claims, pledges, agreements, limitations in voting rights, charges or other encumbrances of any nature whatsoever (collectively, *Liens*). There are no accrued and unpaid dividends with respect to any outstanding shares of capital stock of the Company or any of its Subsidiaries.

(h) The Company has no class of securities of the Company or its Subsidiaries registered or required to be registered under the Securities Exchange Act of 1934, as amended (the *Exchange Act*).

Section 3.4 Authority Relative to this Agreement; Shareholder Approval.

(a) Subject only to the approval of the stockholders of the Company as described below, the Company has full corporate power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby have been duly and validly approved by the Board of Directors of the Company (the *Company Board*). The Company Board has (i) unanimously determined that this Agreement and the transactions contemplated hereby are advisable and in the best interests of the stockholders of the Company, (ii) unanimously approved this Agreement and the transactions contemplated hereby and (iii) unanimously recommended that the stockholders of the Company adopt and approve (A) this Agreement and the Merger, (B) the escrow and indemnification obligations of the Effective Time Company Stockholders set forth in Article IX hereof and the deposit of Parent Common Stock equal to the Escrow Amount into the Escrow Fund and (C) the appointment of Sanford S. Wadler as the Stockholder Agent (collectively, the *Company Voting Proposal*). This Agreement has been duly and validly executed and delivered by the Company, and (assuming due authorization, execution and delivery by Parent and Merger Sub) this Agreement constitutes a valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or other similar Laws now or hereafter in effect relating to creditors rights generally and by general equitable principles (regardless of whether enforceability is considered in a proceeding in equity or at Law).

(b) Except for the adoption and approval of this Agreement, the approval of the Merger and approval of the matter set forth in Section 6.4(f) of this Agreement by affirmative vote of the holders of (i) a majority of the voting power of all shares of the Company Common Stock entitled to vote, (ii) a majority of each series of the Company Preferred Stock entitled to vote and (iii) a majority of the Company Capital Stock entitled to vote voting together pursuant to duly called and noticed and validly convened and held meeting of the holders of the Company Common Stock (the *Requisite Company Stock Approval*), no other corporate proceedings on the part of the Company are necessary to approve this Agreement and to consummate the transactions contemplated hereby.

Section 3.5 No Conflict; Required Filings and Consents.

(a) The execution and delivery by the Company of this Agreement do not, the execution and delivery by the Company of any instrument required hereby to be executed and delivered by the Company at the Closing will not, and the performance by the Company of its agreements and obligations under this Agreement will not, (i) conflict with or violate the Company Charter or Company Bylaws or any Subsidiary Documents, (ii) in any material respect, conflict with or violate any Law applicable to the Company or by

Table of Contents

which its properties is bound or affected, (iii) result in any breach of or constitute a default (or an event that with notice or lapse of time or both would become a default), or impair the Company's rights or alter the rights or obligations of any third party or the Company (including monetary rights and obligations) under, or give to any third party any rights of termination, amendment, payment, acceleration or cancellation of, or result in the creation of a Lien on any of the properties or assets (including Intellectual Property) of the Company pursuant to any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which the Company is a party or by which the Company or its properties is bound or affected, or (iv) other than the Company Stock Options, give rise to or result in any person having, or having the right to exercise, any pre-emptive rights, rights of first refusal, rights to acquire or similar rights with respect to any capital stock of the Company or any of its assets or properties.

(b) The execution and delivery by the Company of this Agreement do not, the execution and delivery by the Company of any instrument required hereby to be executed and delivered by the Company at the Closing will not, and the performance of its agreements and obligations under this Agreement by the Company will not, require any consent, approval, order, license, authorization, registration, declaration or permit of, or filing with or notification to, any nation or government, any state, province or other political subdivision thereof or any multinational organization or body or other entity having or exercising executive, legislative, judicial, regulatory or administrative functions of or pertaining to government (including any court, arbitrational tribunal, administrative or regulatory agency or commission or other governmental authority or instrumentality), whether domestic or foreign, (a *Governmental Entity*), except (i) as may be required by the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the *HSR Act*), (ii) as may be required under any foreign antitrust or competition Law, (iii) the filing of the Joint Proxy Statement/Prospectus (as defined in *Section 6.4*) with the U.S. Securities and Exchange Commission (the *SEC*) under the Exchange Act, (iv) such clearances, consents, approvals, orders, licenses, authorizations, registrations, declarations, permits, filings, and notifications as may be required under applicable U.S. federal and state or foreign securities Laws, (v) the filing of the Certificate of Merger or other documents as required by the DGCL and (vi) such clearances, consents, approvals, orders, registrations, declarations, permits, filings and notifications which, if not obtained or made, would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

Section 3.6 *Compliance; Permits.*

(a) The Company is and has been in material compliance with and is not in material default or violation of (and has not received any notice of material non-compliance, default or violation with respect to) any Law applicable to the Company or by which any of its properties are bound or affected.

(b) The Company holds all permits, licenses, easements, variances, exemptions, consents, certificates, authorizations, registrations, orders and other approvals from Governmental Entities that are material to the operation of its business as currently conducted (collectively, the *Company Permits*). The Company Permits are in full force and effect, have not been violated in any material respect and, to the Company's knowledge, no suspension, revocation or cancellation thereof has been threatened, and there is no action, proceeding or investigation pending or threatened, seeking the suspension, revocation or cancellation of any Company Permits. No Company Permit shall cease to be effective as a result of the consummation of the transactions contemplated by this Agreement, other than as would not reasonably be expected to have a Company Material Adverse Effect.

Section 3.7 *Financial Statements.*

(a) Each of the audited consolidated statements of operations, statements of cash flows and statements of changes in stockholders' equity for the years ended December 31, 2002, 2003 and 2004 and the balance sheets as of December 31, 2003 and 2004 and the related notes and schedules (the *Audited Company Financial Statements*), the unaudited consolidated statement of operations, and statement of cash flows for the nine months ended October 1, 2005 and the balance sheet as of October 1, 2005 and the related notes and schedules (the *September Company*

Financial Statements) and any quarterly or fiscal year consolidated

A-12

Table of Contents

statements of operations, statements of cash flows or statements of changes in stockholders' equity and balance sheets for any period ending on or between the date of this Agreement and the Closing and the related notes and schedules (the *Later Company Financial Statements*), complied or will comply, as of its respective date, in all material respects with all applicable accounting requirements, was or will be prepared in accordance with U.S. generally accepted accounting principles (*GAAP*) (except as may be indicated in the notes thereto) applied on a consistent basis throughout the periods involved and fairly presented in all material respects or will fairly present in all material respects the consolidated financial position of the Company and its consolidated Subsidiaries as of the respective dates thereof and the consolidated results of the operations and cash flows of the Company and its consolidated Subsidiaries for the periods indicated, except as otherwise explained therein and except that any unaudited interim financial statements do not contain footnotes and are subject to normal and recurring year-end adjustments which have not been made and are not expected to be material in amount, individually or in the aggregate. The balance sheet and notes related thereto of the Company as of October 1, 2005 is referred to herein as the *Company Balance Sheet*).

(b) Each of the Company Audited Financial Statements, the September Company Financial Statements and the Later Company Financial Statements accurately reflects, or will reflect as the case may be, the revenues and costs relating to the Company Material Contracts as required by GAAP.

Section 3.8 *Internal Controls and Procedures*. The Company maintains internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain accountability for assets, (iii) access to assets is permitted only in accordance with management's general or specific authorization and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

Section 3.9 *Absence of Certain Changes or Events*. From the date of the Company Balance Sheet through the date hereof, the Company has conducted its business in the ordinary course of business consistent with past practice and, since such date and through the date hereof, there has not occurred: (i) any Company Material Adverse Effect; (ii) any amendments to or changes in the Company Charter, Company Bylaws or Subsidiary Documents; (iii) any material damage to, destruction or loss of any asset of the Company or any of its Subsidiaries (whether or not covered by insurance); (iv) any change by the Company in its accounting methods, principles or practices; (v) any revaluation by the Company of any of its assets, including writing down the value of inventory or writing off notes or accounts receivable other than in the ordinary course of business consistent with past practice; (vi) any sale of a material amount of assets (tangible or intangible) of the Company or any of its Subsidiaries other than sales of Company Products or Resale Equipment in the ordinary course of business consistent with past practice; (vii) any recalls, field notifications or field corrections with respect to products manufactured by or on behalf of the Company or any of its Subsidiaries, excluding any work performed in compliance with warranties provided by the Company in the ordinary course of business; or (viii) any other action or event that would have required the consent of Parent pursuant to *Section 5.2* had such action or event occurred after the date of this Agreement.

Section 3.10 *No Undisclosed Liabilities*.

(a) Except as reflected in the Company Balance Sheet, the Company has no liabilities (absolute, accrued, contingent or otherwise) which are required by GAAP to be set forth on a consolidated balance sheet of the Company and its consolidated Subsidiaries or in the notes thereto, other than (i) any liabilities and obligations incurred since the date of the Company Balance Sheet in the ordinary course of business consistent with past practice, (ii) any liabilities or obligations incurred in connection with the transactions contemplated by this Agreement and (iii) liabilities that, individually or in the aggregate, have not had, and would not reasonably be expected to have, a Company Material Adverse Effect.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(b) The Company is not a party to, or has any commitment to become a party to, any joint venture, partnership agreement or any similar contract (including any contract relating to any transaction,

A-13

Table of Contents

arrangement or relationship between or among the Company or any of its Subsidiaries, on the one hand, and any unconsolidated affiliate, including any structured finance, special purpose or limited purpose entity or person, on the other hand) where the purpose or primary intention of such arrangement is to avoid disclosure of any material transaction involving the Company in the Company's consolidated financial statements.

Section 3.11 *Absence of Litigation; Investigations*. Prior to the date of this Agreement, there were no material claims, actions, suits, proceedings, governmental investigations, inquiries or subpoenas (other than challenging or arising from or relating to the Merger or any of the other transactions contemplated by this Agreement), (a) pending against the Company or any of its properties or assets, (b) to the Company's knowledge, threatened against the Company or any of its properties or assets or (c) whether filed or threatened, that have been settled or compromised by the Company within the three years prior to the date of this Agreement and at the time of such settlement or compromise were material. The Company is not subject to any outstanding order, writ, injunction or decree that would reasonably be expected to be material or would reasonably be expected to prevent or delay the consummation of the transactions contemplated by this Agreement. There has not been nor are there currently any internal investigations or inquiries being conducted by the Company, the Company Board (or any committee thereof) or any third party at the request of any of the foregoing concerning any financial, accounting, tax, conflict of interest, self-dealing, fraudulent or deceptive conduct or other misfeasance or malfeasance issues.

Section 3.12 *Agreements, Contracts and Commitments*.

(a) For purposes of this Agreement, the term *Company Material Contracts* shall mean any note, bond, mortgage, indenture, guarantee, other evidence of indebtedness, lease, license, contract, agreement or other instrument or obligation to which the Company or any of its Subsidiaries is a party or by which any of them or any of their assets are bound, and which:

(i) has a remaining term of more than one year from the date hereof and (A) cannot be unilaterally terminated by the Company at any time, without material penalty, within thirty (30) days of providing notice of termination, and (B) involves the payment or receipt of money in excess of \$25,000 per year;

(ii) involves the payment or receipt of money in excess of \$50,000 in any year;

(iii) contains covenants limiting the freedom of the Company or any of its Subsidiaries to sell any products or services of or to any other person, engage in any line of business or compete with any person or operate at any location;

(iv) was made with any stockholders, officer, director, Company employee or member of the Company Board, or any service, operating or management agreement or arrangement with respect to any of the Company's assets or properties (whether leased or owned), other than those that are terminable by the Company on no more than thirty (30) days' notice without liability or financial obligation to the Company;

(v) is a dealer, distributor, joint marketing or development contract under which the Company has continuing material obligations to jointly market any product, technology or service and which may not be canceled without penalty upon notice of ninety (90) days or less, or any contract pursuant to which the Company has continuing material obligations to jointly develop any Intellectual Property that will not be owned, in whole or in part, by the Company;

(vi) includes indemnification, guaranty or warranty other than any of those contracts entered into in the ordinary course of the Company's business;

(vii) mortgages, indentures, guarantees, loans or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit;

(viii) settlement agreements under which the Company has ongoing obligations;

(ix) Company IP Contract; or

(x) Company Real Property Leases.

Table of Contents

(b) All of the Company Material Contracts are in full force and effect (except as such enforceability may be subject to Laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of Law governing specific performance, injunctive relief or other equitable remedies).

(c) *Section 3.12(c)* of the Company Disclosure Schedule contains a complete and accurate list of, and true and complete copies have been delivered or made available to Parent with respect to, all Company Material Contracts in effect as of the date hereof or as otherwise set forth on *Section 3.12(c)* of the Company Disclosure Schedule.

(d) As of the date of this Agreement, (i) there is no breach or violation of or default by the Company or any of its Subsidiaries under any of the Company Material Contracts, except such breaches, violations and defaults as have been waived in writing, and (ii) no event has occurred with respect to the Company or any of its Subsidiaries which, with notice or lapse of time or both, would constitute a breach, violation or default, or give rise to a right of termination, modification, cancellation, foreclosure, imposition of a Lien, prepayment or acceleration under any of the Company Material Contracts, which breach, violation or default referred to in clauses (i) or (ii) would reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect.

Section 3.13 Employee Benefit Plans, Options and Employment Agreements.

(a) *Section 3.13* of the Company Disclosure Schedule sets forth a complete and accurate list of all Employee Benefit Plans maintained, or contributed to by the Company or any of its Subsidiaries or to which the Company or any of its Subsidiaries is obligated to contribute, or under which any of them has or may have any liability for premiums or benefits (collectively, the *Company Employee Plans*). There are not currently, nor have there been in the past six years, any Company ERISA Affiliates other than Company Subsidiaries.

(b) With respect to each Company Employee Plan, the Company has made available to Parent complete and accurate copies of (i) such Company Employee Plan (or a written summary of any unwritten plan) together with all amendments, (ii) in the case of any plan for which Forms 5500 are required to be filed, the most recent annual report (Form 5500) with schedules attached, (iii) in the case of any plan that is intended to be qualified under Section 401(a) of the Code, the most recent determination, advisory or opinion letter from the Internal Revenue Service, (iv) each trust agreement, group annuity contract, administration and similar material agreements, investment management or investment advisory agreements, (v) the most recent summary plan descriptions and employee handbook, or other similar material employee communications relating to employee benefits matters, (vi) all current personnel, payroll and employment manuals and policies, (vii) the most recent financial statements for each Company Employee Plan that is funded, (viii) all material correspondence to or from any governmental agency related to any Company Employee Plan during the preceding three years and (ix) the three most recent plan years' discrimination tests for each Company Employee Plan.

(c) The Company and each of its Subsidiaries have complied in all material respects with, and each Company Employee Plan has been administered in all material respects in accordance with, ERISA, the Code and all other applicable Laws and the regulations thereunder and materially in accordance with such Company Employee Plan's terms. Each of the Company and its Subsidiaries have in all material respects met their obligations with respect to each Company Employee Plan and have timely made (or timely will make) all required contributions thereto. All filings and reports as to each Company Employee Plan required to have been submitted to the Internal Revenue Service or to the United States Department of Labor or to any other relevant authority in any jurisdiction have been timely submitted. With respect to the Company Employee Plans, no event has occurred (and, to the Company's knowledge, there exists no condition or set of circumstances) in connection with which the Company or any of its Subsidiaries could reasonably be expected to be subject to any material liability (including penalties or taxes) under ERISA, the Code or any other applicable Law (other than for contributions and routine administrative expenses), nor will the negotiation or consummation of the transactions contemplated by this Agreement, in and of themselves, give rise to any such material liability.

Table of Contents

(d) With respect to the Company Employee Plans, there are no material benefit obligations for which contributions have not been made or properly accrued and there are no material benefit obligations which have not been accounted for by reserves (if required by GAAP), or otherwise properly footnoted in accordance with the requirements of GAAP, on the financial statements of the Company. The assets of each Company Employee Plan which is funded are reported at their fair market value on the books and records of such Company Employee Plan.

(e) No Company Employee Plan (other than the Company Stock Plans) has assets that include securities issued by the Company or any of its Subsidiaries.

(f) Each Company Employee Plan that is intended to be qualified under Section 401(a) of the Code (each, a *Qualified Plan*) (i) is the subject of an unrevoked favorable determination letter from the Internal Revenue Service with respect to such Qualified Plan's qualified status under the Code, as amended by the Tax Reform Act of 1986 and all subsequent legislation, (ii) has remaining a period of time under the Code or applicable Treasury regulations or Internal Revenue Service pronouncements in which to request, and make any amendments necessary to obtain, such a letter from the Internal Revenue Service, or (iii) is a prototype or volume submitter plan that is permitted to rely on the favorable opinion or advisory letter issued to the prototype or volume submitter plan sponsor of such Qualified Plan. No such determination, opinion or advisory letter has been revoked (nor, to the Company's knowledge, has any such revocation been threatened. No act or omission has occurred that would reasonably be expected to adversely affect the qualification of any such Qualified Plan or materially increase the cost to the Company and its Subsidiaries, together, of maintaining or participating in any such Qualified Plan. There has been no termination, partial termination or discontinuance of contributions to any Qualified Plan that will result in material liability to the Company. Each Company Employee Plan which is required to satisfy Section 401(k)(3) or Section 401(m)(2) of the Code has been tested for compliance with, and satisfies in all material respects the requirements of Section 401(k)(3) and Section 401(m)(2) of the Code, as the case may be, for each plan year ending prior to the Closing Date for which testing is required to be completed. No prohibited transaction, within the meaning of Section 4975 of the Code or Sections 406 and 407 of ERISA, which is not otherwise exempt under Section 408 of ERISA (or any exemption issued thereunder), has occurred with respect to any Company Employee Plan.

(g) Neither the Company nor any of its ERISA Affiliates has (i) ever maintained a Company Employee Plan which was ever subject to Section 412 of the Code or Title IV of ERISA or (ii) ever been obligated to contribute to a multiemployer plan (as defined in Section 4001(a)(3) of ERISA). No Company Employee Plan is funded by, associated with or related to a voluntary employees beneficiary association within the meaning of Section 501(c)(9) of the Code. Neither the Company nor any of its ERISA Affiliates has ever maintained or contributed to a multiple employer plan as defined in ERISA or the Code, or a funded welfare plan within the meaning of Section 419 of the Code. No Company Employee Plan provides medical benefits that are not fully insured through an insurance contract.

(h) To the extent permitted by applicable Law, each Company Employee Plan (other than the Company Stock Plans or an employment, severance, change in control or similar agreement with an individual) is amendable and terminable unilaterally by the Company or one or more of its Subsidiaries party thereto or covered thereby at any time without material liability to the Company as a result thereof, other than for benefits accrued as of the date of such amendment or termination and routine administrative costs.

(i) Other than as required under Section 601 et seq. of ERISA, Section 4980B(f) of the Code or similar provisions of state Law, none of the Company Employee Plans promises or provides health or other welfare benefits (excluding routine conversion rights, normal run out of benefit claims under the Company's health insurance plans and normal claims for benefits under the Company's group life insurance, accidental death and dismemberment insurance and disability plans and policies) or coverage to any person following retirement or other termination of employment and neither the Company nor any of its Subsidiaries has ever represented, promised or contracted to provide such benefits or coverage. For each Company Employee Plan which provides benefits after termination of employment (other than medical benefits required to be

Table of Contents

continued under Section 4980B of the Code, Part 6 of Subtitle B of Title I of ERISA or similar provisions of state law and normal claims for benefits under the Company's group life insurance, accidental death and dismemberment insurance and disability plans and policies), the present value of benefits accrued under each such Company Employee Plan are fully funded, fully covered by insurance or reflected on the Company Balance Sheet (or Later Company Financial Statements) in accordance with GAAP.

(j) There is no action, suit, proceeding, claim, arbitration, audit or investigation pending or, to the Company's knowledge, threatened, with respect to any Company Employee Plan, other than claims for benefits in the ordinary course. No Company Employee Plan is or within the last three calendar years has been the subject of, or has received notice that it is the subject of, examination by a government agency or a participant in a government sponsored amnesty, voluntary compliance or similar program. Neither the Company nor any of its Subsidiaries is subject to any material penalty or tax with respect to any Company Employee Plan under Section 502(i) of ERISA or Sections 4975 through 4980 of the Code.

(k) To the Company's knowledge, each individual who has received compensation for the performance of services on behalf of the Company or any of the Company's Subsidiaries has been properly classified as an employee or independent contractor in accordance with applicable Law.

(l) Except as would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect, with respect to each Company Employee Plan maintained or covering employees outside the United States, and the books and records thereof: (i) all liabilities with respect to such plan are set forth on a consolidated balance sheet of Company or in the notes thereto in accordance with GAAP; and (ii) no such plan is or within the last two calendar years has been the subject of, or has received notice that it is the subject of, an examination by a government agency or a participant in a government sponsored amnesty, voluntary compliance or similar program that has given rise to or is reasonably expected to give rise to any liability. *Section 3.13(l)* of the Company Disclosure Schedule lists each country in which the Company or any of its Subsidiaries has operations and the number of employees in each such country.

(m) *Section 3.13(m)* of the Company Disclosure Schedule sets forth a true, complete and correct list of: (i) all employment agreements with employees of the Company or any of its Subsidiaries (other than at-will offer letters that are consistent with the Company's general form and do not provide for severance payments or benefits, notice periods for termination or change of control benefits) and all material terms and conditions of employees of the UK Subsidiary; (ii) all employees or former employees of the Company and the UK Subsidiary who have executed a non-competition agreement with the Company and/or the UK Subsidiary the term of which has not yet expired; (iii) all severance agreements, programs and policies of the Company and/or the UK Subsidiary with or relating to its employees, excluding programs and policies required to be maintained by Law; and (iv) all plans, programs, agreements and other arrangements of the Company pursuant to which payments (or acceleration of benefits or vesting of options or lapse of repurchase rights) may be required, or may become payable directly or indirectly as a result of or in connection with, the negotiation or consummation of the transactions contemplated by, or the execution of, this Agreement (either alone or in connection with additional or subsequent events). True, complete and correct copies of each of the foregoing agreements to which any employee of the Company or the UK Subsidiary is a party have been made available to Parent.

(n) All contributions required to be made with respect to any Company Employee Plan on or prior to the Effective Time have been or will be timely made or are or will be reflected on the Company Balance Sheet (or Later Company Financial Statements) in accordance with GAAP. The Company: (i) has withheld and reported all amounts required by Law or by agreement to be withheld and reported with respect to wages, salaries and other payments to employees; (ii) is not liable for any arrears of wages or any taxes or any penalty for failure to comply with any of the foregoing; and (iii) is not liable for any payment to any trust or other fund governed by or maintained by or on behalf of any governmental authority, with respect to unemployment compensation benefits, social security or other benefits or obligations for current or former employees (other than routine payments to be made in the normal course of business and consistent with past practice).

Table of Contents

(o) The negotiation or consummation of the transactions contemplated by this Agreement will not, either alone or in combination with another event, (i) entitle any current or former employee, officer or other service provider of the Company or any of its Subsidiaries to severance pay, or any other payment from the Company or any of its Subsidiaries or forgiveness of indebtedness or (ii) accelerate the time of payment or vesting (other than in connection with the termination of the Company 401(k) Plan pursuant to *Section 6.8(b)* hereof), cause a lapse of repurchase rights or increase the amount of compensation due any such employee, officer or other service provider. There is no Company Employee Plan or other contract, agreement, plan or arrangement that, individually or collectively, could give rise to the payment of any amount that would not be deductible pursuant to Sections 280G (determined without regard to Section 280G(b)(4) of the Code) as a result of the Merger.

(p) Each nonqualified deferred compensation plan (as defined in Section 409A(d)(1) of the Code) sponsored or maintained by the Company or any of its Subsidiaries has been operated since January 1, 2005 in good faith compliance with Section 409A of the Code and Notice 2005-1 to the extent subject thereto. No such plan has been materially modified (within the meaning of IRS Notice 2005-1) at any time after October 3, 2004.

Section 3.14 *Labor Matters.*

(a) The Company and its Subsidiaries are in compliance in all material respects with all applicable Laws respecting employment and employment practices, including, without limitation, all Laws respecting terms and conditions of employment, health and safety, wages and hours, child labor, immigration, employment discrimination, employment termination, disability rights or benefits, equal opportunity, plant closures and layoffs, affirmative action, workers' compensation, labor relations, employee leave issues and unemployment insurance.

(b) There are no personnel manuals or handbooks applicable to employees of the Company or its Subsidiaries, other than those set forth in *Section 3.14(b)* of the Company Disclosure Schedule, true and complete copies or written summaries of which have heretofore been provided to Parent.

(c) There are no actions, suits, claims, grievances, investigations, or other proceedings pending or, to the Company's knowledge, threatened, between (i) the Company or its Subsidiaries (and/or any of their current or former officers, directors, employees, or representatives, in their capacities as such) and (ii) any of their respective current or former employees, directors, consultants or independent contractors, or any applicant for employment or classes of the foregoing, or any Governmental Entity, which actions, suits, claims, grievances, investigations, or other proceedings have or would reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. There are no pending or, to the Company's knowledge, threatened or reasonably anticipated claims or actions against the Company under any worker's compensation policy or long-term disability policy.

(d) The Company and its Subsidiaries have good labor relations, and the Company and/or its Subsidiaries and their respective employees, agents or representatives have not committed any unfair labor practice as defined in the National Labor Relations Act or any similar foreign, state or local law. Neither the Company nor its Subsidiaries is a party to, bound by or subject to (and none of the Company's or its Subsidiaries' properties or assets is bound by or subject to) any labor agreement, collective bargaining agreement, work rules or practices, or any other labor-related agreements or arrangements with any labor union, labor organization, trade union (in the case of the UK Subsidiary, whether recognized or unrecognized) or works council or other body of employees. There are no labor agreements, collective bargaining agreements, work rules or practices, or any other labor-related agreements or arrangements that pertain to any of the employees of the Company or its Subsidiaries, and no employees of the Company or its Subsidiaries are represented by any labor union, labor organization, trade union or works council with respect to their employment with the Company or its Subsidiaries, as the case may be.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(e) To the Company's knowledge, there are no current labor union organizing activities with respect to any employees of the Company or its Subsidiaries, and no labor union, labor organization, trade union,

A-18

Table of Contents

works council, or group of employees of the Company or its Subsidiaries has made a pending demand for recognition or certification, and there are no representation or certification proceedings or petitions seeking a representation proceeding presently pending or threatened in writing to be brought or filed with the National Labor Relations Board or any other labor relations tribunal or authority. To the Company's knowledge, there are no labor disputes, strikes, slowdowns, work stoppages, lockouts, or threats thereof, against or affecting the Company.

(f) No employee of the Company or its Subsidiaries (i) to the Company's knowledge, is in violation of any term of any patent disclosure agreement, non-competition agreement, or any restrictive covenant to a former employer relating to the right of any such employee to be employed by the Company or its Subsidiaries because of the nature of the business conducted or presently proposed to be conducted by the Company or its Subsidiaries or relating to the use of trade secrets or proprietary information of others, or (ii) in the case of any key employee or group of key employees, has given notice as of the date of this Agreement to the Company or any of its Subsidiaries, as the case may be, that such employee or any employee in a group of key employees intends to terminate his or her employment with the Company or any of its Subsidiaries, as the case may be. All of the non-competition agreements currently in effect between the Company and/or its Subsidiaries and their respective employees are valid.

(g) The Company and its Subsidiaries are and have been in compliance with all notice and other requirements under the Worker Adjustment and Retraining Notification Act of 1988, as amended (the *WARN Act*), and any foreign, state or local Law relating to plant closings and layoffs or redundancies. The Company or any of its Subsidiaries is not currently engaged in any layoffs or employment terminations sufficient in number to trigger application of the *WARN Act* or any state, local or foreign Law relating to plant closings and layoffs or redundancies. *Section 3.14(g)* of the Company Disclosure Schedule contains a true and complete list of the names and the sites of employment or facilities of those individuals who suffered an employment loss (as defined in the *WARN Act*) at any site of employment or facility of the Company during the 90-day period prior to the date of this Agreement. *Section 3.14(g)* of the Company Disclosure Schedule shall be updated immediately prior to the Closing with respect to the 90-day period prior to the Closing. In connection with such person's employment, no employee of the UK Subsidiary would be entitled to any amount other than the basic statutory redundancy payments calculated in accordance with Section 162 of the Employment Rights Act of 1996 or to include in the calculation of such person's continuous employment with the UK Subsidiary any employment by any other person before such person's employment with the UK Subsidiary. Within a period of one year prior to the Closing, the UK Subsidiary has not been a party to any relevant transfer as defined in the Transfer of Undertakings (Protection of Employment) Regulations 1981 (*TUPE*) nor has the UK Subsidiary failed to comply with any duty to inform and consult any appropriate representatives under *TUPE*.

(h) The execution of this Agreement and the consummation of the transactions contemplated by this Agreement will not result in any breach or other violation of any collective bargaining agreement, employment agreement, consulting agreement or any other labor-related agreement to which the Company or any of its Subsidiaries is a party.

Section 3.15 Properties and Assets.

(a) The Company has good and valid title to, or a valid leasehold interest in, all the properties and assets which it purports to own or lease (real, tangible, personal and mixed), including all the properties and assets reflected in the Company Balance Sheet (except for personal property *sold* since the date of the Company Balance Sheet in the ordinary course of business consistent with past practice). All properties and assets reflected in the Company Balance Sheet are free and clear of all Liens, except for Liens reflected on the Company Balance Sheet and Liens for current taxes not yet due and other Liens that do not materially impair the use or operation of the property or assets subject thereto.

(b) *Section 3.15* of the Company Disclosure Schedule sets forth a true, complete and correct list of all real property owned, leased, subleased or licensed by the Company and the location of such premises. Complete

Table of Contents

copies of all material real property leases, licenses or other occupancy agreements to which the Company is a party (collectively, the *Company Real Property Leases*) have been delivered to or made available to Parent. *Section 3.15* of the Company Disclosure Schedule lists all Company Real Property Leases.

(c) As of the date of this Agreement, (i) all Company Real Property Leases are in full force and effect (except as such enforceability may be subject to Laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of Law governing specific performance, injunctive relief or other equitable remedies), (ii) there is no existing material default by the Company under any of the Company Real Property Leases, except such defaults as have been waived in writing, (iii) no event has occurred with respect to the Company which, with notice or lapse of time or both, would constitute a default of any of the Company Real Property Leases, and (iv) to the Company's knowledge, there are no defaults of any material obligations of any party other than the Company under any Company Real Property Lease.

Section 3.16 Taxes.

(a) The Company and each of its Subsidiaries have timely filed with the appropriate taxing authorities all material Tax Returns required to be filed by them, and all such Tax Returns are true, correct and complete, in all material respects, in accordance with applicable law. All Taxes required to be paid by the Company and each of its Subsidiaries (whether or not shown to be due on such Tax Returns) have been timely paid. There are no Liens relating or attributable to or Taxes on any assets of the Company or any of its Subsidiaries, other than liens relating to Taxes not yet due and payable. Neither the Company nor any of its Subsidiaries has granted any outstanding waiver of any statute of limitations with respect to, or any outstanding extension of a period for the assessment of, any Tax. The accruals and reserves for Taxes (exclusive of any accruals for deferred taxes or similar items that reflect timing differences between tax and financial accounting principles) reflected in the Company's Balance Sheet are adequate to cover all Taxes accruable through the date thereof (including taxes being contested) in accordance with GAAP. All liabilities for Taxes attributable to the period commencing on the date following the date of the Company's Balance Sheet were incurred in the ordinary course of business and are consistent in type and amount with Taxes attributable to similar prior periods.

(b) The Company and each of its Subsidiaries has timely paid or withheld with respect to their employees all federal and state income Taxes, Federal Insurance Contribution Act, Federal Unemployment Tax and other Taxes required to be paid or withheld (and has timely paid over any withheld amounts to the appropriate Taxing authority). Neither the Company nor any of its Subsidiaries has received any notice of any Tax deficiency outstanding, proposed or assessed against the Company or its Subsidiaries. No audit or other examination of any Tax Return of the Company or any of its Subsidiaries is presently in progress, and neither the Company nor any of its Subsidiaries have received any written notice of any audit examination, deficiency, refund litigation, proposed adjustment or matter in controversy with respect to any Tax Return of the Company or its Subsidiaries.

(c) Neither the Company nor any of its Subsidiaries is a party to or bound by any Tax indemnity, Tax sharing or Tax allocation agreement nor does the Company owe any amount under any such agreement. Except for the group of which the Company is the common parent, the Company has never been a member of an affiliated group of corporations within the meaning of Section 1504 of the Code. Except with respect to the group referred to in the preceding sentence, neither the Company nor any of its Subsidiaries are liable for the Taxes of any person under Treasury Regulation 1.1502-6 (or any similar provision of state, local or foreign Law, and including any arrangement for group relief within a jurisdiction or similar arrangement) as a transferee or successor, by contract or otherwise. Neither the Company nor any of its Subsidiaries has ever been a party to any joint venture, partnership or other agreement that could be treated as a partnership for Tax purposes.

(d) To the extent requested by Parent, the Company has made available to Parent complete and correct copies of all Tax Returns, examination reports and statements of deficiencies assessed against or agreed to by the Company and each of its Subsidiaries with respect to all taxable years for which the statutes of limitation have not expired.

Table of Contents

(e) Neither the Company nor any of its Subsidiaries has agreed, or is it required to, make any material adjustment under Section 481 of the Code by reason of a change in accounting method or otherwise prior to the Effective Time.

(f) Neither the Company nor any of its Subsidiaries is, or ever has been, a United States real property holding corporation (as defined in Section 897(c)(2) of the Code) during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code.

(g) Neither the Company nor any of its Subsidiaries has constituted either a distributing corporation or a controlled corporation (within the meaning of Section 355(a)(1)(A) of the Code) in a distribution of stock intended to qualify for tax-free treatment under Section 355 of the Code (i) in the two years prior to the date of this Agreement or (ii) in a distribution which could otherwise constitute part of a plan or series of related transactions (within the meaning of Section 355(e) of the Code) in connection with the Merger.

(h) Neither the Company nor any of its Subsidiaries has engaged in, or has any commitment to engage in, a reportable transaction as set forth in Treas. Reg. § 1.6011-4(b) or any a transaction that is the same as or substantially similar to one of the types of transactions that the Internal Revenue Service has determined to be a tax avoidance transaction and identified by notice, regulation, or other form of published guidance as a listed transaction, as set forth in Treas. Reg. § 1.6011-4(b)(2).

Section 3.17 *Environmental Matters.*

(a) The Company is in compliance in all material respects with federal, state, local and foreign Laws and regulations relating to pollution, protection or preservation of human health or the environment, including, without limitation, Laws and regulations relating to emissions, discharges, releases or threatened releases of toxic or hazardous substances, materials or wastes, petroleum and petroleum products, asbestos or asbestos-containing materials, polychlorinated biphenyls, radon, or lead or lead-based paints or materials (*Materials of Environmental Concern*), or otherwise relating to the generation, storage, containment (whether above ground or underground), disposal, recycling, transport, management or handling of Materials of Environmental Concern or any product containing Materials of Environmental Concern, or the preservation of the environment, the mitigation of adverse effects thereon or exposure of any person to Materials of Environmental Concern (collectively, *Environmental Laws*), and including, but not limited to, compliance with any Company Permits or other governmental authorizations or the terms and conditions thereof and compliance with any Laws respecting the sale, distribution or labeling of products pursuant to Environmental Laws.

(b) The Company has not received any written notice, whether from a governmental authority or otherwise, alleging any violation of or noncompliance with any Environmental Laws by the Company.

(c) There is no pending or threatened claim, action, investigation, or notice by any person or entity alleging potential liability on the part of the Company for investigatory, cleanup or governmental response costs, or natural resources or property damages, or personal injuries, attorney's fees or penalties relating to (i) the presence, or release into the environment, of any Materials of Environmental Concern at any location owned or operated by Company, now or in the past, or otherwise caused by the Company or by the actions of any other party for which the Company would be liable by contract or pursuant to Environmental Laws, or (ii) any violation, or alleged violation, of any Environmental Law (collectively, *Company Environmental Claims*), except where such Company Environmental Claims would not have a Company Material Adverse Effect.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(d) There are no past or present facts or circumstances that could reasonably be expected to form the basis of any Company Environmental Claim against the Company or against any person or entity whose liability for any Company Environmental Claim the Company has retained or assumed either contractually or by operation of Law, except where such Company Environmental Claims would not have a Company Material Adverse Effect.

(e) The Company has made available to Parent all material assessments, reports, data, results of investigations or audits, that are in the possession of Company pertaining to the environmental condition of

A-21

Table of Contents

any real property currently or formerly owned, leased, subleased or licensed by the Company, or the compliance (or noncompliance) by the Company with any Environmental Laws.

Section 3.18 *Intellectual Property*.

(a) *Section 3.18(a)* of the Company Disclosure Schedule lists all Company Products and material Company Intellectual Property.

(b) *Section 3.18(b)* of the Company Disclosure Schedule (i) lists all Registered Intellectual Property owned by, or filed on behalf of or in the name of, the Company (the *Company Registered Intellectual Property*) and (ii) lists any pending proceedings or actions of which the Company has been given notice before any court or tribunal (including the United States Patent and Trademark Office or equivalent authority anywhere in the world) in which any of the Company Registered Intellectual Property is involved.

(c) Each item of Company Registered Intellectual Property is valid and subsisting, and all necessary registration, maintenance and renewal fees in connection with such Company Registered Intellectual Property have been paid and all necessary documents and certificates in connection with such Company Registered Intellectual Property have been filed with the relevant patent, copyright, trademark or other authorities in the United States or foreign jurisdictions, as the case may be, for the purposes of maintaining such Company Registered Intellectual Property. There are no actions that must be taken by the Company within 60 days of Closing, including the payment of any registration, maintenance or renewal fees or the filing of any documents, applications or certificates for the purposes of maintaining, perfecting or preserving or renewing any Company Registered Intellectual Property. In each case in which the Company has acquired any ownership of Company Registered Intellectual Property from any Person, the Company has obtained a valid and enforceable assignment sufficient to irrevocably transfer all rights in such Company Registered Intellectual Property (including the right to seek past and future damages with respect thereto) to the Company and, to the maximum extent provided for by, and in accordance with, applicable laws and regulations, the Company has recorded each such assignment with the relevant governmental authorities, including the PTO, the U.S. Copyright Office, or their respective equivalents in any relevant foreign jurisdiction, as the case may be.

(d) All Company Intellectual Property will be fully transferable, alienable or licensable by Merger Sub and/or Parent without restriction and without payment of any kind to any third party. The Company is the exclusive owner or exclusive licensee of all Company Intellectual Property.

(e) To the extent that any Company Intellectual Property has been developed or created independently or jointly by any Person other than the Company for which the Company has, directly or indirectly, provided consideration for such development or creation, the Company has a written agreement with such Person with respect thereto, and the Company has obtained ownership of, and is the exclusive owner of, all such Intellectual Property therein and associated Intellectual Property Rights by operation of law or by valid assignment, and has required the waiver of all non-assignable rights, including all author or moral rights.

(f) The Company has not (i) granted any exclusive license of or exclusive right to use, or authorized the retention of any exclusive rights to use or joint ownership of, any Intellectual Property or Intellectual Property Rights that is or was Company Intellectual Property, to any other Person, or (ii) in the past two years, transferred, assigned or permitted the Company's rights in such Company Intellectual Property to lapse or enter into the public domain.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(g) Other than (i) the public or open source technology listed in *Section 3.18(q)* of the Company Disclosure Schedule, (ii) Shrink-Wrap Code, (iii) non-disclosure agreements entered into in a writing in the ordinary course of business and materially consistent with the Company's own forms of non-disclosure agreement (copies of which are attached as Schedule 3.18(g) hereto (the *Company NDAs*)), *Section 3.18(g)* of the Company Disclosure Schedule lists all contracts, licenses and agreements to which the Company is a party that includes a license, a non-assertion or covenant not to sue with respect to any Intellectual Property Rights (*Company IP Contract*).

A-22

Table of Contents

(h) (1) The public or open source technology listed in *Section 3.18(g)* of the Company Disclosure Schedule, (2) Shrink-Wrap Code, (3) non-disclosure agreements entered into in a writing in the ordinary course of business and materially consistent with the Company NDAs, (4) the Company Intellectual Property owned by the Company and (5) the agreements set forth in *Section 3.18(g)* of the Company Disclosure Schedule, constitute all of the Intellectual Property and Intellectual Property Rights used in, necessary to or that otherwise would be infringed by the conduct of the business of the Company as it currently is conducted or contemplated by the Company to be conducted, including the design, development, manufacture, use, import and sale of any Company Product.

(i) No third party that has licensed Intellectual Property to the Company has ownership rights or license rights to improvements or derivative works made by the Company in such Intellectual Property that has been licensed to the Company.

(j) The Company is not a party to any settlements, covenants not to sue, consents, decrees, stipulations, judgments, or orders resulting from suits, actions or similar legal proceedings which (i) restrict the Company's rights to use any Intellectual Property owned by and material to the business of the Company as currently conducted or (ii) restrict the conduct of the business of the Company as currently conducted in order to accommodate any third Person's Intellectual Property Rights.

(k) The Company currently has in place a commercially reasonable program to assess whether its activities infringe or misappropriate the Intellectual Property Rights of others. The operation of the business of the Company as it is currently conducted, including the design, development, use, import, branding, advertising, promotion, marketing, manufacture and sale of any Company Product, to the knowledge of the Company after due inquiry, has not and does not infringe or misappropriate any Intellectual Property Rights of any Person (excluding any Intellectual Property Rights arising from any patent that is issued subsequent to the Closing Date), violate any right of any Person (including any right to privacy or publicity), or constitute unfair competition or trade practices under the laws of any jurisdiction. In the past two years, the Company has not received notice from any Person claiming that such operation or any act, any Company Product or Company Intellectual Property infringes or misappropriates any Intellectual Property Rights of any Person or constitutes unfair competition or trade practices under the laws of any jurisdiction (nor does the Company have knowledge (after due inquiry) of any basis therefor).

(l) Neither this Agreement nor the transactions contemplated by this Agreement, including the assignment to Parent by operation of law or otherwise of any contracts or agreements to which the Company is a party, will result in: (i) Parent or the Merger Sub granting to any third party any right to or with respect to any Intellectual Property Rights owned by, or licensed to, any of them, (ii) Parent or the Merger Sub being bound by, or subject to, any non-compete or other material restriction on the operation or scope of their respective businesses, or (iii) Parent or the Merger Sub being obligated to pay any royalties or other consideration, or offer any discounts, to any third party in excess of those that would be payable by, or required to be offered by, any of them, respectively, in the absence of this Agreement or the transactions contemplated hereby.

(m) To the knowledge of the Company (after due inquiry to the relevant Company staff), no Person is infringing or misappropriating any Company Intellectual Property owned by Company.

(n) The Company has taken reasonable steps that are required or necessary to protect the Company's rights in confidential information and trade secrets of the Company or provided by any other Person to the Company. Without limiting the foregoing, (i) the Company has, and enforces, a policy requiring each current and former employee to execute proprietary information, confidentiality and assignment agreements substantially in the Company's standard form for employees (copies of which are attached as Schedule 3.18(n)(i) hereto (the *Employee Proprietary Information Agreement*)), (ii) the Company has required and requires each current and former consultant or contractor to execute a consulting agreement containing proprietary information, confidentiality and assignment provisions substantially in the Company's standard form for consultants or contractors (copies of which are attached as Schedule 3.18(n)(ii) hereto (the *Consultant Proprietary Information Agreement*)) and (iii) all current and

Table of Contents

former employees, consultants and contractors of the Company have executed an Employee Proprietary Information Agreement or a Consultant Proprietary Information Agreement, as appropriate, without exclusions for the assignment of Intellectual Property as provided for therein.

(o) No Company Intellectual Property, Intellectual Property Rights or Company Product is subject to any pending proceeding or outstanding decree, order, judgment or settlement agreement or stipulation that restricts in any manner the use, transfer or licensing thereof by the Company or may affect the validity, use or enforceability of such Company Intellectual Property, Intellectual Property Rights or Company Product.

(p) (i) Since August 1, 2000 and, to the knowledge of the Company after due inquiry, prior to August 1, 2000, no government funding, facilities or resources of a university, college, other educational institution or research center or funding from third parties was used in the development of the Company Intellectual Property and (ii) no Governmental Entity, university, college, other educational institution or research center has any claim or right in or to the Company Intellectual Property. To the Company's knowledge after due inquiry, no current or former employee, consultant or independent contractor of the Company who was involved in, or who contributed to, the creation or development of any Company Intellectual Property, has performed services for the government, a university, college or other educational institution, or a research center, during a period of time during which such employee, consultant or independent contractor was also performing services for the Company.

(q) Except as set forth on *Section 3.18(q)-1* of the Company Disclosure Schedule, no Intellectual Property of the Company, of a third party or in the public domain, that constitutes open source, public source or freeware Intellectual Property, or any modification or derivative thereof, including any version of any software licensed pursuant to any GNU general public license or limited general public license or other software that is licensed pursuant to a license that purports to require the distribution of, or access to, source code or purports to restrict one's ability to charge for distribution of software (collectively *Open Source*), was used in, incorporated into, integrated or bundled with any Intellectual Property that is, or was incorporated in or used in the development or compilation of any Company Product or otherwise distributed by the Company. *Section 3.18(q)-2* sets forth a list of all Open Source that is included in, or provided or distributed with any Company Product and for each use of Open Source: (1) a description of the functionality of the Open Source, (2) the applicable license terms, (3) the applicable Company Product, and (4) the copyright holder of such Open Source.

(r) Except for the warranties and indemnities contained in the Company's standard form agreements for the distribution and sale of Company Products, (copies of which are attached as Schedule 3.18(r) hereto (the *Product Agreements*)) and warranties implied by law, the Company has not given any warranties or indemnities relating to Company Products.

(s) The Company has not (i) disclosed to any third Person any material confidential source code for any Company Product or (ii) made any such source code subject to any open source license, nor is the Company obligated to make the source code for such Company Product generally available. No event has occurred, and no circumstance or condition exists, that (with or without notice or lapse of time, or both) will, or would reasonably be expected to, result in the disclosure or delivery by the Company or any Person acting on their behalf to any Person of any Source Code that is Company Intellectual Property.

(t) The Company has disclosed in writing to Parent all information relating to any problem or issue with respect to any of the Company Products (or any other Company Intellectual Property) which does, or may reasonably be expected to, adversely affect the value, functionality or fitness for the intended purpose of such Company Product or Company Intellectual Property. Without limiting the foregoing, there have been, and are, no claims asserted against Company, any of its Subsidiaries or any of their distributors related to the Company Products or Company Intellectual Property.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(u) There have been no unauthorized intrusions or breaches of the security of the Company's information technology systems. The Company has implemented any and all security patches or upgrades that are generally available for the Company's information technology systems.

A-24

Table of Contents

(v) The Company does not have any obligation to pay any third party any royalties or other fees in excess of \$25,000 in the aggregate in calendar year 2004 or any annual period thereafter for the use of Intellectual Property and no obligation to pay such royalties or other fees in excess of \$50,000 in the aggregate will result from the execution and delivery by the Company of this Agreement and the consummation of the transactions contemplated by this Agreement.

Section 3.19 *Insurance*.

All fire and casualty, general liability, business interruption, product liability, sprinkler and water damage insurance policies and other forms of insurance maintained by the Company has been made available to Parent. Each such policy is in full force and effect and all premiums due thereon have been paid in full. None of such policies shall terminate or lapse (or be otherwise adversely affect) by reason of the execution and delivery of this Agreement or the consummation of the transactions contemplated by this Agreement.

Section 3.20 *Interested Party Transactions*. Since December 31, 2003, no event has occurred that would be required to be reported as a Certain Relationship or Related Transaction pursuant to Statement of Financial Accounting Standards No. 57.

Section 3.21 *Brokers*. No broker, finder or investment banker (other than Merrill Lynch, Pierce, Fenner & Smith Incorporated (*Merrill Lynch*), whose brokerage, finder's or other fees will be paid by the Surviving Corporation) is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of the Company. The Company has furnished to Parent a complete and correct copy of all agreements between the Company and Merrill Lynch pursuant to which Merrill Lynch would be entitled to any such payment.

Section 3.22 *Opinion of Financial Advisor of the Company*. The financial advisor of the Company, Merrill Lynch has delivered to the Company its opinion, dated the date of this Agreement, that as of such date, the Merger Consideration is fair, from a financial point of view, to the stockholders of the Company. The Company has provided a true, complete and correct copy of such opinion to Parent. As of the date hereof, such opinion has not been withdrawn, revoked or modified.

Section 3.23 *Anti-Takeover Statute Not Applicable*. Except for Section 203 of the DGCL (which shall not prohibit the transactions contemplated by the Agreement), no business combination, fair price, moratorium, control share acquisition or other similar anti-takeover statute or regulation under the DGCL or other applicable Law (each, a *Takeover Statute*) is applicable to the Merger or any of the other transactions contemplated by this Agreement or the Company Voting Agreements.

Section 3.24 *Disclosure*. No representation or warranty made by the Company contained in this Agreement, and no statement contained in the Company Disclosure Schedule or in any certificate furnished to Parent pursuant to any provision of this Agreement (including the Company Financial Statements and the notes thereto) contains any untrue statement of a material fact or omits to state a material fact necessary in order to make the statements herein or therein, in the light of the circumstances under which they were made, not misleading. The Company has provided Parent with or made available to Parent all of the material contracts heretofore requested on behalf of Parent, and all other material information concerning the Company or any Company Subsidiary in the possession, custody or control of the Company or any Company Subsidiary. None of the Company or its Subsidiaries is required to file any forms, report, schedules or other documents with the SEC.

Table of Contents

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF PARENT

Except (i) as set forth in the written disclosure schedule prepared by Parent which is dated as of the date hereof and has been delivered by Parent to the Company in connection herewith (the *Parent Disclosure Schedule*) or (ii) as otherwise disclosed in any Parent SEC Report (as defined below) filed with the SEC prior to the date hereof (other than in any risk factors or forward looking statements contained therein, which shall not qualify, modify or otherwise affect the representations and warranties set forth in this *Article IV*), Parent represents and warrants to the Company as follows:

Section 4.1 *Organization and Qualification; Merger Sub*. Parent and each of its Subsidiaries (including Merger Sub) is an entity duly organized, validly existing and in good standing under the Laws of the jurisdiction of its organization and has the requisite corporate or other power and authority necessary to own, lease and operate the properties it purports to own, lease or operate and to carry on its business as it is now being conducted. Parent and each of its Subsidiaries (including Merger Sub) is duly qualified or licensed as a foreign corporation to do business, and is in good standing, in each jurisdiction where the character or location of the properties owned, leased or operated by it or the nature of its activities makes such qualification or licensing necessary, except for such failures to be so duly qualified or licensed and in good standing that would not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. A true, complete and correct list of all of Parent's Subsidiaries, together with the jurisdiction of incorporation of each Subsidiary, the authorized capitalization of each Subsidiary, and the percentage of each Subsidiary's outstanding capital stock owned by Parent or another Subsidiary or affiliate of Parent, is set forth in *Section 4.1* of the Parent Disclosure Schedule. Parent owns all of the outstanding shares of capital stock of each of its Subsidiaries. Except for obligations or liabilities incurred in connection with their incorporation and the transactions contemplated by this Agreement and except for this Agreement and any other agreements or arrangements contemplated by this Agreement, Merger Sub has not incurred, directly or indirectly, any obligations or liabilities or engaged in any business activities of any type or kind whatsoever or entered into any agreements or arrangements with any person. Merger Sub does not directly or indirectly own any equity or similar interest in, or any interest convertible into or exchangeable or exercisable for any equity or similar interest in, any corporation, partnership, limited liability company, joint venture or other business association or entity, excluding securities in any publicly traded company held for investment by Parent and comprising less than one percent (1%) of the outstanding stock of such company.

Section 4.2 *Certificate of Incorporation and Bylaws*. Parent has heretofore made available to the Company a true, complete and correct copy of its articles of incorporation, as amended to date (the *Parent Charter*), and bylaws, as amended to date (the *Parent Bylaws*), and has furnished to the Company true, complete and correct copies of the certificate of incorporation of Merger Sub, as amended to date (the *Merger Sub Charter Documents*). The Parent Charter, Merger Sub Charter Documents and the charter and bylaws (or equivalent organizational documents) each as amended to date, of each of Parent's Subsidiaries (the *Parent Sub Documents*) are in full force and effect. Parent is not in violation of any of the provisions of the Parent Charter or Parent Bylaws, and none of Parent's Subsidiaries is in violation of its respective Parent Sub Documents.

Section 4.3 *Capitalization*.

(a) The authorized capital stock of Parent consists of 50,000,000 shares of Parent Common Stock. As of January 20, 2006, (i) 12,996,427 shares of Parent Common Stock were issued and outstanding; (ii) 904,124 shares of Parent Common Stock are reserved for issuance pursuant to Parent's 2002 Nonstatutory Stock Option Plan (the *2002 Parent NSO Plan*), 785,253 of which have been granted as options under such plan and 118,871 of which remained available for issuance under such plan; (iii) 246,667 shares of Parent Common Stock were reserved for issuance upon exercise of awards granted pursuant to Parent's 2000 Director Stock Option Plan (the *2000 Director Plan*), 140,000 of which have been granted as options under such plan and 106,667 of which remained available for issuance under such plan;

Table of Contents

(iv) 2,154,262 shares of Parent Common Stock were reserved for issuance upon exercise of awards granted pursuant to Parent's 2000 Employee Stock Option Plan (the *2000 Employee Plan*), 1,316,702 of which have been granted as options under such plan and 837,560 of which remained available for issuance under such plan; (v) 15,000 shares of Parent Common Stock were reserved for issuance upon exercise of awards granted pursuant to Parent's 1991 Stock Option Plan (the *1991 Plan*), 15,000 of which have been granted as options under such plan and none of which remained available for issuance under such plan; (vi) 20,000 shares of Parent Common Stock were reserved for issuance upon exercise of awards granted pursuant to Parent's 1991 Director Option Plan (the *1991 Director Plan*), 20,000 of which have been granted as options under such plan and none of which remained available for issuance under such plan; (vii) 629,515 shares of Parent Common Stock were reserved for issuance pursuant to Parent's Employee Stock Purchase Plan (*Parent ESPP*); (viii) 1,200,000 shares of Parent Common Stock were reserved for issuance upon exercise of awards authorized for grant pursuant to the Parent 2005 Stock Option Plan (the *Parent 2005 Plan*), 279,300 of which have been granted as options under pursuant to the Parent 2005 Plan and 920,700 of which remained available for grant under such Parent 2005 Plan. The 2002 Parent NSO Plan, the 2000 Employee Plan, the 2000 Director Plan, the 1991 Plan, the 1991 Director Plan and the Parent 2005 Plan are collectively referred to herein as the *Parent Stock Plans*. Between December 31, 2005 and the date of this Agreement, Parent has not issued any securities (including derivative securities) except for shares of Parent Common Stock issued upon exercise of stock options outstanding.

(b) *Section 4.3(b)* of the Parent Disclosure Schedule sets forth a true, complete and correct list of all persons who, as of January 20, 2006 held outstanding awards to acquire shares of Parent Common Stock (the *Parent Stock Options*) under the Parent Stock Plans or under any other equity incentive plan or arrangement of Parent, indicating, with respect to each Parent Stock Option then outstanding, the tax status of such option under Section 422 of the Code, the number of shares of Parent Common Stock subject to such Parent Stock Option, the name of the plan under which such Parent Stock Option was granted and the exercise price, date of grant, vesting schedule and expiration date thereof, including to the extent to which any vesting has occurred as of the date of this Agreement and whether (and to what extent) the vesting of such Parent Stock Option will be accelerated in any way by the consummation of the transactions contemplated by this Agreement or by the termination of employment or engagement or change in position of any holder thereof following or in connection with the consummation of the Merger. Parent has made available to the Company true, complete and correct copies of all Parent Stock Plans and the forms of all stock option agreements evidencing outstanding Parent Stock Options.

(c) Except as described in *Section 4.3* no capital stock of the Parent or any of its Subsidiaries or any security convertible or exchangeable into or exercisable for such capital stock is issued, reserved for issuance or outstanding as of the date of this Agreement. Except as described in *Section 4.3*, there are no options, preemptive rights, warrants, calls, rights, commitments, agreements, arrangements or understandings of any kind to which Parent or any of its Subsidiaries is a party, or by which Parent or any of its Subsidiaries is bound, obligating Parent or any of its Subsidiaries to issue, deliver or sell, or cause to be issued, delivered or sold, additional shares of capital stock of Parent or any of its Subsidiaries or obligating Parent or any of its Subsidiaries to grant, extend or accelerate the vesting of or enter into any such option, warrant, call, right, commitment, agreement, arrangement or understanding. There are no shareholder agreements, voting trusts, proxies or other similar agreements, arrangements or understandings to which Parent or any of its Subsidiaries is a party, or by which it or they are bound, obligating Parent or any of its Subsidiaries with respect to any shares of capital stock of Parent or any of its Subsidiaries. There are no rights or obligations, contingent or otherwise (including rights of first refusal in favor of Parent), of Parent or any of its Subsidiaries, to repurchase, redeem or otherwise acquire any shares of capital stock of Parent or any of its Subsidiaries or to provide funds to or make any investment (in the form of a loan, capital contribution or otherwise) in any such Subsidiary or any other entity. There are no registration rights or other similar agreements, arrangements or understandings to which Parent or any of its Subsidiaries is a party, or by which it or they are bound, obligating Parent or any of its Subsidiaries with respect to any shares of Parent Common Stock or shares of capital stock of any such Subsidiary.

Table of Contents

(d) All outstanding shares of Parent's capital stock are, all shares of Parent Common Stock reserved for issuance as specified above will be (upon issuance on the terms and conditions specified in the instrument pursuant to which they are issuable), and all shares of Parent Common Stock to be issued in the Merger have been or will be (when issued in accordance with this Agreement), duly authorized, validly issued, fully paid and nonassessable and not subject to, or issued in violation of, any purchase option, call option, right of first refusal, preemptive right, subscription right or any similar right under any provision of the CCC, the Parent Charter, the Parent Bylaws or any agreement, arrangement or understanding to which Parent is a party or is otherwise bound. None of the outstanding shares of the Parent Common Stock have been issued in violation of any federal or state securities Laws. All of the outstanding shares of capital stock of each of Parent's Subsidiaries are duly authorized, validly issued, fully paid and nonassessable, and all such shares are owned by Parent or a Subsidiary of Parent free and clear of all Liens. The Parent Common Stock to be issued in the Merger, when issued in accordance with this Agreement, will be registered under the Securities Act of 1933, as amended (the *Securities Act*) and the Exchange Act and registered or exempt from registration under any applicable state securities or *Blue Sky* Laws.

(e) The Parent Common Stock constitutes the only class of securities of Parent or its Subsidiaries registered or required to be registered under the Exchange Act.

(f) There are no accrued and unpaid dividends with respect to any outstanding shares of capital stock of Parent.

(g) The authorized capital stock of Merger Sub consists of 100 shares of Merger Sub Common Stock, all of which are issued and outstanding and fully paid and nonassessable. All of the issued and outstanding capital stock of Merger Sub is, and immediately preceding the Effective Time will be, owned by Parent, and there are (i) no other shares of capital stock or voting securities of Merger Sub, (ii) no securities of Merger Sub convertible into or exchangeable for shares of capital stock or voting securities of Merger Sub and (iii) no options or other rights to acquire from Merger Sub, and no obligations of Merger Sub to issue, any capital stock, voting securities or securities convertible into or exchangeable for capital stock or voting securities of Merger Sub.

Section 4.4 Authority Relative to this Agreement; Shareholder Approval.

(a) Subject only to the approval of the shareholders of Parent as described below, Parent has full corporate power and authority to execute and deliver this Agreement and to consummate the transactions contemplated hereby. The execution and delivery of this Agreement and the consummation of the transactions contemplated hereby have been duly and validly approved by the Board of Directors of Parent (the *Parent Board*) and the Board of Directors of Merger Sub. The Parent Board has (i) unanimously determined that this Agreement and the transactions contemplated hereby are advisable and in the best interests of the shareholders of Parent, (ii) approved this Agreement and the Merger and (iii) has unanimously recommended that the shareholders of Parent approve the issuance of shares of Parent Common Stock in the Merger (the *Parent Voting Proposal*). This Agreement has been duly and validly executed and delivered by Parent and Merger Sub and (assuming due authorization, execution and delivery by the Company) this Agreement constitutes a valid and binding obligation of Parent and Merger Sub enforceable against Parent and Merger Sub in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium or other similar Laws now or hereafter in effect relating to creditors' rights generally and by general equitable principles (regardless of whether enforceability is considered in a proceeding in equity or at Law).

(b) Except for the approval of the Parent Voting Proposal by the affirmative vote of the holders of a majority of the shares of Parent Common Stock present and voting at a duly constituted meeting of the holders of Parent Common Stock (the *Parent Shareholders Meeting*, and together with the Requisite Company Stock Approval to be obtained at a duly constituted meeting of the holders of Company Capital Stock (the *Company Stockholder Meeting*), the *Merger Shareholders Actions*), of the shareholders of the Parent to consider the Parent Voting Proposal (the *Requisite Parent Shareholder Approval*) and the

Table of Contents

approval of the Merger by Parent, in its capacity as sole shareholder of Merger Sub, no other corporate proceedings on the part of Parent or Merger Sub are necessary to approve this Agreement and to consummate the transactions contemplated hereby.

Section 4.5 *No Conflict, Required Filings and Consents.*

(a) The execution and delivery by Parent and Merger Sub of this Agreement do not, the execution and delivery by Parent and Merger Sub of any instrument required hereby to be executed and delivered at the Closing will not, and the performance by Parent and Merger Sub of their respective agreements and obligations under this Agreement by Parent and Merger Sub will not, (i) conflict with or violate the Parent Charter, the Parent Bylaws, the Merger Sub Charter Documents or any Parent Sub Documents, (ii) in any material respect, conflict with or violate any Law applicable to Parent or Merger Sub or any Law by which Parent's properties are bound or affected, (iii) except as would not reasonably be expected to have a Parent Material Adverse Effect, result in any breach of or constitute a default (or an event that with notice or lapse of time or both would become a default) or impair Parent's rights or alter the rights or obligations of any third party including monetary obligations under, or give to any third party any rights of termination, amendment, payment, acceleration or cancellation of, or result in the creation of a Lien on any of the properties or assets (including intangible assets) of Parent pursuant to any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which Parent is a party or by which Parent or its properties is bound or affected, or (iv) other than options under the Parent Stock Plans, give rise to or result in any person having, or having the right to exercise, any pre-emptive rights, rights of first refusal, rights to acquire or similar rights with respect to any capital stock of Parent or any of its assets or properties.

(b) The execution and delivery by Parent and Merger Sub of this Agreement do not, the execution and delivery by Parent and Merger Sub of any instrument required hereby to be executed and delivered at the Closing will not, and the performance of the respective agreements of, and obligations under, this Agreement by Parent and Merger Sub will not, require any consent, approval, order, license, authorization, registration, declaration or permit of, or filing with or notification to, any Governmental Entity, except (i) as may be required by the HSR Act, (ii) as may be required under any foreign antitrust or competition Law or regulation, (iii) the filing of the Registration Statement on Form S-4 (the *Registration Statement*) with the SEC in accordance with the Securities Act, and the filing of the Proxy Statement/Prospectus/ Information Statement (as defined in *Section 6.4*) with the SEC under the Exchange Act, (iv) such clearances, consents, approvals, orders, licenses, authorizations, registrations, declarations, permits, filings and notifications as may be required under applicable U.S. federal and state or foreign securities Laws, (v) the filing of the Certificate of Merger or other documents as required by the DGCL and (vi) such other consents, approvals, orders, registrations, declarations, permits, filings or notifications which, if not obtained or made, would not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

Section 4.6 *Compliance; Permits.*

(a) Parent is and has been in material compliance with and is not in material default or violation of (and has not received any notice of material non-compliance, default or violation with respect to) any Law applicable to it or by which any of its respective properties are bound or affected.

(b) Parent holds all permits, licenses, easements, variances, exemptions, consents, certificates, authorizations, registrations, orders and other approvals from Governmental Entities that are material to the operation of its business as currently conducted (collectively, the *Parent Permits*). The Parent Permits are in full force and effect, have not been violated in any material respect and no suspension, revocation or cancellation thereof has been threatened, and to Parent's knowledge there is no action, proceeding or investigation pending or threatened, seeking the suspension, revocation or cancellation of any Parent Permits. No Parent Permit shall cease to be effective as a result of the consummation of the transactions contemplated by this Agreement, other than as would not reasonably be expected to have a Parent Material Adverse Effect.

Table of Contents

Section 4.7 *SEC Filings; Financial Statements.*

(a) Parent has filed all forms, reports, schedules, statements and other documents, including any exhibits thereto, required to be filed by Parent since January 1, 2003 with the SEC (collectively, the *Parent SEC Reports*). The Parent SEC Reports, including all forms, reports and documents filed by Parent with the SEC after the date hereof and prior to the Effective Time, (i) were and, in the case of Parent SEC Reports filed after the date hereof, will be, prepared in all material respects in accordance with the applicable requirements of the Securities Act and the Exchange Act, as the case may be, and the rules and regulations thereunder and (ii) did not at the time they were filed (or if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing) and, in the case of such forms, reports and documents filed by Parent with the SEC after the date of this Agreement, will not as of the time they are filed, contain any untrue statement of a material fact or omit to state a material fact required to be stated in such Parent SEC Reports or necessary in order to make the statements in such Parent SEC Reports, in light of the circumstances under which they were made, not misleading. None of the Subsidiaries of Parent is required to file any forms, report, schedules or other documents with the SEC.

(b) Each of the consolidated financial statements (including, in each case, any related notes and schedules) contained in the Parent SEC Reports, including any Parent SEC Reports filed between the date of this Agreement and the Closing, complied or will comply, as of its respective date, in all material respects with all applicable accounting requirements and the published rules and regulations of the SEC with respect thereto, was or will be prepared in accordance with GAAP (except as may be indicated in the notes thereto) applied on a consistent basis throughout the periods involved and fairly presented in all material respects or will fairly present in all material respects the consolidated financial position of Parent and its consolidated Subsidiaries as of the respective dates thereof and the consolidated results of the operations and cash flows of Parent and its consolidated Subsidiaries for the periods indicated, except as otherwise explained therein and except that any unaudited interim financial statements are subject to normal and recurring year-end adjustments which have not been made and are not expected to be material in amount, individually or in the aggregate. The unaudited balance sheet and notes related thereto of Parent contained in the Parent SEC Report on Form 10-Q for the fiscal quarter ended September 30, 2005 is referred to herein as the *Parent Balance Sheet*.

(c) The chief executive officer and chief financial officer of Parent have made all certifications required by, and would be able to make such certifications as of the date hereof and as of the Closing Date as if required to be made as of such dates pursuant to, Sections 302 and 906 of the Sarbanes-Oxley Act and any related rules and regulations promulgated by the SEC and the statements contained in any such certifications are complete and correct, and Parent is otherwise in compliance with all applicable effective provisions of the Sarbanes-Oxley Act and the applicable listing standards and corporate governance rules of the Nasdaq.

(d) Each of the consolidated financial statements (including, in each case, any related notes and schedules) contained in the Parent SEC Reports, accurately reflects the revenues and costs relating to the Parent Material Contracts (as defined below).

Section 4.8 *Disclosure Controls and Procedures.* Since December 31, 2003, Parent and each of its Subsidiaries has had in place disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) promulgated under the Exchange Act) reasonably designed and maintained to ensure that all information (both financial and non-financial) required to be disclosed by Parent in the reports that it files or submits to the SEC under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC and that such information is accumulated and communicated to Parent's management as appropriate to allow timely decisions regarding required disclosure and to make the certifications of the chief executive officer and chief financial officer of Parent required under the Exchange Act with respect to such reports. Parent maintains internal accounting controls sufficient to provide reasonable assurances that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted

Table of Contents

accounting principles and to maintain accountability for assets, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Parent has made available to Company information regarding its processes for assessing the effectiveness of its disclosure controls and procedures and internal controls over financial reporting and any material reports or correspondence with Parent's internal auditors regarding the same.

Section 4.9 Absence of Certain Changes or Events. From the date of the Parent Balance Sheet, Parent has conducted its business in the ordinary course of business consistent with past practice and, since such date and through the date hereof, there has not occurred: (i) any Parent Material Adverse Effect; (ii) any amendments to or changes in the Parent Charter or Parent Bylaws; (iii) any material damage to, destruction or loss of any asset of Parent (whether or not covered by insurance); (iv) any change by Parent in its accounting methods, principles or practices; (v) any revaluation by Parent of any of its assets, including writing down the value of inventory or writing off notes or accounts receivable other than in the ordinary course of business consistent with past practice; (vi) any sale of a material amount of assets (tangible or intangible) of Parent; (vii) any recalls, field notifications or field corrections with respect to products manufactured by or on behalf of Parent, or (viii) any other action or event that would have required the consent of the Company pursuant to *Section 5.2* had such action or event occurred after the date of this Agreement.

Section 4.10 No Undisclosed Liabilities.

(a) Except as reflected in the Parent Balance Sheet, Parent has no liabilities (absolute, accrued, contingent or otherwise) which are required by GAAP to be set forth on a consolidated balance sheet of Parent and its consolidated Subsidiaries or in the notes thereto, other than (i) any liabilities and obligations incurred since the date of the Parent Balance Sheet in the ordinary course of business consistent with past practice, (ii) any liabilities or obligations incurred in connection with the transactions contemplated by this Agreement and (iii) liabilities that, individually or in the aggregate, have not had, and would not reasonably be expected to have, a Parent Material Adverse Effect.

(b) Parent is not a party to, nor has any commitment to become a party to, any joint venture, partnership agreement or any similar contract (including any contract relating to any transaction, arrangement or relationship between or among Parent or any of its Subsidiaries, on the one hand, and any unconsolidated affiliate, including any structured finance, special purpose or limited purpose entity or person, on the other hand) where the purpose or intended effect of such arrangement is to avoid disclosure of any material transaction involving Parent in the Parent's consolidated financial statements.

Section 4.11 Absence of Litigation; Investigations. Prior to the date of this Agreement, there were no material claims, actions, suits, proceedings, governmental investigations, inquiries or subpoenas (other than challenging or otherwise arising from or relating to the Merger or any of the other transactions contemplated by this Agreement), (a) pending against Parent or any of its properties or assets, (b) to Parent's knowledge, threatened against Parent, or any of its properties or assets or (c) whether filed or threatened, that have been settled or compromised by Parent within three years prior to the date of this Agreement and at the time of such settlement or compromise were material, which claims, actions, suits, proceedings investigations, inquiries or subpoenas referred to in clause (a) and (b) above would reasonably be expected to have a Parent Material Adverse Effect. Parent is not subject to any outstanding order, writ, injunction or decree that would reasonably be expected to be material or would reasonably be expected to prevent or delay the consummation of the transactions contemplated by this Agreement. There has not been nor are there currently any internal investigations or inquiries being conducted by Parent, the Parent Board (or any committee thereof) or any third party at the request of any of the foregoing concerning any financial, accounting, tax, conflict of interest, self-dealing, fraudulent or deceptive conduct or other misfeasance or malfeasance issues.

Table of Contents

Section 4.12 *Agreements, Contracts and Commitments.*

(a) For purposes of this Agreement, the term *Parent Material Contracts* shall mean any note, bond, mortgage, indenture, guarantee, other evidence of indebtedness, lease, license, contract, agreement or other instrument or obligation to which Parent is a party or by which it or any of its assets is bound, and which:

(i) has a remaining term of more than one year from the date hereof and (A) cannot be unilaterally terminated by Parent at any time, without material penalty, within thirty (30) days of providing notice of termination, and (B) involves the payment or receipt of money in excess of \$100,000 per year;

(ii) involves the payment or receipt of money in excess of \$250,000 in any year;

(iii) contains covenants limiting the freedom of Parent to sell any products or services of or to any other person, engage in any line of business or compete with any person or operate at any location;

(iv) was made with any officer, director, Parent employee or member of the Parent Board, or any service, operating or management agreement or arrangement with respect to any of Parent's assets or properties (whether leased or owned), other than those that are terminable by Parent on no more than thirty (30) days' notice without liability or financial obligation to Parent;

(v) is a dealer, distributor, joint marketing or development contract under which Parent has continuing material obligations to jointly market any product, technology or service and which may not be canceled without penalty upon notice of ninety (90) days or less, or any contract pursuant to which Parent has continuing material obligations to jointly develop any Intellectual Property that will not be owned, in whole or in part, by Parent;

(vi) includes indemnification, guaranty or warranty other than any those contracts entered into in the ordinary course of Parent's business;

(vii) mortgages, indentures, guarantees, loans or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit;

(viii) settlement agreements under which Parent has ongoing obligations; or

(ix) Parent Real Property Leases.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(b) All of the Parent Material Contracts that are required to be described in the Parent SEC Reports (or to be filed as exhibits thereto) are so described or filed and are enforceable and in full force and effect (except as such enforceability may be subject to Laws of general application relating to bankruptcy, insolvency, and the relief of debtors and rules of Law governing specific performance, injunctive relief or other equitable remedies).

(c) As of the date of this Agreement, (i) there is no breach or violation of or default by Parent or any of its Subsidiaries under any of the Parent Material Contracts, except such breaches, violations and defaults as have been waived in writing, and (ii) no event has occurred with respect to Parent or any of its Subsidiaries which, with notice or lapse of time or both, would constitute a breach, violation or default, or give rise to a right of termination, modification, cancellation, foreclosure, imposition of a Lien, prepayment or acceleration under any of the Parent Material Contracts, which breach, violation or default referred to in clauses (i) or (ii), would reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

(d) *Section 4.12* of the Parent Disclosure Schedule contains a complete and accurate list of, and true and complete copies have been delivered or made available to the Company with respect to, all Parent Material Contracts in effect as of the date hereof other than the Parent Material Contracts which are listed as an exhibit to Parent's most recent annual report on Form 10-K or a subsequent quarterly report on Form 10-Q or as otherwise set forth on *Section 4.12(b)* of the Parent Disclosure Schedule.

Section 4.13 Employee Benefit Plans, Options and Employment Agreements.

(a) *Section 4.13(a)* of the Parent Disclosure Schedule sets forth a complete and accurate list of all Employee Benefit Plans maintained, or contributed to by Parent, any of its Subsidiaries or any of their

Table of Contents

respective ERISA Affiliates or to which Parent, any of its Subsidiaries or any of their respective ERISA Affiliates is obligated to contribute, or under which any of them has or may have any liability for premiums or benefits for the benefit of employees located in the United States (collectively, the *Parent Employee Plans*).

(b) With respect to each Parent Employee Plan, Parent has made available to the Company complete and accurate copies of (i) such Parent Employee Plan (or a written summary of any unwritten plan) together with all amendments, (ii) in the case of any plan for which Forms 5500 are required to be filed, the most recent annual report (Form 5500) with schedules attached, (iii) in the case of any plan that is intended to be qualified under Section 401(a) of the Code, the most recent determination letter from the Internal Revenue Service, (iv) each trust agreement, group annuity contract, administration and similar material agreements, investment management or investment advisory agreements, (v) the most recent summary plan descriptions and employee handbook, or other similar material employee communications relating to employee benefits matters, (vi) all personnel, payroll and employment manuals and policies, and (vii) the most recent financial statements for each Parent Employee Plan that is funded; (viii) all material correspondence to or from any governmental agency related to any Parent Employee Plan during the preceding three years and (ix) the three most recent plan years' discrimination tests for each Parent Employee Plan.

(c) The Parent, its Subsidiaries and each of its respective ERISA Affiliates have complied in all material respects with, and each Parent Employee Plan has been administered in all material respects in accordance with, ERISA, the Code and all other applicable Laws and the regulations thereunder and materially in accordance with such Parent Employee Plan's terms. Each of Parent, its Subsidiaries and their respective ERISA Affiliates have in all material respects met their obligations with respect to each Parent Employee Plan and have timely made (or timely will make) all required contributions thereto. All filings and reports as to each Parent Employee Plan required to have been submitted to the Internal Revenue Service or to the United States Department of Labor have been timely submitted. With respect to the Parent Employee Plans, no event has occurred, and, to Parent's knowledge, there exists no condition or set of circumstances in connection with which Parent or its Subsidiaries could reasonably be expected to be subject to any material liability (including penalties or taxes) under ERISA, the Code or any other applicable Law (other than for contributions and routine administrative expenses), nor will the negotiation or consummation of the transactions contemplated by this Agreement, in and of themselves, give rise to any such material liability.

(d) With respect to the Parent Employee Plans, there are no material benefit obligations for which contributions have not been made or properly accrued and there are no material benefit obligations which have not been accounted for by reserves (if required by GAAP), or otherwise properly footnoted in accordance with the requirements of GAAP, on the financial statements of Parent. The assets of each Parent Employee Plan which is funded are reported at their fair market value on the books and records of such Parent Employee Plan.

(e) No Parent Employee Plan has assets that include securities issued by Parent, any of its Subsidiaries or any of their respective ERISA Affiliates.

(f) Each Parent Employee Plan that is intended to be qualified under Section 401(a) of the Code (each, a *Qualified Plan*) (i) is the subject of an unrevoked favorable determination letter from the Internal Revenue Service with respect to such Qualified Plan's qualified status under the Code, as amended by the Tax Reform Act of 1986 and all subsequent legislation, (ii) has remaining a period of time under the Code or applicable Treasury regulations or Internal Revenue Service pronouncements in which to request, and make any amendments necessary to obtain, such a letter from the Internal Revenue Service and (iii) is a prototype or volume submitter plan that is permitted to rely on the favorable opinion or advisory letter issued to the prototype or volume submitter plan sponsor of such Qualified Plan. No such determination, opinion or advisory letter has been revoked (nor, to the Company's knowledge, has any such revocation been threatened). No such determination, opinion or advisory letter has been revoked (nor, to Parent's knowledge, has any such revocation been threatened). No act or omission has occurred that would reasonably be expected to adversely affect the qualification of any such Qualified Plan or materially

Table of Contents

increase the cost to Parent and its Subsidiaries, together, of maintaining or participating in any such Qualified Plan. There has been no termination, partial termination or discontinuance of contributions to any Qualified Plan that will result in material liability to Parent. Each Parent Employee Plan which is required to satisfy Section 401(k)(3) or Section 401(m)(2) of the Code has been tested for compliance with, and satisfies in all material respects the requirements of Section 401(k)(3) and Section 401(m)(2) of the Code, as the case may be, for each plan year ending prior to the Closing Date for which testing is required to be completed. No prohibited transaction, within the meaning of Section 4975 of the Code or Sections 406 and 407 of ERISA, which is not otherwise exempt under Section 408 of ERISA (or any exemption issued thereunder), has occurred with respect to any Parent Employee Plan.

(g) Neither Parent nor any of its respective ERISA Affiliates has (i) ever maintained a Parent Employee Plan which was ever subject to Section 412 of the Code or Title IV of ERISA or (ii) ever been obligated to contribute to a multiemployer plan (as defined in Section 4001(a)(3) of ERISA). No Parent Employee Plan is funded by, associated with or related to a voluntary employees beneficiary association within the meaning of Section 501(c)(9) of the Code. Neither Parent nor any of its respective ERISA Affiliates has ever maintained or contributed to a multiple employer plan as defined in ERISA or the Code, or a funded welfare plan within the meaning of Section 419 of the Code.

(h) To the extent permitted by applicable Law, each Parent Employee Plan (other than the Parent Stock Plans or an employment, severance, change in control or similar agreement with an individual) is amendable and terminable unilaterally by Parent or one or more of its Subsidiaries party thereto or covered thereby at any time without material liability to Parent as a result thereof, other than for benefits accrued as of the date of such amendment or termination and routine administrative costs.

(i) Other than as required under Section 601 et seq. of ERISA, Section 4980B(f) of the Code or similar provisions of state Law, none of the Parent Employee Plans promises or provides health or other welfare benefits (excluding routine conversion rights and normal claims for benefits under the Parent's group life insurance, accidental death and dismemberment insurance and disability plans and policies) or coverage to any person following retirement or other termination of employment and neither Parent nor any of its respective ERISA Affiliates has ever represented, promised or contracted to provide such benefits or coverage. For each Parent Employee Plan which provides benefits after termination of employment (other than medical benefits required to be continued under Section 4980B of the Code, Part 6 of Subtitle B of Title I of ERISA or similar provisions of state law and normal claims for benefits under the Parent's group life insurance, accidental death and dismemberment insurance and disability plans and policies), the present value of benefits accrued under each such Parent Employee Plan are fully funded, fully covered by insurance or reflected on the Parent Balance Sheet (or any quarterly or annual consolidated statements of operations, statements of cash flows or statements of changes in shareholders' equity and balance sheets for any period ending on or between the date of this Agreement and the Closing and the related notes thereto) in accordance with GAAP.

(j) There is no action, suit, proceeding, claim, arbitration, audit or investigation pending or, to Parent's knowledge, threatened, with respect to any Parent Employee Plan, other than claims for benefits in the ordinary course. No Parent Employee Plan is or within the last two calendar years has been the subject of, or has received notice that it is the subject of, examination by a government agency or a participant in a government sponsored amnesty, voluntary compliance or similar program.

(k) To Parent's knowledge, each individual who has received compensation for the performance of services on behalf of Parent, any of its Subsidiaries or their respective ERISA Affiliates has been properly classified as an employee or independent contractor in accordance with applicable Law.

(l) Except as would not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect, with respect to each Employee Benefit Plan maintained by Parent, any of its Subsidiaries or any of their ERISA Affiliates that covers employees outside the United States, and the books and records thereof, (i) such plan is in compliance with all applicable Laws of each applicable jurisdiction, (ii) there is no action, suit, proceeding, claim, arbitration, audit or investigation pending or, to Parent's

Table of Contents

knowledge, threatened, with respect to such plan, other than claims for benefits in the ordinary course (iii) all liabilities with respect to such plan are set forth on a consolidated balance sheet of Parent and its Subsidiaries or in the notes thereto in accordance with GAAP; and (iv) no such plan is or within the last two calendar years has been the subject of, or has received notice that it is the subject of, an examination by a government agency or a participant in a government sponsored amnesty, voluntary compliance or similar program that has given rise to or is reasonably expected to give rise to any liability. *Section 4.13(l)* of the Parent Disclosure Schedule lists each country in which Parent or any of its Subsidiaries or affiliates has operations and the number of employees in each such country.

(m) *Section 4.13(m)* of the Parent Disclosure Schedule sets forth a true, complete and correct list of: (i) all employment agreements with employees of Parent or any of its Subsidiaries (other than at-will offer letters that are consistent with Parent's general form and do not provide for severance payments or benefits, notice periods for termination or change of control benefits); (ii) all employees or former employees of Parent who have executed a non-competition agreement with Parent, the term of which has not yet expired; (iii) all severance agreements, programs and policies of Parent or any of its Subsidiaries with or relating to its employees, excluding programs and policies required to be maintained by Law; and (iv) all plans, programs, agreements and other arrangements of Parent or any of its Subsidiaries pursuant to which payments (or acceleration of benefits or vesting of options or lapse of repurchase rights) may be required upon, or may become payable directly or indirectly as a result of or in connection with, the negotiation or consummation of the transactions contemplated by, or the execution of, this Agreement. True, complete and correct copies of each of the foregoing agreements to which any employee of Parent is a party have been made available to Company.

(n) All contributions required to be made with respect to any Parent Employee Plan on or prior to the Effective Time have been or will be timely made or are or will be reflected on the Parent Balance Sheet (or any quarterly or annual consolidated statements of operations, statements of cash flows or statements of changes in shareholders' equity and balance sheets for any period ending on or between the date of this Agreement and the Closing and the related notes thereto) in accordance with GAAP.

(o) The negotiation or consummation of the transactions contemplated by this Agreement will not, either alone or in combination with another event, (i) entitle any current or former employee, officer or other service provider of Parent, or any of its Subsidiaries or any of their respective ERISA Affiliates to severance pay, or any other payment from Parent, any of its Subsidiaries or (ii) accelerate the time of payment or vesting, cause a lapse of repurchase rights or increase the amount of compensation due any such employee, officer or other service provider. There is no Parent Employee Plan or other contract, agreement, plan or arrangement that, individually or collectively, could give rise to the payment of any amount that would not be deductible pursuant to Section 280G (determined without regard to Section 280G(b)(4) of the Code) as a result of the Merger or 162(m) of the Code.

(p) Each nonqualified deferred compensation plan (as defined in Section 4098A(d)(1) of the Code) sponsored or maintained by Parent, any of its Subsidiaries or any of their respective ERISA Affiliates has been operated since January 1, 2005 in good faith compliance with Section 409A of the Code and Notice 2005-1 to the extent subject thereto. No such plan has been materially modified (within the meaning of IRS Notice 2005-1) at any time after October 3, 2004.

Section 4.14 Labor Matters.

(a) Parent is in compliance in all material respects with all applicable Laws respecting employment and employment practices, including, without limitation, all Laws respecting terms and conditions of employment, health and safety, wages and hours, child labor, immigration, employment discrimination, disability rights or benefits, equal opportunity, plant closures and layoffs, affirmative action, workers' compensation, labor relations, employee leave issues and unemployment insurance.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(b) There are no personnel manuals or handbooks applicable to employees of Parent, other than those set forth in *Section 4.14(b)* of the Parent Disclosure Schedule, true and complete copies or written summaries of which have heretofore been provided to the Company.

A-35

Table of Contents

(c) There are no actions, suits, claims, grievances, investigations, or other proceedings pending or, to Parent's knowledge, threatened, between (i) Parent (and/or any of their current or former officers, directors, employees, or representatives, in their capacities as such) and (ii) any of their respective current or former employees, consultants or independent contractors, or any applicant for employment or classes of the foregoing, or any Governmental Entity, which actions, suits, claims, grievances, investigations, or other proceedings have or would reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect.

(d) Parent has good labor relations, and Parent and its employees, agents or representatives have not committed any unfair labor practice as defined in the National Labor Relations Act. Parent is not a party to, bound by or subject to (and none of Parent's properties or assets is bound by or subject to) any labor agreement, collective bargaining agreement, work rules or practices, or any other labor-related agreements or arrangements with any labor union, labor organization, trade union or works council. There are no labor agreements, collective bargaining agreements, work rules or practices, or any other labor-related agreements or arrangements that pertain to any of the employees of Parent, and no employees of Parent are represented by any labor union, labor organization, trade union or works council with respect to their employment with Parent.

(e) To Parent's knowledge, there are no current labor union organizing activities with respect to any employees of Parent, and no labor union, labor organization, trade union, works council, or group of employees of Parent has made a pending demand for recognition or certification, and there are no representation or certification proceedings or petitions seeking a representation proceeding presently pending or threatened in writing to be brought or filed with the National Labor Relations Board or any other labor relations tribunal or authority. To the Parent's knowledge, there are no labor disputes, strikes, slowdowns, work stoppages, lockouts, or threats thereof, against or affecting Parent.

(f) No employee of Parent (i) to Parent's knowledge, is in violation of any term of any patent disclosure agreement, non-competition agreement, or any restrictive covenant to a former employer relating to the right of any such employee to be employed by Parent because of the nature of the business conducted or presently proposed to be conducted by Parent or relating to the use of trade secrets or proprietary information of others, or (ii) in the case of any key employee or group of key employees, has given notice as of the date of this Agreement to Parent that such employee or any employee in a group of key employees intends to terminate his or her employment with Parent.

(g) Parent is and has been in compliance with all notice and other requirements under the WARN Act, and any similar foreign, state or local Law relating to plant closings and layoffs. Parent is not currently engaged in any layoffs or employment terminations sufficient in number to trigger application of the WARN Act or any similar state, local or foreign Law. *Section 4.14(g)* of the Parent Disclosure Schedule contains a true and complete list of the names and the sites of employment or facilities of those individuals who suffered an employment loss (as defined in the WARN Act) at any site of employment or facility of Parent during the 90-day period prior to the date of this Agreement. *Section 4.14(g)* of the Parent Disclosure Schedule shall be updated immediately prior to the Closing with respect to the 90-day period prior to the Closing.

(h) The execution of this Agreement and the consummation of the transactions contemplated by this Agreement will not result in any breach or other violation of any collective bargaining agreement, employment agreement, consulting agreement or any other labor-related agreement to which Parent is a party.

Section 4.15 Properties; Encumbrances.

(a) Parent has good and valid title to, or a valid leasehold interest in, all the properties and assets which it purports to own or lease (real, tangible, personal and mixed), including all the properties and assets reflected in the Parent Balance Sheet (except for personal property sold since the date of the Parent Balance Sheet in the ordinary course of business consistent with past practice). All properties and assets reflected in

Table of Contents

the Parent Balance Sheet are free and clear of all Liens, except for Liens reflected on the Parent Balance Sheet and Liens for current taxes not yet due and other Liens that do not materially impair the use or operation of the property or assets subject thereto.

(b) *Section 4.15* of the Parent Disclosure Schedule sets forth a true, complete and correct list of all real property owned, leased, subleased or licensed by Parent and the location of such premises. All material real property leases, licenses or other occupancy agreements to which Parent is a party (collectively, the *Parent Real Property Leases*) are either filed as exhibits to the Parent SEC Reports or complete copies thereof have been delivered to or made available to the Company. *Section 4.15* of the Parent Disclosure Schedule lists all Parent Real Property Leases other than the Parent Real Property Leases which are listed as an exhibit to Parent's most recent annual report on Form 10-K or a subsequent quarterly report on Form 10-Q.

(c) As of the date of this Agreement, (i) all Parent Real Property Leases are in full force and effect (except as such enforceability may be subject to Laws of general application relating to bankruptcy, insolvency and the relief of debtors and rules of Law governing specific performance, injunctive relief or other equitable remedies), (ii) there is no existing material default by Parent under any of the Parent Real Property Leases, except such defaults as have been waived in writing, (iii) no event has occurred with respect to Parent which, with notice or lapse of time or both, would constitute a default of any of the Parent Real Property Leases, and (iv) to the Parent's knowledge, there are no defaults of any material obligations of any party other than Parent under any Parent Real Property Lease.

Section 4.16 Taxes.

(a) Parent and its Subsidiaries have timely filed with the appropriate taxing authorities all Tax Returns required to be filed by them and all such Tax Returns are, in all material respects, true, correct and complete in accordance with applicable law. All Taxes required to be paid by Parent (whether or now shown to be due on such Tax Returns) have been timely paid. There are no Liens relating to or attributable to Taxes on any assets of Parent and its Subsidiaries other than Liens relating to Taxes not yet due and payable. Parent and its Subsidiaries have not granted any outstanding waiver of any statute of limitations with respect to, or any outstanding extension of a period for the assessment of, any Tax. The accruals and reserves for Taxes (exclusive of any accruals for deferred taxes or similar items that reflect timing differences between tax and financial accounting principles) reflected in the Parent Balance Sheet are adequate to cover all Taxes accruable through the date thereof (including Taxes being contested) in accordance with GAAP. All liabilities for Taxes attributable to the period commencing on the date following the date of the Parent Balance Sheet were incurred in the ordinary course of business and are consistent in type and amount with Taxes attributable to similar prior periods.

(b) Parent has timely paid or withheld with respect to its employees all federal and state income Taxes, Federal Insurance Contribution Act, Federal Unemployment Tax and other Taxes required to be paid or withheld (and have timely paid over any withheld amounts to the appropriate Taxing authority). Parent and its Subsidiaries have not received any notice of any Tax deficiency outstanding, proposed or assessed against Parent or its Subsidiaries. No audit or other examination of any Tax Return of Parent or its Subsidiaries are presently in progress, and Parent and its Subsidiaries have not received any written notice of any audit examination, deficiency, refund litigation, proposed adjustment or matter in controversy with respect to any Tax Return of Parent or its Subsidiaries.

(c) Parent and its Subsidiaries is not a party to or bound by any Tax indemnity, Tax sharing or Tax allocation agreement nor does Parent or any Parent Subsidiary owe any amount under any such agreement. Except for the group of which Parent and its Subsidiaries are now currently members, Parent has never been a member of an affiliated group of corporations within the meaning of Section 1504 of the Code. Except with respect to the group referred to in the preceding sentence, Parent and its Subsidiaries are not liable for the Taxes of any person under Treasury Regulation 1.1502-6 (or any similar provision of state, local or foreign Law, and including any arrangement for group relief within a jurisdiction or similar arrangement) as a transferee or successor, by contract or otherwise. Parent and its Subsidiaries have never been a party to any joint venture, partnership or other agreement that could be treated as a partnership for Tax purposes.

Table of Contents

(d) To the extent requested by the Company, Parent and its Subsidiaries have made available to the Company complete and correct copies of all Tax Returns, examination reports and statements of deficiencies assessed against or agreed to by Parent and its Subsidiaries with respect to all taxable years for which the statutes of limitation have not expired.

(e) Parent has not agreed nor is it required to make any material adjustment under Section 481 of the Code by reason of a change in accounting method or otherwise prior to the Effective Time.

(f) Parent is not, and has never been, a United States real property holding corporation (as defined in Section 897(c)(2) of the Code) during the applicable period specified in Section 897(c)(1)(A)(ii) of the Code.

(g) Parent has not constituted either a distributing corporation or a controlled corporation (within the meaning of Section 355(a)(1)(A) of the Code) in a distribution of stock intended to qualify for tax-free treatment under Section 355 of the Code (A) in the two years prior to the date of this Agreement or (B) in a distribution which could otherwise constitute part of a plan or series of related transactions (within the meaning of Section 355(e) of the Code) in connection with the Merger.

(h) Parent has not engaged in, or has any commitment to engage in, a reportable transaction as set forth in Treas. Reg. § 1.6011-4(b) or any transaction that is the same as or substantially similar to one of the types of transactions that the Internal Revenue Service has determined to be a tax avoidance transaction and identified by notice, regulation, or other form of published guidance as a reportable transaction, as set forth in Treas. Reg. § 1.6011-4(b)(2).

Section 4.17 *Environmental Matters.*

(a) Parent is in compliance in all material respects with federal, state, local and foreign Laws and regulations relating to Materials of Environmental Concern, or otherwise relating to Environmental Laws, and including, but not limited to, compliance with any Parent Permits or other governmental authorizations or the terms and conditions thereof and compliance with any Laws respecting the sale, distribution or labeling of products pursuant to Environmental Laws.

(b) Parent has not received any written notice, whether from a governmental authority or otherwise, alleging any violation of or noncompliance with any Environmental Laws by Parent for which it is responsible.

(c) There is no pending or threatened claim, action, investigation or notice by any person or entity alleging potential liability on the part of Parent or any of its Subsidiaries for investigatory, cleanup or governmental response costs, or natural resources or property damages, or personal injuries, attorney's fees or penalties relating to (i) the presence, or release into the environment, of any Materials of Environmental Concern at any location owned or operated by Parent, now or in the past, or otherwise caused by Parent or by the actions of any other party for which Parent would be liable by contract or pursuant to Environmental Laws, or (ii) any violation, or alleged violation, of any Environmental Law (collectively, *Parent Environmental Claims*), except where such Parent Environmental Claims would not have a Parent Material Adverse Effect or otherwise require disclosure in the Parent SEC Reports.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(d) There are no past or present facts or circumstances that could reasonably be expected to form the basis of any Parent Environmental Claim against Parent or against any person or entity whose liability for any Parent Environmental Claim Parent has retained or assumed either contractually or by operation of Law, except where such Parent Environmental Claim, if made, would not have a Parent Material Adverse Effect or otherwise require disclosure in the Parent SEC Reports. Parent has made available to the Company all material third party, non privileged assessments, reports, data, results of investigations or audits that is in the possession of Parent regarding environmental matters pertaining to the environmental condition of the business of Parent, or the compliance (or noncompliance) by Parent with any Environmental Laws.

A-38

Table of Contents

Section 4.18 *Intellectual Property*.

(a) For purposes of this Agreement, the term *Parent Registered Intellectual Property* means all Registered Intellectual Property owned by, or filed on behalf of or in the name of, Parent or any of its Subsidiaries.

(b) *Section 4.18(b)* of the Parent Disclosure Schedule sets forth as of the date hereof a true, complete and correct list of all Parent Registered Intellectual Property. All of the Parent Registered Intellectual Property is owned solely by Parent and no Registered Intellectual Property that ever was Parent Registered Intellectual Property has been disposed of, transferred or assigned by Parent in the two years preceding the date hereof.

(c) The Parent Registered Intellectual Property, is subsisting, and has not expired or been cancelled, or abandoned.

(d) There is no pending or, to Parent's knowledge, threatened, and at no time within the three years prior to the date of this Agreement has there been pending any, material suit, arbitration or other adversarial proceeding before any court, government agency or arbitral tribunal or in any jurisdiction alleging that any activities or conduct of Parent's business infringes or will infringe upon, violate or constitute the unauthorized use of the Intellectual Property of any third party or challenging the ownership, validity, enforceability or registrability of any Intellectual Property owned by Parent.

(e) Parent is not a party to any settlements, covenants not to sue, consents, decrees, stipulations, judgments, or orders resulting from suits, actions or similar legal proceedings which (i) restrict Parent's rights to use any Intellectual Property owned by and material to the business of the Parent as currently conducted, (ii) restrict the conduct of the business of Parent as currently conducted in order to accommodate any third party's Intellectual Property rights, or (iii) permit third parties to use any Intellectual Property owned by and used in the business of Parent as currently conducted.

(f) Parent has taken reasonable steps that are required or necessary to protect the Company's rights in confidential information and trade secrets owned by Parent that are material to the business of Parent as currently conducted.

(g) To Parent's knowledge, no third party is misappropriating, infringing, diluting or violating any Intellectual Property owned by Parent that is material to the business of Parent as currently conducted, and no Intellectual Property misappropriation, infringement dilution or violation suits, arbitrations or other adversarial proceedings have been brought before any court, government agency or arbitral tribunal against any third party by Parent which remain unresolved.

(h) Parent does not have any obligation to pay any third party any royalties or other fees in excess of \$100,000 in the aggregate in calendar year 2005 to date or any annual period thereafter for the use of Intellectual Property and no obligation to pay such royalties or other fees in excess of \$250,000 in the aggregate will result from the execution and delivery by Parent of this Agreement and the consummation of the transactions contemplated by this Agreement.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(i) Parent is not in violation of any material license, sublicense, agreement or instrument to which Parent is party or otherwise bound under which Parent derives rights to Intellectual Property that is material to Parent's business as currently conducted, nor will the consummation by Parent of the transactions contemplated hereby result in any loss or impairment of ownership by Parent of, or the right of any of them to use, any Intellectual Property that is material to the business of Parent as currently conducted, nor, to Parent's knowledge, require the consent of any Governmental Entity or third party with respect to any such Intellectual Property.

(j) In the past two years, the Parent has not received notice from any Person claiming that operation of the business of the Parent or any act or Product of Parent infringes or misappropriates any Intellectual Property Rights of any Person or constitutes unfair competition or trade practices under the laws of any jurisdiction (nor does the Parent have knowledge of any basis therefor).

A-39

Table of Contents

Section 4.19 *Insurance*. All fire and casualty, general liability, business interruption, product liability, sprinkler and water damage insurance policies and other forms of insurance maintained by Parent have been made available to the Company. Each such policy is in full force and effect and all premiums due thereon have been paid in full. None of such policies shall terminate or lapse (or be otherwise adversely affect) by reason of the execution and delivery of this Agreement or the consummation of the transactions contemplated by this Agreement.

Section 4.20 *Interested Party Transactions*. Since December 31, 2003, no event has occurred that would be required to be reported as a Certain Relationship or Related Transaction pursuant to Statement of Financial Accounting Standards No. 57.

Section 4.21 *Brokers*. No broker, finder or investment banker (other than SG Cowen Securities Corporation (*SG Cowen*) whose brokerage, finder's or other fee will be paid by Parent) is entitled to any brokerage, finder's or other fee or commission in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of Parent or any of its Subsidiaries. Parent has furnished to the Company a complete and correct copy of all agreements between Parent and SG Cowen pursuant to which SG Cowen would be entitled to any such payment.

Section 4.22 *Opinion of Financial Advisor of Parent*. The financial advisor of Parent, SG Cowen, has delivered to Parent an opinion dated on the date of this Agreement to the effect that as of such date, the Merger Consideration is fair, from a financial point of view, to Parent. Parent has provided a true, complete and correct copy of such opinion to the Company. As of the date hereof, such opinion has not been withdrawn, revoked or modified.

Section 4.23 *Anti-Takeover Statute Not Applicable*. No Takeover Statute is applicable to the Merger or any of the other transactions contemplated by this Agreement.

ARTICLE V

INTERIM CONDUCT OF BUSINESS

Section 5.1 *Affirmative Covenants*. Except as described in *Section 5.1* of the Company Disclosure Schedule in the case of the Company, or *Section 5.1* of the Parent Disclosure Schedule in the case of Parent, or to the extent the other party hereto shall otherwise consent in writing (which consent shall not be unreasonably withheld, delayed or conditioned), during the period from the date of this Agreement and continuing until the earlier of the termination of this Agreement or the Effective Time, each party hereto shall (i) conduct its business only in, and shall not take any action except in, the ordinary course and in a manner that is consistent with past practices and in compliance in all material respects with all applicable Laws, and (ii) use commercially reasonable efforts to preserve intact its business organization, keep available the services of its current officers, employees and consultants, and preserve its present relationships with customers, suppliers, distributors and other persons with which it has significant business relations.

Section 5.2 *Restrictive Covenants on Company*. Except as described in *Section 5.2* of the Company Disclosure Schedule or to the extent the Parent hereto shall otherwise consent in writing (which consent shall not be unreasonably withheld, delayed or conditioned), during the period from the date of this Agreement and continuing until the earlier of the termination of this Agreement or the Effective Time, the Company shall not:

Edgar Filing: NANOMETRICS INC - Form S-4/A

(a) amend or otherwise change its certificate of incorporation, bylaws or other equivalent organizational documents;

(b) issue, sell, transfer, pledge, redeem, accelerate rights under, dispose of or encumber, or authorize the issuance, sale, transfer, pledge, redemption, acceleration of rights under, disposition or encumbrance of, any shares of its capital stock of any class, or any options, warrants, convertible securities or other rights of

A-40

Table of Contents

any kind to acquire any shares of Company Capital Stock (or cash based on the value or appreciation in value of its capital stock), or any other ownership interest in Company, other than (i) the issuance of Company Common Stock upon the exercise of outstanding stock options as of the date hereof or granted thereafter pursuant to the foregoing subsection (i) and (ii) the acceleration of vesting of Canceled Options in accordance with the Company Stock Plan;

(c) sell, pledge, mortgage, dispose, lease, license or encumber any of its properties or assets (whether tangible or intangible), or suffer to exist any Lien thereupon other than (A) sales of assets, excluding equipment, not to exceed, in the aggregate (i) \$25,000 if prior to March 31, 2006 and (ii) \$50,000 if after March 31, 2006; (B) sales, leases or licenses of Company Products in the ordinary course of business consistent with past practice and (C) sale of used Company Products or third party products that the Company has purchased and refurbished (the Resale Equipment) in the ordinary course of business consistent with past practice;

(d) (A) declare, set aside, make or pay any dividend or other distribution (whether in cash, stock or property or any combination thereof) in respect of any of its capital stock, except that a direct or indirect wholly owned Subsidiary of the Company (or a Subsidiary of the Company) may declare and pay a dividend to its parent, (B) split, combine or reclassify any of its capital stock or issue or authorize or propose the issuance of any other securities in respect of, in lieu of or in substitution for shares of its capital stock, or (C) purchase, repurchase, redeem or otherwise acquire, directly or indirectly, any of its securities, or any option, warrant or right to acquire any such securities, or propose to do any of the foregoing, other than pursuant to the exercise of repurchase rights with respect to unvested shares held by individuals terminating employment or service;

(e) acquire (by merger, consolidation or acquisition of stock or assets or otherwise) any corporation, partnership or other business organization or division thereof or any equity interest therein;

(f) incur any indebtedness for borrowed money or issue any debt securities or assume, guarantee or endorse or otherwise as an accommodation become responsible for (whether directly, contingently or otherwise), the obligations of any person for borrowed money, or make any loans or advances or capital contributions to or investments in any other person, except in the ordinary course of business and consistent with past practice;

(g) (A) amend any Company Material Contract in any material respect or enter into any agreement that would be deemed to be a Company Material Contract other than in the ordinary course of business and consistent with past practice, (B) terminate, cancel or waive any right under any Company Material Contract other than in the ordinary course of business consistent with past practices, or (C) enter into, amend or terminate any lease relating to real property;

(h) (A) adopt or implement any shareholder rights plan or similar arrangement, or (B) take any action to cause any Takeover Statute to apply (or fail to take any action to prevent any Takeover Statute from applying) to this Agreement, the Company Voting Agreements or the transactions contemplated hereby;

(i) make or authorize any capital expenditures or purchase of fixed assets, other than in the ordinary course of business and in any event in an aggregate of not more than \$500,000 (and no single item shall exceed \$50,000) other than purchases of Resale Equipment or demonstration equipment in the ordinary course of business consistent with past practice;

Edgar Filing: NANOMETRICS INC - Form S-4/A

(j) modify its standard warranty terms for its products or amend or modify any product warranties in effect as of the date of this Agreement in any manner that is materially adverse to it, other than extensions of warranties in the ordinary course of business;

(k) (A) increase (or agree to increase) the compensation payable or to become payable or accelerate (or agreement to accelerate) the vesting or any benefits to its directors, officers or employees, except for increases in compensation and stock option grants to be made to officers and employees based on annual employment reviews pursuant to a budget provided to the Parent prior to the date hereof and the grant of an

A-41

Table of Contents

option for 50,000 shares of Company Common Stock to each nonemployee director of the Company, (B) hire or promote any officer or director-level employee or appoint any director, (C) make any loan, advance or capital contribution (other than loans or advances of reasonable travel and relocation expenses), or grant any severance or termination pay to any current or former officers, directors, consultants or employees, or enter into or amend any Company Employee Plan or other plan, contract, agreement or arrangement that would be a Company Employee Plan; (D) establish, adopt, enter into or amend any collective bargaining agreement or other plan, agreement, trust, fund, policy or arrangement for the benefit of any of its current or former directors, officers or employees, (E) pay any discretionary bonuses to any of its officers, or (F) materially change any actuarial assumption or other assumption used to calculate funding obligations with respect to any pension or retirement plan, or change the manner in which contributions to any such plan are made or the basis on which such contributions are determined, except, in each case, as may be required by applicable Law or contractual commitments which are existing as of the date of this Agreement and listed in *Section 3.13* of the Company Disclosure Schedule;

(l) take any action to change accounting policies or procedures (including procedures with respect to revenue recognition, payments of accounts payable and collection of accounts receivable), change any assumption underlying, or method of calculating, any bad debt contingency or other reserve, except in each case as required under GAAP or applicable Law;

(m) make any Tax election inconsistent with past practice, change any Tax election already made, settle or compromise any material federal, state, local or foreign Tax liability or agree to an extension of a statute of limitations, fail to file any Tax Return when due (or, alternatively, fail to file for available extensions) or fail to cause such Tax Returns when filed to be complete and accurate; or fail to pay any material Taxes when due;

(n) pay, discharge or satisfy any claims, liabilities or obligations (absolute, accrued, asserted or unasserted, contingent or otherwise), other than the payment, discharge or satisfaction in the ordinary course of business and consistent with past practices of liabilities reflected or reserved against in the Company Balance Sheet or incurred in the ordinary course of business and consistent with past practice;

(o) fail to pay accounts payable and other obligations other than in the ordinary course of business consistent with past practice;

(p) accelerate the collection of receivables or modify the payment terms of any receivables other than in the ordinary course of business consistent with past practices;

(q) sell, securitize, factor or otherwise transfer any accounts receivable other than in the ordinary course of business consistent with past practice;

(r) adopt a plan of complete or partial liquidation, dissolution, merger, consolidation, restructuring, recapitalization or other reorganization (other than as expressly provided in this Agreement);

(s) (A) at any time within the 90-day period before the Effective Time, without complying fully with the notice and other requirements of the WARN Act, effectuate (1) a plant closing (as defined in the WARN Act) affecting any single site of employment or one or more facilities or operating units within any single site of employment of the Company or any of its Subsidiaries, or (2) a mass layoff (as defined in the WARN Act) at any single site of employment or one or more facilities or operating units within any single site of employment of the Company or any of its Subsidiaries; or (B) terminate or lay off employees in such numbers as to give rise to liability under any applicable Laws respecting the

Edgar Filing: NANOMETRICS INC - Form S-4/A

payment of severance pay, separation pay, termination pay, pay in lieu of notice of termination, redundancy pay, or the payment of any other compensation, premium or penalty upon termination of employment, reduction of hours, or temporary or permanent layoffs (it being understood and hereby agreed that for purposes of the WARN Act and this Agreement, the Effective Time is and shall be the same as the effective date within the meaning of the WARN Act);

(t) take any action that would, or would reasonably be expected to, prevent or materially impair or delay its ability to consummate the transaction contemplated by the Agreement;

A-42

Table of Contents

(u) take any action which would make any of its representations or warranties contained in this Agreement untrue or incorrect, or prevent it from performing or cause it not to perform its covenants hereunder, in each case, such that the conditions set forth in *Section 7.2* would not be satisfied; or

(v) authorize, take, or agree in writing or otherwise to take, any of the actions described in *Section 5.2(a)* through *(u)* above, inclusive.

Section 5.3 Restrictive Covenants on Parent. Except as described in *Section 5.3* of the Parent Disclosure Schedule or to the extent the Company shall otherwise consent in writing (which consent shall not be unreasonably withheld, delayed or conditioned), during the period from the date of this Agreement and continuing until the earlier of the termination of this Agreement or the Effective Time, the Parent shall not:

(a) amend or otherwise change its articles of incorporation or bylaws; except as required by this Agreement;

(b) issue, sell, transfer, pledge, redeem, accelerate rights under, dispose of or encumber, or authorize the issuance, sale, transfer, pledge, redemption, acceleration of rights under, disposition or encumbrances of, any shares of its capital stock of any class or any options, warrants, convertible securities or other rights of any kind to acquire any shares of Parent's capital stock, or any other ownership interest in Company, other than (i) grants of stock options for the purchase of up to an aggregate of 400,000 shares of Parent Common Stock to employees or pursuant to the Parent ESPP, (ii) in connection with acquisitions of up to \$25 million of aggregate consideration or (iii) convertible debt offerings or public offerings of Parent Common Stock with not more than \$25 million of aggregate proceeds;

(c) change the size of the Parent Board of Directors, except in accordance with this Agreement;

(d) adopt a plan of complete or partial liquidation, dissolution, restructuring, recapitalization or other reorganization (other than as expressly provided in this Agreement);

(e) take any action that would, or would reasonably be expected to, prevent or materially impair or delay its ability to consummate the transaction contemplated by this Agreement;

(f) take any action which would make any of its representations or warranties contained in this Agreement untrue or incorrect, or prevent it from performing or cause it not to perform its covenants hereunder, in each case, such that the conditions set forth in *Section 7.3* would not be satisfied; or

(g) authorize, take, or agree in writing, or otherwise to take any of the actions described in *Section 5.3(a)* through *(f)* above, inclusive.

ARTICLE VI

ADDITIONAL AGREEMENTS

Section 6.1 *Access to Information; Notice of Certain Matters.*

(a) Subject to the terms of this *Section 6.1*, each of Parent and the Company shall (and shall cause its Subsidiaries and its and their respective directors, officers, employees, auditors, agents and other representatives to) afford to the other party, and its officers, employees, financial advisors, legal counsel, accountants, consultants and other representatives reasonable access during normal business hours to all of its books and records, properties, plants and personnel (including for the purpose of performing such environmental tests and investigations as the Parent or Company deem necessary); *provided, however*, that any such access shall be conducted under the supervision of personnel of the party providing such access and in a manner that does not interfere with the normal operations of the party providing such access.

(b) The Company shall give prompt notice to Parent, and Parent shall give prompt notice to the Company, upon any director or officer of the Company or Parent (as applicable) becoming aware of (i) any governmental complaints, investigations or hearings (or communications indicating that the same may be

Table of Contents

contemplated), or the institution or the threat of significant litigation involving such party or any of its Subsidiaries, and will keep the other party fully informed of such events and (ii) the occurrence, or failure to occur, of any event, that would be reasonably likely to cause any of the conditions set forth in *Article VII* not to be satisfied.

(c) Notwithstanding anything to the contrary set forth herein, nothing in this *Section 6.1* shall require the Company or Parent to disclose any information that, in its sole and absolute discretion, (i) it is not legally permitted to disclose or the disclosure of which would contravene any applicable Law or binding order (including any Antitrust Law), (ii) the disclosure of which would jeopardize any attorney-client or other legal privilege, or (iii) the disclosure of which would conflict with, violate or cause a default under any existing agreement to which it is a party.

(d) No information received pursuant to an investigation made under this *Section 6.1* shall be deemed to (i) qualify, modify, amend or otherwise affect any representations, warranties, covenants or other agreements of the parties set forth in this Agreement or any certificate or other instrument delivered to other party in connection with the transactions contemplated hereby, (ii) amend or otherwise supplement the information set forth in the Company Disclosure Schedule or the Parent Disclosure Schedule, as applicable, (iii) limit or restrict the remedies available to the parties under applicable Law arising out of a breach of this Agreement, or (iv) limit or restrict the ability of either party to invoke or rely on the conditions to the obligations of the parties to consummate the transactions contemplated hereby set forth in *Article VII* hereof.

(e) Each of Parent and the Company shall (and shall cause its directors, officers, employees, auditors, agents and other representatives to) hold in confidence all non-public information acquired from the other party or the other party's representatives as a result of any investigation made under this *Section 6.1* in accordance with the terms of the letter agreement, dated as of December 5, 2005, between Parent and the Company (the *Confidentiality Agreement*).

Section 6.2 No Solicitation.

(a) The Company shall cause each of its Subsidiaries, affiliates, directors, officers, employees, agents and representatives (including any investment banker, financial advisor, attorney, accountant or other representative retained by it) to (i) immediately cease any discussions or negotiations with any other parties that may be ongoing with respect to the possibility or consideration of any Acquisition Proposal (as defined below) and (ii) not release any third party from, or waive any provisions of, any confidentiality or standstill agreement to which it or any of its Subsidiaries is a party with respect to any Acquisition Proposal. Subject to the terms of this *Section 6.2*, the Company shall not, nor shall it authorize or permit any of its Subsidiaries, directors, officers, employees, agents or representatives (including any investment banker, financial advisor, attorney, accountant or other representative retained by it) to, directly or indirectly through another person, (i) solicit, initiate, facilitate or encourage (including by way of furnishing information or assistance), or take any other action designed to solicit, initiate, facilitate or encourage any inquiries with respect to or the making of any proposal that constitutes, or is reasonably likely to lead to, an Acquisition Proposal (except to disclose the existence of this provision), (ii) participate in any discussions or negotiations regarding an Acquisition Proposal (except to disclose the existence of this provision), or (iii) enter into or execute any letter of intent, memorandum of understanding, agreement in principle, merger agreement or similar agreement constituting or relating to an Acquisition Proposal. Any violation of the foregoing restrictions by any representative of the Company, whether or not such representative is so authorized and whether or not such representative is purporting to act on behalf of the Company or otherwise, shall be deemed to be a breach of this Agreement by the Company.

(b) The Company shall notify the Parent promptly (and in any event within 24 hours) after receipt of any Acquisition Proposal, or any request for nonpublic information relating to such party by any person that informs such party that it is considering making, or has made, an Acquisition Proposal, or any inquiry from any person seeking to have discussions or negotiations with the Company relating to a possible Acquisition Proposal. Such notice shall be made orally and confirmed in writing, and shall indicate the identity of the

Table of Contents

person making the Acquisition Proposal, inquiry or request and the material terms and conditions of any inquiries, proposals or offers (including a copy thereof if in writing and any related documentation or correspondence).

(c) Nothing set forth in this *Section 6.2* shall (i) permit the Company to terminate this Agreement, (ii) affect any other obligation of the parties under this Agreement, (iii) limit the Company's obligation to request the Requisite Company Stockholder Approval from all holders of Company Capital Stock, (iv) relieve the Company of its obligation to submit to a vote of its stockholders the Requisite Company Stockholder Approval at the Company Stockholder Meeting, or (v) permit the Company to submit for a vote of its stockholders at or prior to the Effective Time any Acquisition Proposal other than the Company Voting Proposal.

Section 6.3 Board Recommendations. Subject to the terms of this *Section 6.3*, the Company Board (or any committee thereof) shall not:

(a) withdraw or modify, or propose publicly to withdraw or modify, in a manner adverse to the other party, the approval or recommendation by the Company Board or any such committee of this Agreement or the transactions contemplated hereby (any such withdrawal, amendment, modification or proposal, a *Change of Recommendation*); or

(b) adopt, approve or recommend to its stockholders that they accept, or propose publicly to adopt, approve or recommend, any Acquisition Proposal.

Section 6.4 Joint Proxy Statement/Prospectus; Registration Statement.

(a) As promptly as practicable after execution of this Agreement, Parent and the Company shall cooperate with each other regarding, and shall prepare and file with the SEC, the Joint Proxy Statement/Prospectus (as amended or supplemented, the *Joint Proxy Statement/Prospectus*) to be sent to the stockholders of the Company in connection with the Company Stockholder Meeting and to the shareholders of Parent in connection with the Parent Shareholders Meeting, and Parent shall prepare and file with the SEC the Registration Statement (in which the Joint Proxy Statement/Prospectus will be included). The Company and Parent shall use reasonable best efforts to cause the Registration Statement to become effective as soon as practicable thereafter.

(b) Without limiting the generality of the foregoing, each of the Company and Parent shall cause its respective representatives to fully cooperate with the other parties and its respective representatives in the preparation of the Joint Proxy Statement/Prospectus and the Registration Statement, and shall, upon request, furnish the other parties with all information concerning it and its Affiliates as the other may deem reasonably necessary or advisable in connection with the preparation of the Joint Proxy Statement/Prospectus and the Registration Statement. Parent shall use reasonable efforts to take all actions required under any applicable federal or state securities or Blue Sky Laws in connection with the issuance of shares of Parent Common Stock pursuant to the Merger. As promptly as practicable after the Registration Statement becomes effective, Parent and the Company shall cause the Joint Proxy Statement/Prospectus to be mailed to their respective shareholders.

(c) The information supplied or to be supplied by either Parent or the Company for inclusion in the Registration Statement shall not at the time the Registration Statement is filed with the SEC or declared effective by the SEC contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The information supplied or to be supplied by either party for inclusion or incorporation by reference in the Proxy Statement/Prospectus/Information Statement to be sent to the shareholders of such party in connection with the Company Stockholder

Edgar Filing: NANOMETRICS INC - Form S-4/A

Meeting or the Parent Shareholders Meeting, as the case may be, or to be included or supplied by or on behalf of Parent or the Company, as the case may be, for inclusion in any filing pursuant to Rule 165 and Rule 425 under the Securities Act or Rule 14a-12 under the Exchange Act (each, a *Regulation M-A Filing*) shall

A-45

Table of Contents

not, on the date the Proxy Statement/Prospectus/ Information Statement (or any amendment thereof or supplement thereto) is first mailed to shareholders of Parent or the stockholders of the Company, as the case may be, or at the time any Regulation M-A Filing is filed with the SEC or as of the Effective Time, contain any statement which, at such time and in light of the circumstances under which it shall be made, is false or misleading with respect to any material fact, or omit to state any material fact necessary in order to make the statements made therein not false or misleading; or omit to state any material fact necessary to correct any statement in any earlier communication with respect to the solicitation of proxies for the Merger Shareholders Actions which has become false or misleading. The Proxy Statement/Prospectus shall comply in all material respects as to form and substance with the requirements of the Securities Act, the Exchange Act and the rules and regulations thereunder.

(d) Without limiting the generality of the foregoing, prior to the Effective Time (i) the Company and Parent shall notify each other as promptly as practicable upon becoming aware of any event or circumstance which should be described in an amendment of, or supplement to, the Proxy Statement/Prospectus/ Information Statement or the Registration Statement, and (ii) Parent shall notify the Company as promptly as practicable after the receipt by Parent of any written or oral comments of the SEC on, or of any written or oral request by the SEC for amendments or supplements to, the Joint Proxy Statement/Prospectus or the Registration Statement, and shall promptly supply the Company with copies of all correspondence between Parent or any of its Representatives and the SEC with respect to any of the foregoing filings.

(e) The Company and Parent shall make any necessary filing with respect to the Merger under the Securities Act and the Exchange Act and the rules and regulations thereunder.

(f) If applicable, the Company shall also submit to the Company Stockholders for approval in the Joint Proxy Statement/Prospectus, by such number of shares of Company Capital Stock as is required by the terms of Section 280G(b)(5)(B) of the Internal Revenue Code, any payments and/or benefits that may separately or in the aggregate, constitute parachute payments, within the meaning of Section 280G(b)(2) of the Internal Revenue Code (*Section 280G Payments*) (which initial determination shall be made by the Company and shall be subject to review and approval by Parent), such that such Section 280G Payments shall not be deemed to be Section 280G Payments, and prior to the Closing, the Company shall deliver to Parent certification that (i) a Company stockholder vote was solicited in conformance with Section 280G of the Internal Revenue Code and the requisite stockholder approval was obtained with respect to any Section 280G Payments that were subject to the Company stockholder vote or (ii) the Company stockholder approval of Section 280G Payments was not obtained and as a consequence, any such payments and/or benefits will not be made or provided to the extent they would cause any amounts to constitute Section 280G Payments, pursuant to the waivers of those payments and/or benefits duly executed by the affected individuals prior to the Company stockholder vote.

Section 6.5 Merger Shareholders Actions.

(a) The Company, acting through its Board of Directors, shall take all actions in accordance with applicable Law, the Company Charter and the Company Bylaws to promptly and duly call, give notice of, convene and hold as promptly as practicable, and in any event within forty-five (45) days after the declaration of effectiveness of the Registration Statement, the Company Stockholder Meeting for the purpose of considering and approving the Company Voting Proposal and the matters set forth in *Section 6.4(f)*. Parent, acting through its Board of Directors, shall take all actions in accordance with applicable Law, the Parent Charter, the Parent Bylaws and the rules of Nasdaq, to promptly and duly call, give notice of, convene and hold as promptly as practicable, and in any event within forty-five (45) days after the declaration of effectiveness of the Registration Statement, the Parent Shareholder Meeting for the purpose of considering and voting upon the approval of the Parent Voting Proposal.

(b) To the fullest extent permitted by applicable Law, (i) in the case of the Company, the Company Board shall recommend approval of the Company Voting Proposal and the matters set forth in *Section 6.4(f)* by the stockholders of the Company at the Company Stockholders Meeting and include such

Table of Contents

recommendation in the Joint Proxy Statement/Prospectus and (ii) in the case of Parent, the Parent Board shall recommend approval of the Parent Voting Proposal by the shareholders of Parent at the Parent Shareholders Meeting and include such recommendation in the Proxy Statement/Prospectus/ Information Statement. Each of the Company and Parent shall use its reasonable best efforts to solicit from its shareholders actions by written consent or proxies, as the case may be, in favor of the Company Voting Proposal and the matters set forth in *Section 6.4(f)* or the Parent Voting Proposal, respectively, and to secure the Requisite Company Stockholder Approval and the Requisite Parent Shareholder Approval, respectively.

(c) The Company shall submit the Company Voting Proposal and the matters set forth in *Section 6.4(f)* to its stockholders at the Company Stockholder Meeting for the purpose of acting upon such proposal whether or not any actual, potential or purported Acquisition Proposal has been commenced, disclosed, announced or submitted to the Company. Each of the Company and Parent shall use reasonable best efforts to ensure that all actions by written consents or proxies, as the case may be, solicited in connection with its Merger Shareholders Actions are solicited, in compliance with, in the case of the Company, the DGCL, the Company Charter and the Company Bylaws and, in the case of Parent, the rules of the Nasdaq, the CCC, the Parent Charter and the Parent Bylaws, and all other applicable legal requirements. Notwithstanding anything to the contrary contained in this Agreement, each of the Company or Parent, after consultation with the other, may adjourn or postpone the Company Stockholder Meeting or the Parent Shareholder Meeting, as the case may be, to the extent necessary to ensure that any required supplement or amendment to the Joint Proxy Statement/Prospectus is provided to its shareholders or, if as of the time for which the Company Stockholder Meeting or the Parent Shareholder Meeting, as the case may be, is originally scheduled (as set forth in the Joint Proxy Statement/Prospectus), there are insufficient shares of, in the case of the Company, Company Capital Stock and, in the case of Parent, Parent Common Stock, represented (either in person or by proxy) to constitute a quorum necessary to take the action set forth in the Company Stockholder Meeting or conduct the business of the Parent Shareholder Meeting, as the case may be.

(d) Following the Merger Shareholders Actions and at or prior to the Closing, each of the Company and Parent shall deliver to the Corporate Secretary of the other party a certificate setting forth the voting results from the respective Merger Shareholders Actions.

Section 6.6 Reasonable Best Efforts to Complete.

(a) Subject to the terms and conditions of this Agreement, each of Parent and the Company shall cooperate fully with the other and use its reasonable best efforts to take, or cause to be taken, all actions, and to do, or cause to be done, all things necessary, proper or advisable to consummate and make effective, in the most expeditious manner possible, the Merger and the other transactions contemplated hereby, including by (i) obtaining (and cooperating with the other in obtaining) any clearance, consent, authorization, order or approval of, or any exemption by, any Governmental Entity required to be obtained or made by Parent or the Company in connection with the Merger, and making any and all registrations and filings that may be necessary or advisable to obtain the approval or waiver from, or to avoid an action or proceeding by, any Governmental Entity, including all filings required by the HSR Act and any other applicable Antitrust Laws, (ii) obtaining all necessary consents, waivers and approvals under any of the Parent Material Contracts, Company Material Contracts and Company Real Property Leases in connection with the Merger, (iii) authorizing for listing on the Nasdaq, upon official notice of issuance, the shares of Parent Common Stock to be issued in the Merger, (iv) reserving for issuance the shares of Parent Common Stock issuable upon the exercise of all Assumed Options, (v) defending any Lawsuit or other proceeding, whether brought by a Governmental Entity or other third party, seeking to challenge this Agreement or the transactions contemplated hereby, including by seeking to have lifted or rescinded any injunction or restraining order or other order adversely affecting the ability of the parties to consummate the transactions contemplated hereby, and (vi) executing any certificates, instruments or other documents that are necessary to consummate and make effective the transactions contemplated hereby and to fully carry out the purposes and intent of this Agreement.

Table of Contents

(b) Each of the Company and Parent shall keep the other reasonably informed of the status of their respective efforts to consummate the transactions contemplated hereby, including by (i) promptly notifying the other of, and if in writing, furnishing the other with copies of (or, in the case of material oral communications, advising the other orally of) any communications from or with any Governmental Entity (whether domestic, foreign or supranational) with respect to the transactions contemplated hereby, (ii) permitting the other to review and discuss in advance, and consider in good faith the views of the other in connection with, any proposed written (or any material proposed oral) communication with any such Governmental Entity, (iii) not participating in any meeting with any such Governmental Entity unless it consults with the other in advance and to the extent permitted by such Governmental Entity gives the other the opportunity to attend and participate thereat, (iv) furnishing the other with copies of all correspondence, filings and communications between it and any such Governmental Entity with respect to this Agreement and the transactions contemplated hereby, and (v) furnishing the other with such necessary information and reasonable assistance as each of them may reasonably request in connection with its preparation of necessary filings or submissions of information to any such Governmental Entity. Each of the Company and Parent may, as each deems advisable and necessary, reasonably designate any competitively sensitive material provided to the other under this *Section 6.6* as outside counsel only and, in such event, such material and the information contained therein shall be given only to the outside legal counsel of the recipient and shall not be disclosed by such counsel to non-legal directors, officers, employees or other advisors or representatives of the recipient unless express permission is obtained in advance from the source of the materials or its legal counsel.

(c) Notwithstanding anything to the contrary set forth in this *Section 6.6* or elsewhere in this Agreement, neither Parent nor any of its affiliates shall be required to (i) sell or dispose of or hold separately (through a trust or otherwise) any assets or businesses or interests in any assets or businesses of Parent, the Company or their respective affiliates or make any other change in any portion of the businesses of the Company or Parent or incur any other limitation on the conduct of the businesses of the Company or Parent to obtain such clearances, consents, authorizations, orders, approvals and exemptions or agree to do, or submit to orders providing for, any of the foregoing, in each case whether before or after the Effective Time, or (ii) if any governmental body that has the authority to enforce any Antitrust Law seeks, or authorizes its staff to seek, a preliminary injunction or restraining order to enjoin consummation of the Merger, take or agree to take any action which Parent reasonably believes would be prohibited or restricted under such preliminary injunction or restraining order.

(d) In case at any time after the Effective Time any further action is necessary to carry out the purposes of this Agreement or to vest the Surviving Corporation with full title to all properties, assets, rights, approvals, immunities and franchises of any of the parties to the Merger, the proper officers and directors of each party hereto shall take all such necessary action as may be reasonably requested by Parent to achieve such intent.

Section 6.7 Public Announcements. Parent and the Company shall consult with each other before issuing any press release or making any public statement with respect to this Agreement and the transactions contemplated hereby and shall not issue any such press release or make any such public statement without the prior written consent of the other party, which shall not be unreasonably withheld, delayed or conditioned; *provided, however,* that a party may, without the prior consent of the other party, issue such press release or make such public statement as may upon consultation with outside counsel be required by applicable Law or the rules and regulations of the Nasdaq if it has used all reasonable best efforts to consult with the other party prior thereto regarding the timing, scope and content of any such press release or public statement, and *provided, further,* no such consultation shall be required to make any disclosure or otherwise take any action expressly permitted by *Section 6.3*.

Section 6.8 Company Employee Benefits; Company 401(k) Plan.

(a) From and after the Effective Time, Parent will, or will cause the Surviving Corporation to, recognize the prior service with the Company or its Subsidiaries of each employee of the Company or its

Table of Contents

Subsidiaries as of the Effective Time (the *Company Employees*) in connection with all employee benefit plans, programs or policies (including vacation) of Parent or its subsidiaries or affiliates in which Company Employees are eligible to participate following the Effective Time, for purposes of eligibility, vesting and levels of vacation and severance benefits (but not for purposes of benefit accruals or benefit amounts under any defined benefit pension plan or to the extent that such recognition would result in duplication of benefits).

(b) Parent will, or will cause the Surviving Corporation, to make any payments required to be made under the Employee Retention Plan.

(c) Prior to the Effective Time, the Company shall take such actions as Parent may reasonably request so as to enable the Surviving Corporation to effect such actions relating to the Company 401(k) Plan (the *401(k) Plan*) as Parent may deem necessary or appropriate (after reasonable consultation with the Company), including terminating the 401(k) Plan prior to the Effective Time. Unless Parent notifies the Company otherwise, in writing, at least three (3) business days prior to the date on which the Effective Time occurs, the Company shall terminate the 401(k) Plan effective as of the day immediately preceding the date on which the Effective Time occurs. Prior to the Effective Time, the Company shall provide to Parent (i) executed resolutions by the Company's Board of Directors authorizing the termination of the 401(k) Plan and (ii) if applicable, an executed amendment to the 401(k) Plan intended to maintain compliance with all applicable requirements of the Code and regulations thereunder. The form and substance of such resolutions shall be subject to the prior review and approval of Parent, which approval shall not be unreasonably withheld.

Section 6.9 *Company Stock Plan.*

(a) Parent shall assume the Company Stock Plan with such assumption to be effective as of the Effective Time, including the rights and obligations of the Company with respect to the Assumed Options. The Company shall take such reasonable actions prior to the Effective Time as are reasonably necessary to effect the provisions of this *Section 6.9(a)* including taking such actions as may be required to confirm that the Parent Board of Directors (or its committee) shall, effective as of the Effective Time, become the administrator of the assumed Company Stock Plan and shall have any and all amendment authority with respect thereto. For the avoidance of doubt, any assumption by Parent of the Company Stock Plan shall not adversely affect the rights of the holders of options under the Company Stock Plan. Except as set forth on *Section 1.6(c)(iii)* and *Section 1.6(c)(iv)* of the Company Disclosure Schedule, the Company shall take such actions prior to the Effective Time as are reasonably necessary to provide that Assumed Options or Company Restricted Stock, as the case may be, will not accelerate and that any rights of repurchase will not lapse in connection with the Merger pursuant to Section 4 of the Company Stock Plan.

(b) As soon as practicable following the Effective Time, but in any event within fifteen (15) business days thereafter (to the extent Parent has received the most recent copies of the relevant Company Stock Plan), Parent shall prepare and file with the SEC a registration statement on Form S-8 covering the shares of Parent Common Stock issuable pursuant to the outstanding Assumed Options, Parent shall cause the same to become effective.

Section 6.10 *Indemnification and Insurance.*

(a) For six (6) years after the Effective Time, Parent shall, and shall cause the Surviving Corporation and its Subsidiaries to, honor and fulfill in all respects the obligations of the Company and its Subsidiaries under any and all indemnification agreements in effect immediately prior to the Effective Time between the Company or any of its Subsidiaries and any of its current or former directors and officers and any person who becomes a director or officer of the Company or any of its Subsidiaries prior to the Effective Time (the *D&O Indemnified Parties*). In addition, for a period of six (6) years following the Effective Time, Parent shall (and shall cause the Surviving Corporation and its Subsidiaries to) cause the certificate or articles of incorporation and bylaws (and other similar organizational documents) of the Surviving Corporation and its

Table of Contents

Subsidiaries to contain provisions with respect to indemnification and exculpation that are at least as favorable as the indemnification and exculpation provisions contained in the certificate or articles of incorporation and bylaws (or other similar organizational documents) of the Company and its Subsidiaries immediately prior to the Effective Time, and during such six-year period, such provisions shall not be amended, repealed or otherwise modified in any respect, except as required by Law.

(b) For a period of six (6) years after the Effective Time, Parent and the Surviving Corporation shall cause to be maintained in effect the existing policy of the Company's directors and officers and fiduciary liability insurance (the *D&O Policy*) covering claims arising from facts or events that occurred at or prior to the Effective Time (including for acts or omissions occurring in connection with this Agreement and the consummation of the transactions contemplated hereby, to the extent that such acts or omissions are covered by the D&O Policy) and covering each D&O Indemnified Party who is covered as of the Effective Time by the D&O Policy on terms with respect to coverage and amounts that are no less favorable than those terms in effect on the date hereof; *provided, however*, that in no event shall Parent or the Surviving Corporation be required to expend in any one year an amount in excess of 200% of the current annual premium paid by the Company (which annual premium is set forth on *Schedule 6.10(b)* of the Company Disclosure Schedule) for such insurance (such 200% amount, the *Maximum Annual Premium*); and *provided, further*, that if the annual premiums of such insurance coverage exceed such amount, Parent and the Surviving Corporation shall be obligated to obtain a policy with the greatest coverage available for a cost not exceeding the Maximum Annual Premium. Notwithstanding anything in this *Section 6.10* to the contrary, Parent may fulfill its (and Surviving Corporation's) obligations under this *Section 6.10(b)* by purchasing a D&O Policy or a tail policy under the Company's existing D&O Policy, in either case which (i) has an effective term of six (6) years from the Effective Time, (ii) covers only those persons who are currently covered by the Company's directors and officers insurance policy in effect as of the date hereof and only for actions and omissions occurring on or prior to the Effective Time, (iii) contains terms with respect to coverage and amounts that are no less favorable than those terms in the Company's D&O Policy on the date hereof.

(c) The obligations under this *Section 6.10* shall not be terminated, amended or otherwise modified in such a manner as to adversely affect any D&O Indemnified Party (or any other person who is a beneficiary under the D&O Policy or the tail policy referred to in paragraph (b) above (and their heirs and representatives)) without the prior written consent of such affected D&O Indemnified Party or other person who is a beneficiary under the D&O Policy or the tail policy referred to in paragraph (b) above (and their heirs and representatives). Each of the D&O Indemnified Parties or other persons who are beneficiaries under the D&O Policy or the tail policy referred to in paragraph (b) above (and their heirs and representatives) are intended to be third party beneficiaries of this *Section 6.10*, with full rights of enforcement as if a party thereto. The rights of the D&O Indemnified Parties (and other persons who are beneficiaries under the D&O Policy or the tail policy referred to in paragraph (b) above (and their heirs and representatives)) under this *Section 6.10* shall be in addition to, and not in substitution for, any other rights that such persons may have under the certificate or articles of incorporation, bylaws or other equivalent organizational documents, any and all indemnification agreements of or entered into by the Company or any of its Subsidiaries, or applicable Law (whether at Law or in equity).

(d) In the event that Parent, Surviving Corporation or any of their Subsidiaries (or any of their respective successors or assigns) shall consolidate or merge with any other person and shall not be the continuing or surviving corporation or entity in such consolidation or merger, or transfers at least 50% of its properties and assets to any other person, then in each case proper provision shall be made so that the continuing or surviving corporation or entity (or its successors or assigns, if applicable), or transferee of such assets, as the case may be, shall assume the obligations set forth in this *Section 6.10*.

Section 6.11 Company Affiliates. *Section 6.11* of the Company Schedule contains a complete and accurate list of those persons who may be deemed to be, in the Company's reasonable judgment, affiliates of the Company within the meaning of Rule 145 promulgated under the Securities Act (each, a *Company Affiliate* and collectively, the *Company Affiliates*). The Company shall provide Parent with such information and documents

Table of Contents

as Parent reasonably requests for purposes of reviewing and evaluating the foregoing schedule of Company Affiliates. Parent will be entitled to place appropriate legends on the certificates evidencing any Parent Common Stock to be issued to a Company Affiliate pursuant to the terms of this Agreement, and to issue appropriate stop transfer instructions to the transfer agent for the Parent Common Stock.

Section 6.12 *Tax Matters*. None of Parent, Merger Sub or the Company shall, nor shall they permit any of their respective Subsidiaries to, take any action prior to or following the Closing that would reasonably be expected to cause the Merger to fail to qualify as a reorganization within the meaning of Section 368(a) of the Code. Officers of each of Parent, Merger Sub and the Company shall execute and deliver to WSGR, counsel to Parent, and to Perkins Coie LLP, counsel to the Company, certificates containing appropriate representations of Parent, Merger Sub and the Company at such time or times as may be reasonably requested by such Law firms, including the effective date of the Registration and the Effective Time, in connection with their respective deliveries of opinions with respect to the Tax treatment of the Merger.

Section 6.13 *Takeover Statutes*. Notwithstanding any other provision in this Agreement, in no event shall the approval of the Merger and this Agreement by the Company Board under Section 203 of the DGCL be withdrawn, revoked or modified by the Company Board. If any Takeover Statute is or may become applicable to the Merger or any of the other transactions contemplated by this Agreement, the Company and the Company Board, or Parent and the Parent Board, as applicable, shall promptly grant such approvals and take such Lawful actions as are necessary so that such transactions may be consummated as promptly as practicable on the terms contemplated by this Agreement or the Merger, as the case may be, and otherwise take such Lawful actions to eliminate or minimize the effects of such statute, and any regulations promulgated thereunder, on such transactions.

Section 6.14 *Directorships*. Effective as of the Effective Time, the Board of Directors of Parent shall be expanded to include up to three individuals, each of whom shall be reasonably acceptable to the Parent, that prior to the Effective Time served as directors of the Company (each, a *Company Director*); and the remaining members of the Parent's board of directors at the Effective Time shall be individuals that prior to the Effective Time served as directors of Parent (each, a *Parent Director*).

Section 6.15 *Termination of Company Investor Rights*. The Company shall take such steps as may be necessary to provide for the termination as of the Closing of all Company investor rights granted by the Company to its stockholders and in effect prior to the Closing, including but not limited to rights of co-sale, voting, registration, first refusal, board observation or information or operational covenants.

Section 6.16 *Financial Statements and Consents of Accountants*. The Company shall use all reasonable efforts to cause its management and its independent auditors to facilitate on a timely basis (i) the preparation of financial statements (including pro forma financial statements if required) as required by Parent to comply with applicable SEC regulations, (ii) the reasonable review of any Company audit or review work papers for up to the past three (3) years, including the examination of selected financial statements and data and (iii) the delivery of such representations from the Company's independent accountants as may be reasonably requested by Parent of its independent auditors in connection with the preparation of the any filings the Parent is required to make with the SEC. Parent and the Company will each use all reasonable efforts to cause to be delivered to each other consents and certificates from their respective independent auditors, in form reasonably satisfactory to the recipient and customary in scope and substance for consents delivered by independent public accountants in connection with any filings the Parent is required to make with the SEC.

Section 6.17 *Working Capital Loan*. Parent shall provide a loan to the Company in the aggregate amount of \$1,250,000 pursuant to an unsecured, subordinated, convertible promissory note substantially in the form attached hereto as *Exhibit D* (the *Promissory Note*) within ten (10) Business Days after written demand by the Company if the Merger has not occurred and this Agreement has not been terminated prior to the respective Determination Date. The Company may make one such demand on or after April 30, 2006 and one additional

Table of Contents

demand on or after June 30, 2006 (each such date, a Determination Date). In the event this Agreement has been terminated in accordance with its terms prior to a given Determination Date, the Parent shall have no obligation to make any loan to the Company. All principal and interest due under any outstanding Promissory Note shall convert into shares of Company Common Stock if such amounts remain outstanding on the one year anniversary of the termination of this Agreement. The conversion price of the outstanding debt shall be the lesser of (i) the fair market value of the Company Common Stock at the time of such conversion as determined in good faith by the Board of Directors of the Company or (ii) \$0.40 per share. The Promissory Notes shall provide that all principal and accrued but unpaid interest shall become immediately due and payable prior to the completion of any Acquisition Transaction if such Promissory Notes have not been converted to Company Common Stock prior to that date.

ARTICLE VII

CONDITIONS TO THE MERGER

Section 7.1 *Conditions to Obligations of Each Party to Effect the Merger*. The obligation of Parent to effect the Merger, and the obligation of the Company to effect the Merger, shall be subject to the satisfaction at or prior to the Closing of the following conditions:

(a) *Effectiveness of the Registration Statement*. The Registration Statement shall have been declared effective by the SEC under the Securities Act. No stop order suspending the effectiveness of the Registration Statement shall have been issued by the SEC and no proceedings for that purpose and no similar proceeding in respect of the Joint Proxy Statement/Prospectus shall have been initiated or threatened in writing by the SEC.

(b) *Shareholder Approval*. The Requisite Company Stockholder Approval and the Requisite Parent Shareholder Approval shall have been obtained.

(c) *Antitrust Approvals*. All necessary waiting periods (and all extensions thereof) applicable to the Merger under the Antitrust Laws shall have terminated or expired, and all clearances, consents, approvals, orders and authorizations necessary for the consummation of the Merger under the Antitrust Laws shall have been received.

(d) *No Injunctions or Restraints*. No temporary restraining order, preliminary or permanent injunction or other order issued by any court of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the Merger shall be in effect.

(e) *No Illegality*. No statute, rule, regulation or order shall be enacted, entered, enforced or deemed applicable to the Merger by a governmental authority of competent jurisdiction that makes the consummation of the Merger illegal.

(f) *NASDAQ Listing*. The shares of Parent Common Stock issuable in the Merger shall have been authorized for listing on the Nasdaq.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(g) *Tax Opinions.* Parent and the Company shall have received an opinion of WSGR, and Perkins Coie LLP, respectively, dated as of the Effective Time, to the effect that the Merger will qualify as a reorganization within the meaning of Section 368(a) of the Code; *provided, however,* that if (i) Perkins Coie LLP, fails to render such opinion, this condition shall nonetheless be deemed to be satisfied with respect to the Company if WSGR renders such opinion to the Company and (ii) if WSGR fails to render such opinion, this condition shall nonetheless be deemed to be satisfied with respect to Parent if Perkins Coie LLP renders such opinion to Parent. The issuance of such opinions shall be conditioned upon the receipt by such counsel of customary representation letters from each of Parent, Merger Sub and the Company, in each case, in form and substance reasonably satisfactory to such counsel. Each such representation letter shall be dated on or before the date of such opinion and shall not have been withdrawn or modified in any material respect.

A-52

Table of Contents

Section 7.2 *Additional Conditions to Obligations of Parent and Merger Sub to Effect the Merger*. Subject to the matters set forth on Section 7.2 of the Company Disclosure Schedule, the obligations of Parent and Merger Sub to effect the Merger are also subject to the fulfillment on or prior to the Closing of the following additional conditions (each of which may be waived by Parent and Merger Sub in whole or in part at any time prior to the Closing):

(a) *Representations and Warranties*. Each of the representations and warranties of the Company contained in this Agreement shall be true and correct (without giving effect to any qualification as to materiality or Company Material Adverse Effect contained in any specific representation or warranty), as of the date of this Agreement and as of the Closing Date, except (i) for changes contemplated or permitted by this Agreement, (ii) that the accuracy of representations and warranties that by their terms speak as of another date will be determined as of such date and (iii) where any failures of any such representations and warranties to be true and correct would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect; and Parent shall have received a certificate of the Company signed on behalf of the Company by the chief executive officer and chief financial officer of the Company to such effect.

(b) *Agreements and Covenants*. The Company shall have performed or complied in all material respects with all agreements and covenants required by this Agreement to be performed or complied with by it at or prior to the Closing Date; and Parent shall have received a certificate of the Company signed on behalf of the Company by the chief executive officer and the chief financial officer of the Company to such effect.

(c) *No Company Material Adverse Effect*. No Company Material Adverse Effect shall have occurred since the date hereof.

(d) *Contract Consents*. Parent shall have received (i) the Approvals set forth in *Schedule 7.2(d)*, in form and substance reasonably satisfactory to Parent, and (ii) all Approvals, in form and substance reasonably satisfactory to Parent, that may be required in connection with the Merger and the other transactions contemplated hereby under any material Contracts that are executed after the date hereof and would have been required to be set forth in *Section 3.5* of the Company Disclosure Schedule had such Contracts been in effect on the date hereof. All such Approvals referenced in the foregoing clauses (i) and (ii) shall be in full force and effect.

(e) *Contract Terminations*. Parent shall have received evidence reasonably satisfactory to it that the Contracts set forth on *Schedule 7.2(e)* have been terminated and are of no further force or effect.

(f) *Litigation*. There shall be no Action or Proceeding of a material nature pending, or overtly threatened, against Parent or the Company, their respective properties or any of their respective officers or directors (in their capacities as such) arising out of, or in any way connected with, the Merger or the other transactions contemplated by the terms of this Agreement.

(g) *Legal Opinion*. Parent shall have received a legal opinion from Perkins Coie LLP, counsel to the Company, in a form reasonably acceptable to Parent.

(h) *Employees*. Each of the Key Employment Agreements shall be in full force and effect as of the Closing Date and none of the employee parties thereto shall have taken any action to terminate, revoke or otherwise repudiate any such Employment Agreement.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(i) *Company Intellectual Property*. No Person shall have (i) shall have notified Parent, the Company, any Company Subsidiary or any of their respective officers or directors that it intends to commence or that it has commenced, an Action or Proceeding alleging that any of the Intellectual Property, including the Company Intellectual Property, presently embodied or proposed by the Company to be embodied in any of the Company s or any Company Subsidiaries products or services materially infringes or otherwise materially violates the intellectual property rights of such Person, or (ii) otherwise alleged that the Company or any Company Subsidiary does not own or have the right to exploit such intellectual property, including

A-53

Table of Contents

the Company Intellectual Property, unless with respect to any of subsections (i) or (ii), such Person shall have definitively and unconditionally (x) withdrawn such notification, notice or allegation and (y) abandoned such Action or Proceeding.

(j) *Section 280G Payments*. With respect to any payments or benefits that may constitute a Section 280G Payment (as initially determined by the Company and subject to review and approval by Parent), the stockholders of the Company shall have approved, pursuant to the method provided for in the regulations promulgated under Section 280G of the Code, any such Section 280G Payments or shall have disapproved such payments and/or benefits, and, as a consequence, no Section 280G Payments shall be paid or provided for in any manner and Parent and its subsidiaries shall not have any liabilities with respect to any Section 280G Payments.

(k) *Capitalization Certificate*. Parent shall have received from the Company a certificate (the *Capitalization Certificate*), dated as of the Closing Date and executed by the president or chief executive officer and secretary of the Company, in a form reasonably acceptable to Parent, setting forth (i) the name of each Effective Time Company Stockholder and the type and number of shares of Company Capital Stock held by each such Effective Time Company Stockholder and (ii) the name of each holder of a Company Stock Option that is outstanding immediately prior to the Effective Time and the type and number of shares of Company Capital Stock issuable upon the exercise in full of each such Company Stock Option.

(l) *Closing Date Payment Schedule*. Parent and the Company shall each have reviewed and approved and Parent shall have received a certificate of the Company signed on behalf of the Company by the chief executive officer and chief financial officer of the Company a schedule (the *Closing Date Payment Schedule*) reflecting, as of the Effective Time (i) for each holder of Company Capital Stock, the number of shares of Company Capital Stock held of record, the aggregate number of shares of Parent Common Stock payable to such holder in the Merger, the number of such shares payable promptly after the Effective Time (in accordance with *Section 1.6*) and payable into the Escrow Fund (as defined in *Section 9.4*), the amount of cash payable to such holder for any fractional shares, the stock certificate numbers held by each such person and such person's federal tax identification number to the extent such number is known and (ii) for each holder of Company Options, the number of shares of Company Common Stock issuable upon exercise thereof immediately prior to the Effective Time, the number of shares of Parent Common Stock issuable upon exercise thereof following their assumption by Parent (if such Company Options will be Assumed Options in accordance with *Section 1.6(d)*), and the per share exercise price thereof upon such assumption, assuming that such options were fully vested.

(m) *Statement of Expenses*. Parent shall have received from the Company the statement setting forth the Company's good faith estimate of the Expenses incurred by the Company and its Subsidiaries (the *Statement of Company Expenses*).

(n) *FIRPTA Certificate*. The Company shall deliver to Parent a properly executed notice in a form reasonably acceptable to Parent for purposes of satisfying Parent's obligations under Section 897 and 1445 of the Code, together with written authorization for Parent to deliver such notice to the Internal Revenue Service on behalf of the Company after the Closing.

(o) *Limitation on Dissenting Shares*. Holders of no more than five percent (5%) of the outstanding shares of Company Capital Stock (determined on a fully diluted basis) shall have exercised (and not withdrawn or otherwise lost) any appraisal, dissenters' or other similar rights under any applicable Law in connection with the Merger.

(p) *Shareholder Agreements*. The Shareholder Agreements shall be in full force and effect and the Company Stockholders on *Schedule B* shall not have repudiated such agreements.

Table of Contents

Section 7.3 *Additional Conditions to Obligation of the Company to Effect the Merger*. The obligation of the Company to effect the Merger is also subject to the fulfillment at or prior to the Closing of the following additional conditions (each of which may be waived by the Company in whole or in part at any time prior to the Closing):

(a) *Representations and Warranties*. Each of the representations and warranties of Parent contained in this Agreement shall be true and correct (without giving effect to any qualification as to materiality or Parent Material Adverse Effect contained in any specific representation or warranty), as of the date of this Agreement and as of the Closing Date, except (i) for changes contemplated or permitted by this Agreement, (ii) that the accuracy of representations and warranties that by their terms speak as of another date will be determined as of such date and (iii) where any failures of any such representations and warranties to be true and correct would not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect; and the Company shall have received a certificate of Parent signed on behalf of Parent by the chief executive officer and chief financial officer of Parent to such effect.

(b) *Agreements and Covenants*. Parent shall have performed or complied in all material respects with all agreements and covenants required by this Agreement to be performed or complied with by it at or prior to the Closing Date; and the Company shall have received a certificate of Parent signed on behalf of Parent by the chief executive officer and the chief financial officer of Parent to such effect.

(c) *No Parent Material Adverse Effect*. No Parent Material Adverse Effect shall have occurred since the date hereof and be continuing.

ARTICLE VIII

TERMINATION

Section 8.1 *Termination*. This Agreement may be terminated at any time prior to the Effective Time, notwithstanding approval thereof by the stockholders of the Company and/or Parent:

(a) by mutual written consent duly authorized by the Company Board and the Parent Board;

(b) by either Parent or the Company, if the Merger shall not have been consummated by June 30, 2006 (the *Outside Date*); *provided, however*, that the right to terminate this Agreement under this *Section 8.1(b)* shall not be available to any party that has breached its obligations under this Agreement.

(c) by either Parent or the Company, if a court of competent jurisdiction or governmental, regulatory or administrative agency or commission shall have issued a nonappealable final order, decree or ruling or taken any other action having the effect of permanently restraining, enjoining or otherwise prohibiting the Merger (*provided* that the party seeking to terminate this Agreement pursuant to this *Section 8.1(c)* shall have complied with its obligations under *Section 6.6* by using its reasonable best efforts to have any such order, decree, ruling or other action vacated or lifted);

(d) by either Parent or the Company, if the Requisite Company Stockholder Approval shall not have been obtained at the validity held Company Stockholder Meeting; *provided, however*, that the right to terminate this Agreement under this *Section 8.1(d)* shall not be available to the Company if the Company shall have breached the provisions of *Section 6.2*, *Section 6.3* or *Section 6.4*; *provided, further*, that no termination by a party pursuant this *Section 8.1(d)* shall be effective unless concurrently therewith such party fulfills its obligation under *Section 8.3*.

(e) by either Parent or the Company, if the Requisite Parent Shareholder Approval shall not have been obtained at the Parent Shareholder Meeting; *provided, however*, that the right to terminate this Agreement under this *Section 8.1(e)* shall not be available to Parent if Parent shall have breached the provisions of *Section 6.4*; *provided, further*, that no termination by a party pursuant this *Section 8.1(e)* shall be effective unless concurrently therewith such party fulfills its obligation under *Section 8.3*.

(f) by Parent, if the Company shall have breached or failed to perform any of its representations, warranties, or other covenants or agreements contained in this Agreement, which breach or failure to

Table of Contents

perform would reasonably be expected to cause the conditions set forth in *Section 7.2* to not be satisfied at the Closing and which breach or failure, if capable of being cured, shall not have been cured within 20 days following receipt by the Company of written notice of such breach or failure from Parent (it being understood and hereby agreed that Parent may not terminate this Agreement pursuant to this *Section 8.1(f)* if such breach or failure is cured within such 20 day period); or

(g) by the Company, if Parent shall have breached or failed to perform any of its representations, warranties, or other covenants or agreements contained in this Agreement, which breach or failure to perform would reasonably be expected to cause the conditions set forth in *Section 7.3* to not be satisfied at the Closing and which breach or failure, if capable of being cured, shall not have been cured within 20 days following receipt by Parent of written notice of such breach from the Company (it being understood and hereby agreed that the Company may not terminate this Agreement pursuant to this *Section 8.1(g)* if such breach or failure is cured within such 20 day period).

Section 8.2 Effect of Termination. In the event of the termination of this Agreement pursuant to *Section 8.1*, this Agreement shall forthwith become void and there shall be no liability on the part of any party hereto or any of its affiliates, directors, officers or shareholders except (i) that the provisions of this *Section 8.2*, *Section 6.17*, *Section 8.3* and *Article X* hereof shall survive termination and (ii) nothing herein shall relieve any party from liability for any willful or intentional breach of this Agreement. The Confidentiality Agreement shall survive the termination of this Agreement as provided therein.

Section 8.3 Fees and Expenses.

(a) Except as set forth in this *Section 8.3*, all Expenses (as defined below) incurred in connection with this Agreement and the transactions contemplated hereby shall be paid by the party incurring such Expenses, whether or not the Merger is consummated. Parent shall pay all HSR filing fees and all Expenses of the Company incurred in responding to a second request for information from any Governmental Entity in connection with the HSR filing (*HSR Expenses*). For purposes of this Agreement, *Expenses* includes all reasonable out-of-pocket expenses (including all reasonable fees and expenses of counsel, accountants, investment bankers, experts and consultants to a party hereto and its Affiliates) incurred by a party or on its behalf in connection with or related to the authorization, preparation, negotiation, execution and performance of this Agreement and the transactions contemplated hereby, including the preparation, printing, filing and mailing of the Joint Proxy Statement/Prospectus and Registration Statement and the solicitation of shareholder approvals and all other matters related to the transactions contemplated hereby. Expenses of the Company shall also include any amount payable to Bio-Rad Laboratories, Inc. in connection with that certain Transaction Agreement, dated as of June 29, 2000, as amended, that arise as a result of the transactions contemplated by this Agreement, excluding any amount payable to Bio-Rad Laboratories, Inc. as a result of its ownership of Company Capital Stock. Notwithstanding the foregoing, in the event that the Expenses of the Company as set forth in the Statement of Company Expenses exceed \$4.2 million, excluding the HSR Expenses, Parent shall be entitled to reimbursement of such Expenses after the Effective Time from the Escrow Fund without regard to any threshold or deductible.

(b) The Company shall pay to Parent a termination fee equal to \$5,000,000 (the *Company Termination Fee*), and all Expenses of Parent after demand by Parent, in the event that this Agreement is terminated pursuant to *Section 8.1(d)*. The Company Termination Fee and such Expenses of Parent may be paid by the Company's issuance of that number of shares of Company Common Stock to Parent equal to the quotient of (i) the sum of the Company Termination Fee and the Expenses of Parent divided by (ii) \$0.40 (appropriately adjusted for any stock dividends, combinations, recapitalizations and splits and the like with respect to Company Common Stock); provided that if the Company consummates an Acquisition Transaction during the six month period commencing with the termination date of this Agreement pursuant to *Section 8.1(d)*, Parent shall have an option to have the shares issued pursuant to this *Section 8.3(b)* redeemed by the Company at \$0.40 per share (appropriately adjusted for any stock dividends, combinations, recapitalizations and splits and the like with respect to Company Common Stock) immediately prior to the consummation of such Acquisition Transaction.

Table of Contents

(c) Parent shall pay to the Company a termination fee equal to \$5,000,000 (the *Parent Termination Fee*), and all Expenses of the Company within one (1) business day after demand by the Company and by wire transfer of immediately available funds to an account designated in writing by the Company, in the event that this Agreement is (i) terminated pursuant to *Section 8.1(e)* or (ii) any clearance, consent, authorization, order or approval of, or any exemption by, any Governmental Entity required to effect the Merger is not granted or received as a result of Parent exercising its rights under *Section 6.6(c)(i)*.

(d) All cash payments to be made pursuant to this *Section 8.3* shall be made by wire transfer of immediately available funds. If either party fails to timely pay the Expenses of the other party or the Parent Termination Fee or Company Termination Fee, as applicable, pursuant to this *Section 8.3*, then such party shall pay all costs and expenses (including legal fees and expenses) incurred by the other party in connection with any action or proceeding (including the filing of any lawsuit) taken by it to collect such unpaid amounts, together with interest on such unpaid amounts at the prime lending rate prevailing at such time, as published in the Wall Street Journal, from the date such amounts were required to be paid until the date actually received by the such other party.

(e) The parties acknowledge that the agreements contained in this *Section 8.3* are an integral part of the transactions contemplated by this Agreement and constitute liquidated damages and not a penalty, and that, without these agreements, the parties would not have entered into this Agreement.

ARTICLE IX

SURVIVAL & INDEMNIFICATION

Section 9.1 *Survival of Representations, Warranties, Covenants and Agreements.*

(a) Notwithstanding any right of Parent (whether or not exercised) to investigate the affairs of the Company (whether pursuant to *Section 6.1* or otherwise) or a waiver or non-assertion by Parent and Merger Sub of any closing condition set forth in *Article VI* or any termination right set forth in *Article VIII*, each party shall have the right to rely fully upon the representations and warranties of the other party or parties hereto set forth in this Agreement, the Escrow Agreement and the certificates and other instruments delivered in connection herewith or therewith (the *Transaction Agreements*).

(b) The representations and warranties of the Company set forth in this Agreement or in any certificates and instruments delivered by the Company in connection herewith or therewith shall survive the Merger and continue until 11:59 p.m. (California time) on the one (1) year anniversary of the Closing Date; *provided, however*, that notwithstanding the foregoing, the representations and warranties of the Company set forth in *Section 3.16* (Taxes) shall survive the Merger and continue until the expiration of the applicable statute of limitations (including extensions thereof) (the representations and warranties described in the foregoing clause being referred to herein as the *Special Representation*). The applicable expiration date described above is referred to herein as the *Expiration Date*. Notwithstanding the foregoing or anything to the contrary in this Agreement, (i) no right to indemnification pursuant to *Article IX* in respect of any claim that is set forth in an Officer's Certificate delivered in accordance with the terms hereof prior to the applicable Expiration Date shall be affected by the expiration of such representations and warranties pursuant hereto and (ii) no such expiration shall affect the rights of any Parent Indemnified Party under *Article IX* or otherwise to pursue claims for indemnification for Losses arising out of any fraud or willful misconduct until the expiration of the applicable statute of limitations. No Parent Indemnified Parties shall be permitted to bring and the Effective Time Company Stockholders shall not have any Liability for any claim for a breach of a representation, warranty, covenant or agreement contained in this Agreement and the certificates and instruments delivered in connection herewith, to the extent notice of such claim set forth in an Officer's Certificate is not delivered to the applicable

Edgar Filing: NANOMETRICS INC - Form S-4/A

Indemnifying Party prior to the applicable Expiration Date.

(c) In the event that the Merger is consummated, the representations and warranties of Parent and Merger Sub set forth in this Agreement or in any certificate or other instrument delivered in connection herewith shall expire and be of no further force or effect.

A-57

Table of Contents

(d) Notwithstanding anything to the contrary set forth in this Agreement, the covenants and other agreements set forth in this Agreement or in the Escrow Agreement shall survive the Merger indefinitely in accordance with their respective terms.

Section 9.2 *Indemnification*.

(a) Subject to the limitations set forth in this *Article IX*, prior to the Effective Time, the Company shall indemnify and hold harmless, Parent, Merger Sub and their respective directors, officers, employees, agents and Affiliates (each, a *Parent Indemnified Party* and collectively, the *Parent Indemnified Parties*), and following the Effective Time, the Effective Time Company Stockholders (each sometimes referred to in this *Article IX* individually as an *Indemnifying Party* and collectively as the *Indemnifying Parties*) shall indemnify and hold harmless, the Parent Indemnified Parties (which, following the Effective Time, shall also include the Surviving Corporation) from and against any and all Losses (whether or not involving a third party claim) paid, suffered, incurred or sustained by Parent or any other Parent Indemnified Party as a result of any assessments, Taxes, claims, demands, assertions of liability, threatened actions, suits or proceedings (whether civil, criminal, administrative or investigative) directly or indirectly arising out of, resulting from or in connection with:

(i) (A) any failure of any representation or warranty made by the Company in this Agreement as modified by the Company Disclosure Schedule (including any exhibit or schedule to the Company Disclosure Schedule) to be true and correct as of the date of this Agreement and as of the Effective Time as though such representation or warranty were made as of the Effective Time, except in the case of representations and warranties which by their terms speak only as of a specific date, in which event for any failure of any such representation or warranty to be true and correct as of such date, or (B) any failure of any certification, representation or warranty made by the Company in any certificate delivered to Parent pursuant to any provision of this Agreement (other than the Capitalization Certificate) to be true and correct as of the date of such certificate;

(ii) any inaccuracy in the Capitalization Certificate or Closing Schedule; and

(iii) any breach of or default in connection with any of the covenants or agreements made by the Company in this Agreement or the Company Disclosure Schedule (including any exhibit or schedule to the Company Disclosure Schedule);

(iv) any amounts paid per share of Company Capital Stock to holders of Dissenting Shares in excess of the Per Share Common Amount, Per Share Series A Amount or Per Share Convertible Preferred Amount, as applicable; and

(v) any Expenses of the Company in excess of \$4.2 million, excluding the HSR Expenses.

(b) All Effective Time Company Stockholders shall be severally, and not jointly, liable for their pro rata portion of the indemnification obligations under *Section 9.2*.

(c) In determining the amount of any Losses in respect of the failure of any representation or warranty to be true and correct as of any particular date (but not in determining whether any such representations and warranties failed to be true and correct as of any particular date), any

materiality standard or qualification contained in such representation or warranty shall be disregarded.

Section 9.3 *Limitations on Indemnification Recoveries.*

(a) Notwithstanding anything to the contrary contained in this Agreement, if the Merger is consummated, no Parent Indemnified Party may recover any claims for indemnification pursuant to *Section 9.2(a)(i)* or *Section 9.2(a)(iii)* unless and until the Losses paid, suffered, incurred or sustained by the Parent Indemnified Parties (or any of them) in respect of the matters referenced in *Section 9.2(a)(i)* or *Section 9.2(a)(iii)* exceed \$800,000 in the aggregate (the *Deductible Limitation*), in which case the Parent Indemnified Parties may recover claims for indemnification pursuant to *Section 9.2(a)(i)* or

Table of Contents

Section 9.2(a)(iii) that include the Deductible Limitation; *provided, however*, that notwithstanding the foregoing, the Deductible Limitation shall not apply to (i) claims for indemnification for Losses arising out of fraud or willful misconduct (ii) claims for indemnification arising out of any breach of or inaccuracy related to the Special Representation or (iii) claims for indemnification under *Section 9.2(a)(ii)*.

(b) Notwithstanding anything to the contrary contained in this Agreement, whether or not the Merger is consummated, (i) no Parent Indemnified Party may recover any claims for indemnification pursuant to *Section 9.2(a)(i)*, *Section 9.2(a)(iii)*, *Section 9.2(a)(iv)* or *Section 9.2(a)(v)* for Losses paid, suffered, incurred or sustained by the Parent Indemnified Parties (or any of them) that exceed the aggregate value of the shares of Parent Common Stock remaining in the Escrow Fund which Escrow Fund shall be the sole fund to satisfy such claims for indemnification; *provided, however*, that notwithstanding the foregoing, the limitation shall not apply to (A) claims for indemnification for Losses arising out of fraud or willful misconduct, (B) claims for indemnification of Losses arising out of a breach of, or inaccuracy in, the Special Representation or (C) claims for indemnification under *Section 9.2(a)(ii)*.

(c) Notwithstanding anything to the contrary contained in this Agreement, if the Merger is consummated, the amount of Losses that the Parent Indemnified Parties (or any of them) may recover pursuant to a claim for indemnification pursuant to *Section 9.2(a)(i)* or *Section 9.2(a)(iii)* shall be offset, on a dollar-for-dollar basis, against (i) any amounts actually received by the Parent Indemnified Parties making such claim in respect of the Losses forming the basis of such claim for indemnification from a third party pursuant to any indemnification or other similar right, (ii) any amounts actually received by the Parent Indemnified Parties making such claim in respect of the Losses forming the basis of such claim for indemnification from a third party under any insurance policy or other similar arrangement, in the case of the foregoing clauses (i) and (ii), net of any and all applicable collection costs and a reasonable valuation of any premium adjustments resulting therefrom, and (iii) any Tax benefits that the Parent Indemnified Parties actually realize in the same tax year and as a result of the incurrence of such Losses (the *Third Party Recovery Limitation*); *provided, however*, that notwithstanding the foregoing, the Third Party Recovery Limitation (i) shall not apply to claims for indemnification for Losses arising out of fraud or willful misconduct, (ii) shall not apply to claims for indemnification under *Section 9.2(a)(ii)* and *Section 9.2(a)(v)* and (iii) shall not be interpreted or construed to require the Parent Indemnified Parties (or any of them) to take any action to seek, pursue or otherwise procure any such third party recoveries or insurance proceeds (and, in the event that the Parent Indemnified Parties shall elect not to seek or otherwise pursue any such third party recoveries or insurance proceeds, the Third Party Recovery Limitation shall not apply, but any rights of the Parent Indemnified Parties to such third party recoveries or insurance proceeds shall be assigned or subrogated to the Indemnifying Parties).

(d) Notwithstanding anything to the contrary contained in this Agreement, whether or not the Merger is consummated, no Effective Time Company Stockholder shall be liable for Losses paid, suffered, incurred or sustained by the Parent Indemnified Parties (or any of them) for amounts in excess of the product of the number of shares of Parent Common Stock allocated to such Effective Time Company Stockholder pursuant to Section 1.6(b) of this Agreement and the Average Closing Price, provided that the foregoing limitation on liability shall not apply to claims for indemnification for Losses arising out of fraud or willful misconduct with respect to an Effective Time Company Stockholder who participated in or had actual knowledge of the fraud or willful misconduct, other than with respect to holders of Company Convertible Preferred Stock.

(e) Notwithstanding anything to the contrary contained in this Agreement, if the Merger is consummated, the indemnification provisions set forth in this *Article IX* shall be the sole and exclusive remedy for claims by the Parent Indemnified Parties arising out of the matters relating to this Agreement, any certificate or other document related hereto or delivered pursuant to this Agreement or the transactions contemplated hereby or thereby; *provided, however*, that the foregoing limitation on remedies shall not apply (i) to claims for indemnification for Losses arising out of fraud or willful misconduct, (ii) to claims for indemnification under *Section 9.2(a)(ii)* or (iii) if the Merger is not consummated.

Table of Contents

Section 9.4 *Creation of Escrow Fund; Period for Indemnification Claims Against Escrow Fund.*

(a) At the Effective Time the Company's shareholders will be deemed to have received and deposited with the Depository Agent the Escrow Amount (plus any additional shares as may be issued upon any stock split, stock dividend or recapitalization effected by Parent after the Effective Time) without any act of any Company Effective Time Stockholder pursuant to the Escrow Agreement. As soon as practicable after the Effective Time, the Escrow Amount, without any act of any Company shareholder, will be deposited by Parent with U.S. Stock Transfer Corp., a California corporation (or other institution acceptable to Parent and the Stockholder Agent as Depository Agent (the *Depository Agent*)), such deposit to constitute an escrow fund (the *Escrow Fund*) to be governed by the terms set forth herein and in the Escrow Agreement. The portion of the Escrow Amount contributed on behalf of each Effective Time Company Stockholder shall be in proportion to the aggregate Parent Common Stock, which such holder would otherwise be entitled under *Section 1.6(b)* and shall be in the respective share amounts and percentages listed on the Closing Date Payment Schedule opposite each Effective Time Company Stockholder's name. All shares of Parent Common Stock contributed to the Escrow Fund shall not be unvested or subject to any right of repurchase, risk of forfeiture or other condition in favor of the Surviving Corporation.

(b) The period during which claims for indemnification for Losses may be made against the Escrow Fund shall commence at the Effective Time and terminate on the date that is one (1) year following the Closing Date (the *Escrow Period*). Notwithstanding anything to the contrary contained in this Agreement, at the conclusion of the Escrow Period, such portion of the Escrow Fund as in the reasonable and good faith judgment of Parent may be necessary to satisfy any unresolved or unsatisfied claims for indemnification for Losses specified in any Officer's Certificate delivered in good faith and in accordance with the terms hereof prior to expiration of the Escrow Period shall remain in the Escrow Fund until such claims have been finally and fully resolved or satisfied. The remainder, if any, of the Escrow Fund shall be paid to the Effective Time Company Stockholders promptly (and in any event within twenty (20) Business Days) after the expiration of the Escrow Period and the Parent and the Stockholder Agent shall give the Depository Agent written instructions to that effect. After the expiration of the Escrow Period, upon resolution of a pending claim for Losses, the portion of the Escrow Fund remaining, if any, after such Losses have been satisfied, shall be returned to the Effective Time Company Stockholders promptly (and in any event within twenty (20) Business Days) after the final resolution of the underlying claim.

Section 9.5 *Indemnification Claim Procedures During the Escrow Period.*

(a) On or before the expiration of the Escrow Period, Parent may deliver to the Depository Agent, on behalf of itself or any other Parent Indemnified Parties, a certificate signed by any officer of Parent (an *Officer's Certificate*):

(i) stating that a Parent Indemnified Party has paid, suffered, incurred or sustained (or reasonably and in good faith anticipates that it may pay, suffer, incur or sustain) Losses for which such Parent Indemnified Party is entitled to indemnification pursuant to *Section 9.2*;

(ii) stating the amount of such Losses (which, in the case of Losses not yet paid, suffered, incurred, sustained, may be the maximum amount reasonably anticipated to be so paid, suffered, incurred or sustained);

(iii) specifying in reasonable detail (based upon the information then possessed by Parent) the individual items of such Losses included in the amount so stated and the nature of the claim for indemnification to which such Losses relate; and

Edgar Filing: NANOMETRICS INC - Form S-4/A

(iv) the specific provisions of this Agreement that form the basis for such claim for indemnification for such Losses.

(b) Subject to *Section 9.1*, no delay in providing an Officer's Certificate in accordance with the terms hereof shall affect a Parent Indemnified Party's rights hereunder, unless (and then only to the extent that) the Stockholder Agent or any other applicable Indemnifying Parties are materially prejudiced thereby.

A-60

Table of Contents

(c) At the time of delivery of any Officer's Certificate to the Depository Agent, Parent shall deliver a duplicate copy of such Officer's Certificate to the Stockholder Agent, and for a period of twenty (20) Business Days after such delivery to the Depository Agent and the Stockholder Agent of such Officer's Certificate, the Depository Agent shall make no payment or other disbursement of Escrow Funds pursuant to this *Section 9.5* unless the Depository Agent shall have received written authorization from the Stockholder Agent to make such delivery or disbursement. After the expiration of such 20-Business Day period, the Depository Agent shall deliver or disburse Parent Common Stock from the Escrow Fund having a value equal to such Losses from the Escrow Fund to Parent in accordance with this *Section 9.5*; *provided, however*, that no such delivery may be made if and to the extent the Stockholder Agent shall object in a written statement to any claim or claims made in the Officer's Certificate, and such statement shall have been delivered to the Depository Agent and to Parent prior to the expiration of such 20-Business Day period.

(d) For the purposes of determining the number of shares of Parent Common Stock to be delivered to Parent out of the Escrow Fund pursuant to *Section 9.5(c)* hereof, the shares of Parent Common Stock shall be valued at the average of the closing prices of the Parent Common Stock for the ten (10) trading days ending two (2) trading days prior to the time that the claim is made. Parent and the Stockholder Agent shall certify such determined value in a certificate signed by both Parent and the Stockholder Agent, and shall deliver such certificate to the Depository Agent.

Section 9.6 Resolution of Objections to Indemnification Claims.

(a) If the Stockholder Agent objects in writing to any claim or claims by Parent made in any Officer's Certificate within the 20-Business Day period referenced in *Section 9.5*, Parent and the Stockholder Agent shall attempt in good faith for twenty (20) Business Days after Parent's receipt of such written objection to resolve such objection. If Parent and the Stockholder Agent shall so agree, a memorandum setting forth such agreement shall be prepared and signed by both parties and delivered to the Depository Agent. The Depository Agent shall be entitled to conclusively rely on any such memorandum and the Depository Agent shall distribute Parent Common Stock from the Escrow Fund in accordance with the terms of such memorandum.

(b) If no such agreement can be reached during such 20-Business Day period for good faith negotiation, but in any event upon the expiration of such 20-Business Day period, either Parent or the Stockholder Agent may bring suit in the Court of Chancery of the State of Delaware to resolve the matter.

(c) Judgment upon any award rendered by the trial court may be entered in any court having jurisdiction.

Section 9.7 Stockholder Agent.

(a) At the Closing, Sanford S. Wadler shall be constituted and appointed as the Stockholder Agent. For purposes of this Agreement, the term *Stockholder Agent* shall mean the agent for and on behalf of the Effective Time Company Stockholders to: (i) give and receive notices and communications to or from Parent (on behalf of itself of any other Indemnified Person) relating to this Agreement, the Escrow Agreement, the Merger or any other transactions contemplated hereby or thereby (except to the extent that this Agreement expressly contemplates that any such notice or communication shall be given or received by such shareholders individually); (ii) authorize deliveries to Parent of Parent Common Stock from the Escrow Fund in satisfaction of claims for indemnification pursuant to *Section 9.2* asserted by Parent Indemnified Parties; (iii) object to such claims pursuant to *Section 9.6*; (iv) consent or agree to, negotiate, enter into settlements and compromises of, and comply with orders of courts with respect to, such claims; (v) consent or agree to any amendment to this Agreement and (vi) take all actions necessary or appropriate in the judgment of the Stockholder Agent for the accomplishment of the foregoing, in each case without having to seek or obtain the consent of any Person under any circumstance. The Stockholder Agent does not have authority to amend this Agreement, the Escrow Agreement

or any other documents executed and delivered in connection with the transactions contemplated by this Agreement (all of the foregoing, the

A-61

Table of Contents

Transaction Documents) or enter into any new agreement on behalf of or take any action, enter into a settlement or consent to any such action or settlement that would bind any Effective Time Company Stockholder, to the extent such amendment, new agreement, action, consent or settlement will increase the maximum liability of any Effective Time Company Stockholder as set forth in the Transaction Documents executed on the date hereof. The Stockholder Agent may resign at any time. The Person serving as the Stockholder Agent may be replaced from time to time by the holders of a majority in interest of the Parent Common Stock then on deposit in the Escrow Fund upon not less than ten (10) days prior written notice to Parent. No bond shall be required of the Stockholder Agent. The Stockholder Agent shall receive compensation for his services in the amount of \$200 per hour, and a minimum of \$25,000 if a suit is brought by any party pursuant to *Section 9.6(b)*. Such amounts to be paid to the Stockholder Agent, along with any administrative fees and professional fees, including legal and accounting fees, incurred by the Stockholder Agent in the performance of his services, shall be paid from shares or other property in the Escrow Fund; provided, however, that subject to *Section 9.7(b)* payments from the Escrow Fund for such services shall not exceed \$100,000 in the aggregate.

(b) The Stockholder Agent shall not be liable to any Effective Time Company Stockholder or any other former holder of Company Capital Stock for any act done or omitted hereunder as the Stockholder Agent while acting in good faith (and any act done or omitted pursuant to the advice of counsel shall be conclusive evidence of such good faith) and without gross negligence or willful misconduct. The Effective Time Company Stockholders shall be severally liable for the Shareholder Agent's compensation and shall severally indemnify the Stockholder Agent and hold him harmless from and against any loss, liability or expense incurred without gross negligence, willful misconduct or bad faith on the part of the Stockholder Agent and arising out of or in connection with the acceptance or administration of his duties hereunder, including any out-of-pocket costs and expenses and legal fees and other legal costs reasonably incurred by the Stockholder Agent. If not paid directly to the Stockholder Agent by the Effective Time Company Stockholders or from the Escrow Fund pursuant to *Section 9.7(a)*, such losses, liabilities or expenses may be recovered by the Stockholder Agent from shares or other property in the Escrow Fund otherwise distributable to the Effective Time Company Stockholders (and not distributed or distributable to a Parent Indemnified Party or subject to a pending indemnification claim of a Parent Indemnified Party) following the one (1) year anniversary of the Closing Date pursuant to the terms hereof and of the Escrow Agreement, at the time of distribution, and such recovery will be made from the Effective Time Company Stockholders according to their respective pro rata shares of the Escrow Fund.

(c) Any notice or communication given or received by, and any decision, action, failure to act within a designated period of time, agreement, consent, settlement, resolution or instruction of, the Stockholder Agent that is within the scope of the Stockholder Agent's authority under this *Article IX* shall constitute a notice or communication to or by, or a decision, action, failure to act within a designated period of time, agreement, consent, settlement, resolution or instruction of all the Effective Time Company Stockholders and shall be final, binding and conclusive upon each such Effective Time Company Stockholder. Each Parent Indemnified Party shall be entitled to rely upon any such notice, communication, decision, action, failure to act within a designated period of time, agreement, consent, settlement, resolution or instruction as being a notice or communication to or by, or a decision, action, failure to act within a designated period of time, agreement, consent, settlement, resolution or instruction of, each and every such Effective Time Company Stockholder.

Section 9.8 Third Party Claims.

(a) In the event Parent becomes aware of a third party claim which Parent believes may result in a claim for indemnification pursuant to *Section 9.2* by or on behalf of a Parent Indemnified Party (a *Third Party Claim*), Parent shall promptly notify the Stockholder Agent of such Third Party Claim if such claim occurs during the Escrow Period, or each of the Indemnifying Parties that Parent (or any other Parent Indemnified Parties) may bring a claim against if such Third Party Claim occurs after the Escrow Period. Subject to *Section 9.1*, no delay in notifying the Stockholder Agent or any other Indemnifying Party of such Third Party Claim in accordance with the terms hereof shall affect a Parent Indemnified Party's rights

Table of Contents

hereunder, unless (and then only to the extent that) the Stockholder Agent or any other applicable Indemnifying Parties are materially prejudiced thereby.

(b) Parent shall have the right, in its sole discretion, to elect to conduct the defense of any Third Party Claim (and the reasonable costs and expenses incurred by Parent in connection with such defense (including reasonable attorneys fees, other professionals and experts fees and court or arbitration costs) shall be included in the Losses for which the Parent Indemnified Parties may seek indemnification pursuant to *Section 9.2*). The Stockholder Agent (during the Escrow Period) and any other Indemnifying Party against whom any Parent Indemnified Party has brought a claim for indemnification arising out of such Third Party Claim (after the Escrow Period) shall have the right to receive promptly copies of all pleadings, notices and communications with respect to such Third Party Claim to the extent that receipt of such documents does not in the reasonable and good faith judgment of Parent affect any privilege relating to any Parent Indemnified Party, and each such Indemnifying Party shall be entitled, at its expense, to participate in, but not to determine or conduct, any defense of any such Third Party Claim with respect to any such Third Party Claim.

(c) Notification and Reference of Third-Party Claims.

(i) In the event Parent is served with a Third Party Claim, Parent shall notify the Stockholder Agent of such Third Party Claim, and the Stockholder Agent, as representative for the Effective Time Company Stockholders, shall be entitled, at the expense of the Effective Time Company Stockholders, to participate in any defense of such Third Party Claim. Parent shall have the right in its sole discretion to settle any Third Party Claim following consultation with the Stockholder Agent; *provided, however*, that if such settlement was obtained without the Stockholder Agent's consent, and such consent was neither unreasonably withheld, conditioned nor delayed, Parent shall not be entitled to recover from the Escrow Fund unless and until Parent and the Stockholder Agent shall have agreed upon the amount of the Third Party Claim to be paid from the Escrow Fund or Parent is determined to be entitled to such payment upon the completion of the dispute resolution process set forth in Section 9.6. In the event that the Stockholder Agent has consented to any such settlement, the amount of such settlement shall be conclusively and irrebuttably presumed to be reasonable, and the Stockholder Agent shall not make, and the arbitrators shall have no power or authority to hear, any objection under any provision of this *Article IX* to the amount of any claim by Parent against the Escrow Fund with respect to the amount of Losses incurred by Parent in such settlement.

(ii) In the event the Stockholder Agent or an Effective Time Company Stockholder is served with a Third Party Claim, such Effective Time Company Stockholder shall notify the Stockholder Agent and Parent of such Third Party Claim, and the Stockholder Agent shall be entitled, at the expense of the Effective Time Company Stockholder, to participate in any defense of such Third Party Claim. Parent shall have the right in its sole discretion to settle any Third Party Claim following consultation with the Stockholder Agent; *provided, however*, that if such settlement was obtained without the Stockholder Agent's consent, and such consent was neither unreasonably withheld, conditioned nor delayed, Parent shall not be entitled to recover from the Escrow Fund unless and until Parent and the Stockholder Agent shall have agreed upon the amount of the Third Party Claim to be paid from the Escrow Fund or Parent is determined to be entitled to such payment upon the completion of the dispute resolution process set forth in Section 9.6. In the event that the Stockholder Agent has consented to any such settlement, the amount of such settlement shall be conclusively and irrebuttably presumed to be reasonable, and the Stockholder Agent shall not make, and the arbitrators shall have no power or authority to hear, any objection under any provision of this *Article IX* to the amount of any claim by the Effective Time Company Stockholder against Parent with respect to the amount of Losses incurred by the Effective Time Company Stockholder in such settlement.

Table of Contents

ARTICLE X

GENERAL PROVISIONS

Section 10.1 *Nonsurvival of Representations, Warranties and Covenants*. None of the representations, warranties, covenants or other agreements of Parent in this Agreement or in any certificate or other instrument delivered pursuant to this Agreement shall survive the Effective Time, except for the covenants and other agreements contained in *Article I* and *Article II*, and *Section 6.6* (Reasonable Best Efforts to Complete); *Section 6.7* (Public Announcements); *Section 6.8* (Company Employee Benefits; Company 401(k) Plan); *Section 6.9* (Company Stock Plans), *Section 6.10* (Indemnification and Insurance), *Section 6.12* (Tax Matters), *Section 6.17* (Working Capital Loan), *Section 8.2* (Effect of Termination) and *Section 8.3* (Fees and Expenses); and *Article IX* and *Article X*. The Confidentiality Agreement shall survive the execution and delivery of this Agreement or the termination of this Agreement in accordance with the provisions of this Agreement, as the case may be, pursuant to its terms and conditions.

Section 10.2 *Notices*. All notices and other communications given or made pursuant hereto shall be in writing and shall be deemed to have been duly given or made if and when delivered personally or by overnight courier to the parties at the following addresses or sent by electronic transmission, with confirmation received, to the telecopy numbers specified below (or at such other address or telecopy number for a party as shall be specified by like notice):

(a) If to Parent or Merger Sub:

1550 Buckeye Drive

Milpitas, California 95035

Attention: John D. Heaton

Facsimile No.: 408.232.5910

Telephone No.: 408.435.9600

With a copy to (which shall not constitute notice):

Wilson Sonsini Goodrich & Rosati, Professional Corporation

650 Page Mill Road

Palo Alto, California 94304-1050

Attention: Aaron J. Alter

Julia Reigel

Edgar Filing: NANOMETRICS INC - Form S-4/A

Facsimile No.: 650-493-6811

Telephone No.: 650-493-9300

(b) If to the Company:

131 NW Hawthorne Avenue, Suite 101

Bend, Oregon 97701

Attention: Bruce C. Rhine

Facsimile No.:

Telephone No.: (541) 322-2500

With a copy to (which shall not constitute notice):

Perkins Coie LLP

1120 NW Couch, 10th Floor

Portland, Oregon 97209

Attention: Neil M. Nathanson

Facsimile No.: (503) 727-2222

Telephone No.: (503) 727-2000

A-64

Table of Contents

(c) If to the Stockholder Agent:

Bio-Rad Laboratories, Inc.

1000 Alfred Nobel Drive

Hercules, California 94547

Attn: Sanford S. Wadler

Vice President and General Counsel

Facsimile No.: (510) 741-5815

Telephone No.: (510) 741-6005

Any such notice or communication shall be deemed to have been delivered and received (i) in the case of personal delivery, on the date of such delivery, (ii) in the case of facsimile, on the date sent if confirmation of receipt is received and such notice is also promptly mailed by registered or certified mail (return receipt requested), (iii) in the case of a nationally-recognized overnight courier in circumstances under which such courier guarantees next business day delivery, on the next business day after the date when sent and (iv) in the case of mailing, on the third business day following that on which the piece of mail containing such communication is posted.

Section 10.3 *Certain Definitions*. For purposes of this Agreement, the term:

(a) *Acquisition Proposal* means any inquiry, proposal or offer, filing of any regulatory application or notice (whether in draft or final form) or disclosure of an intention to do any of the foregoing from any person relating to an Acquisition Transaction.

(b) *Acquisition Transaction* means any (i) direct or indirect acquisition or purchase of a business that constitutes a substantial portion of the net revenues, net income or assets of the Company or any of its significant subsidiaries (as defined under Regulation S-X of the Securities Act) or (ii) merger, consolidation, business combination, recapitalization, liquidation, dissolution or similar transaction involving the Company in which the stockholders of the Company prior to such transaction own less than a majority of the voting power of the Company following such transaction, in each case other than the transactions contemplated by this Agreement.

(c) *Action or Proceeding* means any action, suit, complaint, petition, investigation, proceeding, arbitration, litigation or Governmental or Regulatory Authority investigation, audit or other proceeding, whether civil or criminal, in law or in equity, or before any arbitrator or Governmental or Regulatory Authority.

(d) *Affiliate* means a person that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, the first mentioned person.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(e) *Antitrust Law* means the Sherman Act, as amended, the Clayton Act, as amended, the HSR Act, the Federal Trade Commission Act, as amended, the EC Merger Regulations and all other federal, state and foreign statutes, rules, regulations, orders, decrees, administrative and judicial doctrines, and other Laws that are designed or intended to prohibit, restrict or regulate actions having the purpose or effect of monopolization or restraint of trade.

(f) *Beneficial Owner* with respect to any shares of Company Common Stock means a person who shall be deemed to be the beneficial owner of such shares pursuant to Rule 13d-3 under the Exchange Act.

(g) *Business Day* means any day other than a Saturday or Sunday or any day on which banks in the State of New York are required or authorized to be closed.

(h) *CCC* means California Corporations Code.

(i) *COBRA* means the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended and as codified in Section 4980B of the Code and Section 601 et. seq. of ERISA.

A-65

Table of Contents

(j) *Company Financial Statements* means the Audited Company Financial Statements, Company September Financial Statements and Later Company Financial Statements.

(k) *Company Intellectual Property* means any and all Intellectual Property and Intellectual Property Rights that are owned by or purported to be owned by or exclusively licensed to the Company.

(l) *Company Material Adverse Effect* means any change, effect or circumstance that (i) is materially adverse to the business, operations, properties condition (financial or otherwise) or capitalization of the Company and its Subsidiaries, taken as a whole, or (ii) materially and adversely affects the ability of the Company to consummate the transactions contemplated hereby; *provided, however*, that in no event shall any of the following, either alone or in combination, be deemed to constitute, nor shall any of the following be taken into account in determining whether there has been or will or could be, a Company Material Adverse Effect: (A) any changes resulting from or arising out of general market, economic or political conditions (including any changes arising out of acts of terrorism, war, weather conditions or other force majeure events), *provided* that such changes do not have a substantially disproportionate impact on the Company and its Subsidiaries, taken as a whole, (B) any changes resulting from or arising out of general market, economic or political conditions in the industries in which the Company or any of its Subsidiaries conduct business (including any changes arising out of acts of terrorism, war, weather conditions or other force majeure events), *provided* that such changes do not have a substantially disproportionate impact on the Company and its Subsidiaries, taken as a whole, (C) any changes resulting from or arising out of actions taken pursuant to (and required by) this Agreement or at the request of Parent or the failure to take any actions due to restrictions set forth in this Agreement and (D) any changes or effects arising out of or resulting from any legal claims or other proceedings made by any of the Company's stockholders arising out of or related to this Agreement, the Merger or any other transactions contemplated hereby.

(m) *Company Product(s)* means all products, technologies and services developed (including products, technologies and services under development), owned, made, provided, distributed, imported, sold or licensed by or on behalf of the Company.

(n) *Company Stock Plan* means the Accent Optical Technologies, Inc. Stock Incentive Plan, adopted October 4, 2000, as amended.

(o) *Control* (including the terms *controlled by* and *under common control with*) means the possession, directly or indirectly or as trustee or executor, of the power to direct or cause the direction of the management or policies of a person, whether through the ownership of stock, as trustee or executor, by contract or credit arrangement or otherwise.

(p) *Employee Benefit Plan* means any employee pension benefit plan (as defined in Section 3(2) of ERISA), any employee welfare benefit plan (as defined in Section 3(1) of ERISA), and any other written or oral plan, agreement or arrangement involving compensation, including insurance coverage, severance benefits, disability benefits, deferred compensation, bonuses, stock options, stock purchase, phantom stock, stock appreciation or other forms of fringe benefits, perquisites, incentive compensation or post-retirement or change in control compensation and all employment, change in control, severance or similar agreements, written or otherwise, for the benefit of, or relating to, any current or former employee, officer or director of the Company or Parent, as applicable, or any of its ERISA Affiliates, as applicable.

(q) *ERISA* means the Employee Retirement Income Security Act of 1974, as amended.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(r) *ERISA Affiliate* means any entity which is, or at any applicable time was, a member of (A) a controlled group of corporations (as defined in Section 414(b) of the Code), (B) a group of trades or businesses under common control (as defined in Section 414(c) of the Code) or (C) an affiliated service group (as defined under Section 414(m) of the Code or the regulations under Section 414(o) of the Code), any of which includes or included the Company or Parent, as applicable.

(s) *FMLA* means the Family Medical Leave Act of 1993, as amended.

A-66

Table of Contents

(t) *Include* or including means include, without limitation or including, without limitation, as the case may be, and the language following include or including shall not be deemed to set forth an exhaustive list.

(u) *Intellectual Property* means Technology and/or Intellectual Property Rights.

(v) *Intellectual Property Rights* means worldwide common law and statutory rights associated with (i) patents, patent applications and inventors certificates, (ii) copyrights, copyright registrations and copyright applications, moral rights and mask work rights, (iii) the protection of trade and industrial secrets and confidential information, (iv) other proprietary rights relating to intangible intellectual property, (v) trademarks, trade names and service marks, (vi) divisions, continuations, renewals, reissuances and extensions of the foregoing (as applicable) and (vii) analogous rights to those set forth above, including the right to enforce and recover remedies for any of the foregoing.

(w) *knowledge* of a matter means actual knowledge of such matter by officers of Parent or the Company, as the case may be.

(x) *Law* with respect to any person means any applicable foreign or domestic federal, state, provincial, local, municipal or other law, statute, code, treaty, ordinance, rule, regulation, administrative, executive or other order (whether temporary, preliminary or permanent) of any Governmental Entity, judgment, writ, stipulation, award, injunction, decree or arbitration award or finding entered or imposed by any Governmental Entity, in any case that are in force as of the date hereof or which come into force during the term of this Agreement.

(y) *Loss* means any and all losses, liabilities, damages, fees, fines, Taxes, penalties, deficiencies, fees and expenses, including interest thereon, reasonable expenses of investigation, court costs, reasonable fees and expenses of attorneys, accountants and other experts and other expenses of any Action or Proceeding or of any claim, default or assessment (such fees and expenses to include all fees and expenses, including fees and expenses of attorneys, incurred in connection with (i) the investigation or defense of any third party claim and (ii) asserting or disputing any right under this Agreement against any party hereto or otherwise).

(z) *Parent Material Adverse Effect* means any change, effect or circumstance that (i) is materially adverse to the business, operations, properties condition (financial or otherwise) or capitalization of Parent and its Subsidiaries, taken as a whole, or (ii) materially and adversely affects the ability of Parent to consummate the transactions contemplated hereby; *provided, however*, that in no event shall any of the following, either alone or in combination, be deemed to constitute, nor shall any of the following be taken into account in determining whether there has been or will or could be, a Parent Material Adverse Effect: (A) any changes resulting from or arising out of general market, economic or political conditions (including any changes arising out of acts of terrorism, war, weather conditions or other force majeure events), provided that such changes do not have a substantially disproportionate impact on Parent and its Subsidiaries, taken as a whole, (B) any changes resulting from or arising out of general market, economic or political conditions in the industries in which Parent or any of its Subsidiaries conduct business (including any changes arising out of acts of terrorism, war, weather conditions or other force majeure events), provided that such changes do not have a substantially disproportionate impact on Parent and its Subsidiaries, taken as a whole, (C) any changes resulting from or arising out of actions taken pursuant to (and required by) this Agreement or at the request of the Company or the failure to take any actions due to restrictions set forth in this Agreement, (D) any changes in the price or trading volume of Parent's stock, in and of itself (it being understood that the facts or occurrences giving rise or contributing to such changes may be deemed to constitute, or be taken into account in determining whether there has been or would reasonably be expected to be, a Parent Material Adverse Effect, using the same standard as set forth in subsections (i) and (ii) of this sentence), (E) any failure by Parent to meet published revenue or earnings projections, in and of itself (it being understood that the facts or occurrences giving rise or contributing to such failure may be deemed to constitute, or be taken into account in determining whether there has been or would reasonably be expected to be, a Parent Material Adverse Effect, using the same standard as set forth in subsections (i) and (ii) of this sentence), (F) any amendments to or restatements of the Parent Financial

Table of Contents

Statements or other effects arising from the matters set forth in Parent's Current Report on Form 8-K dated October 27, 2005, as amended, and (G) any changes or effects arising out of or resulting from any legal claims or other proceedings made by any of Parent's shareholders arising out of or related to this Agreement, the Merger or any other transactions contemplated hereby.

(aa) *Person* means an individual, corporation, partnership, association, trust, unincorporated organization, other entity or group (as defined in Section 13(d)(3) of the Exchange Act).

(bb) *Registered Intellectual Property* means U.S. and foreign (i) patents and pending patent applications, (ii) trademark registrations (including Internet domain registrations) and pending trademark applications, and (iii) copyright registrations and pending copyright applications.

(cc) *Shrink-Wrap Code* means generally commercially available binary code (other than development tools and development environments) where available for a cost of not more than U.S. \$5,000 for a perpetual license for a single user or work station (or \$50,000 in the aggregate for all users and work stations).

(dd) *Subsidiary* means, with respect to any party, any corporation or other organization, whether incorporated or unincorporated, of which (A) such party or any other Subsidiary of such party is a general partner, manager or managing member, (B) such party or any Subsidiary of such party owns at least 50% of the outstanding equity or voting securities or interests or (C) such party or any Subsidiary of such party has the right to elect at least a majority of the board of directors or others performing similar functions with respect to such corporation or other organization.

(ee) *Superior Proposal* means any Acquisition Proposal that the Board of Directors of the party receiving it reasonably determines in good faith (based on (i) the advice of its independent financial advisor or another nationally recognized financial advisor and its outside legal counsel, and (ii) the terms and conditions of such proposal, the financial, legal and regulatory aspects of such proposal and the Person making such proposal) (A) is more favorable to such party's shareholders than the Merger or any counterproposal made by the other party hereto pursuant to Section 7.3, (B) is capable of being consummated in a timely manner in the terms being proposed, and (C) is fully capable of being financed by the Person making such proposal, to the extent required, or for which financing has been committed by a reputable financing source, to the extent required.

(ff) *Tax* or *Taxes* means (i) taxes, fees, assessments, liabilities, levies, duties, tariffs, imposts and governmental impositions or charges of any kind in the nature of (or similar to) taxes, payable to any federal, state, local or foreign taxing authority, or any agency or subdivision thereof, including income, franchise, profits, gross receipts, *ad valorem*, net worth, value added, sales, use, service, real or personal property, special assessments, capital stock, license, payroll, withholding, employment, social security, workers' compensation, unemployment compensation, utility, severance, production, excise, stamp, occupation, premiums, windfall profits, transfer and gains taxes, and including all interest, penalties, fines, additional taxes and additions to tax imposed with respect to any of the foregoing; (ii) any liability for the payment of any amounts of the type described in the foregoing clause (i) as a result of being a member of an affiliated, consolidated, combined or unitary group for any period, and (iii) any liability for the payment of any amounts of the type described in the foregoing clauses (i) or (ii) as a result of any express or implied obligation to indemnify any other person or as a result of any obligations under any agreements or arrangements with any other person with respect to such amounts and including any liability for taxes of a predecessor or transferor entity.

(gg) *Tax Returns* means returns, reports and information statements with respect to Taxes required to be filed with a taxing authority, domestic or foreign, including, consolidated, combined or unitary tax returns and any amendments to any of the foregoing.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(hh) *Technology* means any or all of the following (i) works of authorship including computer programs, source code, and executable code, whether embodied in software, firmware or otherwise, architecture, documentation, designs, files, records, and data, (ii) inventions (whether or not patentable),

A-68

Table of Contents

discoveries, improvements, and technology, (iii) proprietary and confidential information, trade secrets and know how, (iv) databases, data compilations and collections and technical data, (v) logos, trade names, trade dress, trademarks and service marks, (vi) domain names, web addresses and sites, (vii) tools, methods and processes, (viii) devices, prototypes, schematics, breadboards, netlists, maskworks, test methodologies, verilog files, emulation and simulation reports, test vectors and hardware development tools, (ix) technology items, and (x) any and all instantiations of the foregoing in any form and embodied in any media.

(ii) *UK Subsidiary* means Accent Optical Technologies (U.K.) Ltd., a wholly owned subsidiary of the Company.

Section 10.4 *Certain Interpretations*. For purposes of this Agreement:

(a) Unless otherwise specified, all references in this Agreement to Articles, Sections, Schedules and Exhibits shall be deemed to refer to Articles, Sections, Schedules and Exhibits to this Agreement.

(b) The words *include*, *includes* and *including* when used herein shall be deemed in each case to be followed by the words *without limitation* .

(c) Unless otherwise specified or the context otherwise requires, all references in this Agreement to Parent (including any reference to Parent as a *party*) shall be deemed to include Parent and its Subsidiaries, and all references in this Agreement to the Company (including any reference to the Company as a *party*) shall be deemed to include the Company and its Subsidiaries.

(d) The phrase *fraud or willful misconduct* includes any willful or intentional breach or violation of, or any willful or intentional misrepresentation, omission or inaccuracy in, any representation or warranty of the Company contained in this Agreement or any certificate delivered to Parent pursuant to any provision of this Agreement.

(e) All references in this Agreement to the Subsidiaries of an entity shall be deemed to include all direct and indirect Subsidiaries of such entity.

(f) The table of contents and the headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

(g) The parties hereto agree that they have been represented by legal counsel during the negotiation and execution of this Agreement and, therefore, waive the application of any Law, regulation, holding or rule of construction providing that ambiguities in an agreement or other document shall be construed against the party drafting such agreement or document.

Section 10.5 *Amendment*. This Agreement may be amended by the parties hereto by action taken by or on behalf of their respective Boards of Directors at any time prior to the Effective Time; *provided, however*, that, after approval of the Merger by the stockholders of the Company, no amendment may be made which by Law requires further approval by such stockholders without such further approval. This Agreement may not

be amended except by an instrument in writing signed by the parties hereto.

Section 10.6 *Extension; Waiver*. At any time prior to the Effective Time, the parties hereto, by action taken or authorized by their respective Boards of Directors, may to the extent legally allowed, (a) extend the time for the performance of any of the obligations or other acts of any other party hereto, (b) waive any inaccuracies in the representations and warranties of any other party hereto contained herein or in any document delivered pursuant hereto or (c) waive compliance with any of the agreements or conditions of any other party hereto contained herein. Any agreement on the part of a party hereto to any such extension or waiver shall be valid only if set forth in an instrument in writing signed on behalf of such party.

Section 10.7 *Severability*. If any term or other provision of this Agreement is invalid, illegal or incapable of being enforced by any rule of Law, or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith

Table of Contents

to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

Section 10.8 *Entire Agreement; No Third Party Beneficiaries.* This Agreement (including the documents and instruments referred to herein, including the Confidentiality Agreement) (a) constitutes the entire agreement and supersedes all prior agreements and understandings, both written and oral, among the parties, or any of them, with respect to the subject matter hereof, and (b) is not intended to confer upon any person (regardless of any reference to such person in this Agreement) other than the parties hereto any rights or remedies hereunder, other than the persons intended to benefit from the provisions of *Section 6.10* (Indemnification and Insurance), who shall have the right to enforce such provisions directly.

Section 10.9 *Parties.* Notwithstanding anything to the contrary contained herein or executed or delivered in connection with the transactions contemplated by this Agreement, any reference in this agreement to any party or other party to this agreement shall include only Parent, Merger Sub and the Company and shall not include and Effective Time Company Stockholder unless specifically stated otherwise.

Section 10.10 *Assignment.* This Agreement shall not be assigned by operation of Law or otherwise, except that Parent and Merger Sub may assign all or any of their rights hereunder to any wholly owned subsidiary thereof; *provided, however,* that no such assignment pursuant to this *Section 10.10* shall relieve Parent or Merger Sub of their respective obligations hereunder.

Section 10.11 *Failure or Indulgence Not Waiver; Remedies Cumulative.* No failure or delay on the part of any party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude any other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.

Section 10.12 *Governing Law.* This Agreement shall be governed by, and construed in accordance with, the internal Laws of the State of Delaware, without regard to the conflict of Law provisions thereof; *provided, however,* that matters relative to the Board of the Parent shall be governed by, and construed in accordance with, the internal Laws of the State of California. Each Party hereby consents to the institution and resolution of any action or proceeding of any kind or nature with respect to or arising out of this agreement brought by any Party hereto in the federal or state courts located within the State of Delaware.

Section 10.13 *Counterparts.* This Agreement may be executed in two or more counterparts, and by the different parties hereto in separate counterparts, each of which when executed shall be deemed to be an original but all of which taken together shall constitute one and the same agreement.

Section 10.14 *WAIVER OF JURY TRIAL.* EACH OF PARENT, MERGER SUB AND THE COMPANY HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HERBY OR THE ACTIONS OF PARENT, MERGER SUB OR THE COMPANY IN THE NEGOTIATION, ADMINISTRATION, PERFORMANCE AND ENFORCEMENT OF THIS AGREEMENT.

Edgar Filing: NANOMETRICS INC - Form S-4/A

Section 10.15 *Specific Performance*. The parties agree that irreparable damage would occur and that the parties would not have any adequate remedy at Law in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions of this Agreement, this being in addition to any other remedy to which they are entitled at Law or in equity.

A-70

Table of Contents

Section 10.16 *Disclosure Schedules.*

(a) The information set forth in each section or subsection of the Company Disclosure Schedules shall be deemed to provide the information contemplated by, or otherwise qualify, the representations and warranties of the Company set forth in the corresponding section or subsection of this Agreement and any other section or subsection of *Article III* if and to the extent that it is reasonably apparent on the face of the disclosure that it applies to such other section or subsection of *Article III*.

(b) The information set forth in each section or subsection of the Parent Disclosure Schedules shall be deemed to provide the information contemplated by, or otherwise qualify, the representations and warranties of Parent and Merger Sub set forth in the corresponding section or subsection of this Agreement and any other section or subsection of *Article IV* if and to the extent that it is reasonably apparent on the face of the disclosure that it applies to such other section or subsection of *Article IV*.

(c) No amendment, supplement or update after the date of this Agreement shall be made to the Company Disclosure Schedule without the express written consent of Parent and no amendment, supplement or update made or delivered (or purporting to be made or delivered) after the date of this Agreement without such consent shall have any effect on any of the rights or obligations of the Company or Parent, respectively.

Table of Contents

IN WITNESS WHEREOF, Parent Merger Sub, and the Company, and solely with respect to *Article IX*, the Stockholder Agent have caused this Agreement to be executed as of the date first written above by their respective officers thereunto duly authorized.

NANOMETRICS INCORPORATED

By */s/* JOHN D. HEATON
Name: **John D. Heaton**
Title: **President and Chief Executive Officer**

ALLOY MERGER CORPORATION

By */s/* JOHN D. HEATON
Name: **John D. Heaton**
Title: **President and Chief Executive Officer**

ACCENT OPTICAL TECHNOLOGIES, INC.

By */s/* BRUCE C. RHINE
Name: **Bruce C. Rhine**
Title: **President and Chief Executive Officer**

STOCKHOLDER AGENT

By */s/* SANFORD S. WADLER
Name: **Sanford S. Wadler**

Table of Contents

AMENDMENT TO AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

Reference is hereby made to that certain Agreement and Plan of Merger and Reorganization dated as of January 25, 2006 (the *Agreement*) by and among Nanometrics Incorporated, a California corporation (*Parent*), Alloy Merger Corporation, a Delaware corporation and a wholly owned subsidiary of Parent (*Merger Sub*), Accent Optical Technologies, Inc., a Delaware corporation (the *Company*), and, solely with respect to Article IX, Sanford S. Wadler (the *Stockholder Agent*). All capitalized terms used but not defined herein shall have the meanings set forth in the Agreement.

WHEREAS, Section 10.5 of the Agreement provides that the Agreement may be amended at any time prior to the Effective Time by an instrument in writing signed by the parties thereto; and

WHEREAS, the Boards of Directors of the Company, Parent and Merger Sub have determined that it is in the best interests of the respective parties to extend the Outside Date from June 30, 2006 to July 31, 2006.

NOW THEREFORE, the parties hereby agree to amend the Reorganization Agreement as follows:

1. Section 8.1(b) of the Agreement is hereby amended as follows:

by either Parent or the Company, if the Merger shall not have been consummated by July 31, 2006 (the **Outside Date**); *provided, however*, that the right to terminate this Agreement under this Section 8.1(b) shall not be available to any party that has breached its obligations under this Agreement.

2. Section 6.18 is hereby added to Article VI of the Agreement as follows:

Section 6.18. *Interest Payment Loan*. Parent shall provide a loan to the Company in the aggregate amount of \$1,611,238 to fulfill the Company's interest payment obligation to Bio-Rad Laboratories, Inc. which comes due on or before July 9, 2006 (the *Interest Payment Due Date*). This loan shall be made pursuant to an unsecured, subordinated, convertible promissory note substantially in the form of the Promissory Note within ten (10) Business Days after written demand by the Company if the Merger has not occurred and this Agreement has not been terminated prior to the Interest Payment Due Date. All principal due under the Promissory Note issuable pursuant to this Section 6.18 shall be due and payable no later than six (6) months after the termination of this Agreement; *provided however*, that the Promissory Note shall become immediately due and payable prior to the completion of any Acquisition Transaction.

3. The other terms and provisions of the Agreement shall remain in full force and effect without amendment.

4. This amendment shall be governed by and construed in accordance with the domestic laws of the State of Delaware, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the

application of the laws of any jurisdiction other than the State of Delaware.

5. This amendment may be executed in any number of counterparts, each of which shall be deemed an original, but all such counterparts together shall constitute but one and the same instrument.

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK]

A-73

Table of Contents

IN WITNESS WHEREOF, the undersigned have executed this amendment as of June 9, 2006.

NANOMETRICS INCORPORATED

By
Name: **John D. Heaton**
Title: **President and Chief Executive Officer**

ALLOY MERGER CORPORATION

By
Name: **John D. Heaton**
Title: **President and Chief Executive Officer**

ACCENT OPTICAL TECHNOLOGIES, INC.

By
Name: **Bruce C. Rhine**
Title: **President and Chief Executive Officer**

[Signature Page to Amendment to Agreement and Plan of Merger]

A-74

Table of Contents

Annex B-1

PARENT SHAREHOLDER VOTING AGREEMENT

THIS PARENT SHAREHOLDER VOTING AGREEMENT (this Agreement) is entered into as of January 25, 2006, by and between Accent Optical Technologies, Inc., a Delaware corporation (the Company), and the undersigned shareholder (the Shareholder) of Nanometrics Incorporated, a California corporation (Parent).

WITNESSETH:

WHEREAS, Parent, Alloy Merger Corporation, a Delaware corporation and a wholly owned subsidiary of Parent (Merger Sub), the Company and Sanford Waller (the Stockholder Agent) are entering into an Agreement and Plan of Merger and Reorganization (the Reorganization Agreement) concurrently herewith pursuant to which Merger Sub will merge with and into the Company (the Merger), whereupon (A) the Company will become a wholly owned subsidiary of Parent, and (B) all outstanding shares of capital stock of the Company will be converted into the right to receive a number of shares of common stock of Parent as set forth therein.

WHEREAS, the Shareholder is the beneficial owner (as determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the Exchange Act)) of the shares of capital stock of Parent, and options to acquire shares of capital stock of Parent, each as set forth on the signature page of this Agreement.

WHEREAS, in order to induce the Company to enter into the Reorganization Agreement and in consideration of the execution of the Reorganization Agreement by the Company, the Shareholder (solely in his capacity as such) is hereby agreeing to vote the Shares (as defined below), so as to facilitate the consummation of the Merger.

NOW, THEREFORE, in consideration of the premises and the covenants and agreements set forth in the Reorganization Agreement and in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and accepted, the parties hereto hereby agree as follows:

1. Certain Definitions. Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed to them in the Reorganization Agreement. For purposes of this Agreement, the following terms shall have the following respective meanings:

(a) Expiration Date shall mean the earlier to occur of (i) such date and time as the Reorganization Agreement shall have been validly terminated in accordance with its terms and conditions, or (ii) such date and time as the Merger shall become effective in accordance with its terms and conditions.

(b) Person shall mean any individual, any corporation, limited liability company, general or limited partnership, business trust, unincorporated association or other business organization or entity, or any governmental body or authority.

(c) Shares shall mean (i) all voting securities of Parent beneficially owned by the Shareholder as of the date of this Agreement and (ii) all voting securities of Parent which the Shareholder purchases or acquires beneficial ownership of after the date of this Agreement and prior to the Expiration Date, including, without limitation, any shares issued or issuable upon the conversion, exercise or exchange, as the case may be, of any shares held by the Shareholder which are convertible into, or exercisable or exchangeable for, voting securities of Parent; provided, however, that any voting securities of Parent subject to a trading or sales plan for the benefit of the Shareholder established pursuant to Rule 10b5-1 under the Exchange Act prior to the date of this Agreement shall not be Shares for purposes of this Agreement.

B1-1

Table of Contents

(d) Transfer shall mean a direct or indirect: (i) sale, pledge, encumbrance, grant of an option with respect to, transfer or disposal of a security or any interest in such security, or (ii) entrance into an agreement or commitment providing for the sale of, pledge of, encumbrance of, grant of an option with respect to, transfer of or disposition of such security or any interest therein.

2. Transfer of Shares.

(a) Transferee of Shares to be Bound by this Agreement. The Shareholder hereby agrees that, at all times during the period commencing with the execution and delivery of this Agreement until the Expiration Date, the Shareholder shall not cause or permit any Transfer of any of the Shares (or any securities convertible into or exercisable or exchangeable for Shares), or any interest in the foregoing, to be effected unless each Person to whom any of such Shares (or any securities convertible into or exercisable or exchangeable for Shares), or any interest in any of the foregoing, is or may be Transferred shall have (i) executed a counterpart of this Agreement and an irrevocable proxy in the form attached hereto as Exhibit A (the Proxy), and (ii) agreed in writing to hold such Shares (or any securities convertible into or exercisable or exchangeable for Shares), or such interest in the foregoing, subject to the terms and conditions of this Agreement.

(b) Transfer of Voting Rights. The Shareholder hereby agrees that, at all times during the period commencing with the execution and delivery of this Agreement until the Expiration Date, the Shareholder shall not deposit (or permit the deposit of) any Shares (or any securities convertible into or exercisable or exchangeable for Shares), or any interest in the foregoing, in a voting trust or grant any proxy, or enter into any voting agreement or similar agreement or arrangement in contravention of the obligations of the Shareholder under this Agreement with respect to any of the Shares (or any securities convertible into or exercisable or exchangeable for Shares), or any interest in the foregoing.

3. Agreement to Vote Shares. The Shareholder hereby agrees that, at all times during the period commencing with the execution and delivery of this Agreement until the Expiration Date, at every meeting of the shareholders of Parent called with respect to any of the following, and at every adjournment or postponement thereof, and on every action or approval by written consent of the shareholders of Parent, the Shareholder shall vote, to the extent not voted by the person(s) appointed under the Proxy (as defined in Section 4 hereof), the Shares in favor of the adoption and approval of the Reorganization Agreement and the approval of the Merger, and in favor of each of the other actions contemplated by the Reorganization Agreement and any action required in furtherance thereof. Prior to the Expiration Date, the Shareholder shall not enter into any agreement or understanding with any person to vote or give instructions in any manner inconsistent with the terms of this Section 3.

4. Irrevocable Proxy. The Shareholder hereby agrees to deliver to the Company, concurrently with the execution and delivery of this Agreement, the Proxy in the form attached hereto as Exhibit A, which shall be irrevocable to the fullest extent permitted by applicable law, with respect to the Shares. The Shareholder agrees that such Proxy is executed and intended to be irrevocable in accordance with provisions of Section 705 of the California Corporations Code.

5. Representations, Warranties and Covenants of the Shareholder. The Shareholder hereby represents, warrants and covenants to Parent as follows:

(a) The Shareholder is the beneficial or record owner of, or exercises voting power over, the Shares. The Shares constitute the Shareholder's entire interest in the outstanding shares of voting securities of Parent and the Shareholder does not hold any other outstanding shares of capital stock of Parent. No person not a signatory to this Agreement has a beneficial interest in or a right to acquire or vote any of the Shares (other than, (i) if the Shareholder is a partnership, the rights and interest of persons and entities that own partnership interests in the Shareholder under the partnership agreement governing the Shareholder and applicable partnership law or (ii) if the Shareholder is a married individual and resides in a State with community property laws, the community property interest of his or her spouse to the extent applicable under such community property laws). The Shares are and will be at all times up until the Expiration Date free and clear of any security interests, liens, claims,

Table of Contents

pledges, options, rights of first refusal, co-sale rights, agreements, limitations on the Shareholder's voting rights, charges and other encumbrances of any nature (Encumbrances) that would adversely affect the Merger or the exercise or fulfillment of the rights and obligations of Parent under the Reorganization Agreement or of the parties to this Agreement. The Shareholder's principal residence or place of business is set forth on the signature page hereto.

(b) The Shareholder has all requisite power, capacity and authority to enter into this Agreement and to perform its obligations under this Agreement. The execution and delivery of this Agreement by the Shareholder and the consummation by the Shareholder of the transactions contemplated hereby have been duly authorized by all necessary action, if any, on the part of the Shareholder. This Agreement has been duly executed and delivered by the Shareholder and constitutes a valid and binding obligation of the Shareholder, enforceable against the Shareholder in accordance with its terms, subject only to the effect, if any, of (a) applicable bankruptcy and other similar laws affecting the rights of creditors generally and (b) rules of law governing specific performance, injunctive relief and other equitable remedies.

(c) The execution and delivery of this Agreement by the Shareholder does not, and the Shareholder's performance of the obligations under this Agreement will not: (i) conflict with, or result in any violation of any order, decree or judgment applicable to the Shareholder or by which the Shareholder or any of the Shareholder's properties or the Shares are bound; (ii) result in any breach of or constitute a default (with notice or lapse of time, or both) under, or give to others any rights of termination, amendment, acceleration or cancellation of any contract to which the Shareholder is a party or by which the Shareholder or any of the Shareholder's properties (including the Shares) is bound or affected; or (iii) result in the creation of any Encumbrance on any of the Shares. The execution and delivery of this Agreement by the Shareholder does not, and the performance of this Agreement by the Shareholder will not, require the consent of any third party.

(d) There is (i) no action, suit, proceeding, claim, arbitration or investigation pending before any Governmental Entity or, to the Shareholder's actual knowledge, threatened against, and (ii) no judgment, decree or order against, (A) the Shareholder, or (B) any of (1) the Shareholder's affiliates, (2) the Shareholder's or its affiliates' respective properties, (3) the Shareholder's officers or directors (in the case of a corporate entity (in their capacities as such)), or (4) the Shareholder's respective partners (in the case of a partnership), in the case of each of (i) and (ii) that, individually or in the aggregate, would reasonably be expected to materially delay or impair the Shareholder's ability to consummate the transactions contemplated by this Agreement.

6. Consent and Waiver. The Shareholder hereby gives any consents or waivers that are reasonably required for the consummation of the Merger under the terms of any agreement or instrument to which the Shareholder is a party or subject or in respect of any rights the Shareholder may have in connection with the Merger or the other transactions provided for in the Reorganization Agreement (whether such rights exist under the articles of incorporation or bylaws of the Company, any contract or commitment of the Company under statutory or common law or otherwise). Without limiting the generality or effect of the foregoing, the Shareholder hereby waives any and all rights to contest or object to the execution and delivery of the Reorganization Agreement, Parent Board of Directors' actions in approving and recommending the Merger, the consummation of the Merger and the other transactions provided for in the Reorganization Agreement, or to seek damages or other legal or equitable relief in connection therewith.

7. Additional Documents. The Shareholder hereby agrees to execute and deliver any additional documents necessary or desirable, in the reasonable opinion of the Company, to carry out the intent of this Agreement.

8. Confidentiality. The Shareholder shall hold any information regarding this Agreement, the Merger, the Reorganization Agreement and the transactions contemplated thereby, in strict confidence and shall not divulge any such information to any third person until such time as the Merger has been publicly disclosed by the Company. Neither the Shareholder, nor any of its affiliates shall issue or cause the publication of any press release or other public announcement with respect to this Agreement, the Merger, the Reorganization Agreement or the other transactions contemplated thereby without the prior written consent of the Parent, except as may be required by law or by any listing agreement with, or the policies of, the Nasdaq Stock Market or an applicable

Table of Contents

national securities exchange in which circumstance such announcing party shall make reasonable efforts to consult with the Company to the extent practicable.

9. **Appraisal Rights.** The Shareholder agrees not to exercise any rights of appraisal or any dissenters' rights that the Shareholder may have (whether under applicable law or otherwise) or could potentially have or acquire in connection with the Merger.

10. **Termination.** This Agreement shall terminate and shall have no further force or effect after the Expiration Date. Upon such termination, no party shall have any further obligations or liabilities hereunder; provided, however, such termination shall not relieve any party from liability for any breach of this Agreement prior to such termination.

11. **Miscellaneous.**

(a) **Notices.** All notices and other communications hereunder shall be in writing and shall be deemed given on (i) the date of delivery, if delivered personally or by commercial delivery service, or (ii) on the date of confirmation of receipt (or the next Business Day, if the date of confirmation of receipt is not a Business Day), if sent via facsimile (with confirmation of receipt), to the parties hereto at the following address (or at such other address for a party as shall be specified by like notice):

(i) if to the Company, to:
Accent Optical Technologies, Inc.

131 NW Hawthorne

Suite 207

Bend, OR 97701

Attention: Chief Executive Officer

Facsimile No.: 541.318.1966

with a copy (which shall not constitute notice) to:

Perkins Coie LLP

1120 N.W. Couch, Tenth Floor

Portland, Oregon 97209

(503) 727-2000

Attention: **Neil M. Nathanson**

Facsimile No.: 503.727.2222

(ii) if to the Shareholder, to the address set forth for the Shareholder on the signature page hereof.

(b) **Interpretation.** When a reference is made in this Agreement to Sections or Exhibits, such reference shall be to a Section of or an Exhibit to this Agreement unless otherwise indicated. The words "include," "includes" and "including" when used herein shall be deemed in each case to be followed by the words "without limitation." The phrases "the date of this Agreement," "the date hereof," and terms of similar import, unless the context otherwise requires, shall be deemed to refer to the date first above written.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(c) Specific Performance; Injunctive Relief. The parties hereto acknowledge that the Company will be irreparably harmed and that there will be no adequate remedy at law for a violation of any of the covenants or agreements of the Shareholder set forth herein. Therefore, it is agreed that, in addition to any other remedies that may be available to the Company upon any such violation of this Agreement, the Company shall have the right to enforce such covenants and agreements by specific performance, injunctive relief or by any other means available to the Company at law or in equity and the Shareholder hereby waives any and all defenses which could exist in its favor in connection with such enforcement and waives any requirement for the security or posting of any bond in connection with such enforcement.

B1-4

Table of Contents

(d) **Counterparts**. This Agreement may be executed in one or more counterparts, all of which shall be considered one and the same instrument and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other parties hereto; it being understood that all parties need not sign the same counterpart.

(e) **Entire Agreement; Nonassignability; Parties in Interest**. This Agreement and the documents and instruments and other agreements specifically referred to herein or delivered pursuant hereto (including the Proxy) (i) constitute the entire agreement among the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof and (ii) are not intended to confer, and shall not be construed as conferring, upon any person other than the parties hereto any rights or remedies hereunder. Neither this Agreement nor any of the rights, interests, or obligations under this Agreement may be assigned or delegated, in whole or in part, by operation of law or otherwise, by the Shareholder without the prior written consent of the Company, and any such assignment or delegation that is not consented to shall be null and void. This Agreement, together with any rights, interests or obligations of the Company hereunder, may be assigned or delegated in whole or in part by the Company without the consent of or any action by the Shareholder upon notice by the Company to the Shareholder as herein provided. Subject to the preceding sentence, this Agreement shall be binding upon, inure to the benefit of, and be enforceable by, the parties hereto and their respective successors and assigns (including any person to whom any Shares are sold, transferred or assigned).

(f) **Amendment; Waiver**. Subject to the provisions of applicable law, the parties hereto may amend this Agreement at any time pursuant to an instrument in writing signed on behalf of each of the parties hereto. At any time, any party hereto may, to the extent legally allowed, waive any inaccuracies in the representations and warranties made to such party contained herein or in any document delivered pursuant hereto and waive compliance with any of the agreements or conditions for the benefit of such party contained herein. Any agreement on the part of a party hereto to any such waiver shall be valid only if set forth in an instrument in writing signed on behalf of such party. Without limiting the generality or effect of the preceding sentence, no delay in exercising any right under this Agreement shall constitute a waiver of such right, and no waiver of any breach or default shall be deemed a waiver of any other breach or default of the same or any other provision in this Agreement.

(g) **Severability**. In the event that any provision of this Agreement, or the application thereof, becomes or is declared by a court of competent jurisdiction to be illegal, void or unenforceable, the remainder of this Agreement shall continue in full force and effect and shall be interpreted so as reasonably to effect the intent of the parties hereto. The parties hereto further agree to use their commercially reasonable efforts to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that shall achieve, to the extent possible, the economic, business and other purposes of such void or unenforceable provision.

(h) **Remedies Cumulative**. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party shall be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy shall not preclude the exercise of any other remedy.

(i) **Governing Law**. This Agreement shall be governed by and construed in accordance with the laws of the State of California without reference to such state's principles of conflicts of law. Each of the parties hereto irrevocably consents to the exclusive jurisdiction of any court located within the State of California, in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein, agrees that process may be served upon them in any manner authorized by the laws of the State of California for such persons and waives and covenants not to assert or plead any objection which they might otherwise have to such jurisdiction and such process.

(j) **Rules of Construction**. The parties hereto agree that they have been represented by counsel during the negotiation, preparation and execution of this Agreement and, therefore, waive the application of any law, regulation, holding or rule of construction providing that ambiguities in an agreement or other document shall be construed against the party drafting such agreement or document.

Table of Contents

(k) WAIVER OF JURY TRIAL. EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT, OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE ACTIONS OF ANY PARTY HERETO IN NEGOTIATION, ADMINISTRATION, PERFORMANCE OR ENFORCEMENT HEREOF.

[Signature Page Follows]

B1-6

Table of Contents

EXHIBIT A

IRREVOCABLE PROXY

TO VOTE STOCK OF

NANOMETRICS INCORPORATED

The undersigned shareholder of Nanometrics Incorporated, a California corporation (Parent), hereby irrevocably (to the fullest extent permitted by applicable law) appoints the members of the Board of Directors of Accent Optical Technologies, Inc., a Delaware corporation (the Company), and each of them, or any other designee of the Company, as the sole and exclusive attorneys and proxies of the undersigned, with full power of substitution and resubstitution, to vote and exercise all voting and related rights (to the fullest extent that the undersigned is entitled to do so) with respect to all of the shares of capital stock of Parent that now are or hereafter may be beneficially owned by the undersigned, and any and all other shares or securities of Parent issued or issuable in respect thereof on or after the date hereof other than any voting securities of Parent subject to a trading or sales plan for the benefit of the shareholder established pursuant to Rule 10b5-1 under the Exchange Act prior to the date hereof (collectively, the Shares) in accordance with the terms of this irrevocable proxy (the Irrevocable Proxy). The Shares beneficially owned by the undersigned shareholder of Parent as of the date of this Irrevocable Proxy are listed on the final page of this Irrevocable Proxy. Upon the undersigned's execution of this Irrevocable Proxy, any and all prior proxies given by the undersigned with respect to any Shares are hereby revoked and the undersigned agrees not to grant any subsequent proxies or enter into any agreement or understanding with any person to vote or give instructions with respect to the Shares in any manner inconsistent with the terms of this Irrevocable Proxy until after the Expiration Date (as defined below).

This Irrevocable Proxy is irrevocable (to the fullest extent permitted by applicable law), is coupled with an interest, is granted pursuant to that certain Voting Agreement dated as of even date herewith by and between the Company and the undersigned (the Voting Agreement), and is granted in consideration of the Company entering into that certain Agreement and Plan of Merger and Reorganization, dated as of even date herewith (the Reorganization Agreement), which provides for the merger (the Merger) of the Company with and into a wholly-owned subsidiary of Parent (Merger Sub). The undersigned shareholder agrees that the Irrevocable Proxy is executed and intended to be irrevocable in accordance with provisions of Section 705 of the California Corporations Code. As used herein, the term Expiration Date shall mean the earlier to occur of (i) such date and time as the Reorganization Agreement shall have been validly terminated in accordance with its terms and conditions, or (ii) such date and time as the Merger shall become effective in accordance with its terms and conditions.

The attorneys and proxies named above, and each of them, are hereby authorized and empowered by the undersigned, at any time prior to the Expiration Date, to act as the undersigned's attorney and proxy to vote the Shares, and to exercise all voting and other rights of the undersigned with respect to the Shares (including, without limitation, the power to execute and deliver written consents pursuant to the California Corporations Code), at every annual, special or adjourned meeting of the shareholders of the Company and in every written consent in lieu of such meeting in favor of the adoption and approval of the Reorganization Agreement and the approval of the Merger, and in favor of each of the other actions contemplated by the Reorganization Agreement.

The attorneys and proxies named above may not exercise this Irrevocable Proxy on any other matter except as provided above. The undersigned shareholder may vote the Shares on all other matters.

All authority herein conferred shall survive the death or incapacity of the undersigned and any obligation of the undersigned hereunder shall be binding upon the heirs, personal representatives, successors and assigns of the undersigned.

[Signature Page Follows]

B1-7

Table of Contents

Annex B-2

VOTING AGREEMENT

This Voting Agreement (this Agreement) is made as of January 25, 2006, by and among the undersigned holder of stock of Accent Optical Technologies, Inc. (the Holder), Nanometrics Incorporated, a California corporation (Nanometrics) and Accent Optical Technologies, Inc., a Delaware Corporation (Accent).

In order to induce Accent to negotiate and enter into an agreement for the sale of Accent, Holder and Accent agree as follows:

Section 1 Definition of Merger

For purposes of this Agreement, the term Merger means the merger of Accent with Nanometrics or an affiliate of Nanometrics formed for the purpose of acquiring Accent by merger pursuant to an Agreement and Plan of Merger and Reorganization by and among, Nanometrics, Accent, a wholly owned subsidiary of Nanometrics and a representative of the Accent stockholders (the Merger Agreement) that substantially reflects the terms and conditions and allocation of merger proceeds set forth in the letter from Accent to Holder dated January 20, 2006 and the Preliminary Term Sheet attached thereto.

Section 2 Agreement to Vote Shares

Holder hereby agrees that at every meeting of the stockholders of Accent called with respect to any of the following, and at every adjournment or postponement thereof, and on every action or approval by written consent of the stockholders of Accent, Holder shall vote or direct the voting of all shares of Capital Stock of Accent held or under the control of Holder or any affiliate of Holder (the Covered Shares):

in favor of approval and adoption of the Merger Agreement and the Merger, and any other action or approval required in furtherance of the Merger;

in favor of the appointment of the Stockholder Agent;

in favor of the approval of the escrow agreement related to the Merger;

in favor of approval of certain compensation arrangements, if any, pursuant to Section 280G of the Internal Revenue Code of 1986, as amended*;

against any action, approval or agreement that would compete with, impede, interfere with, or adversely affect the approval of the Merger Agreement, the Merger or the timely consummation of the transactions contemplated by the Merger Agreement;

against any action, approval or agreement that would result in any material breach of a representation, warranty, covenant or agreement of Accent under the Merger Agreement; and

against any proposal for any extraordinary corporate transaction, such as a recapitalization, dissolution, liquidation, or sale of assets of Accent or any merger, consolidation or other business combination (other than the Merger) between Accent and any Person (other than Nanometrics or a Subsidiary of Nanometrics) or any other action or agreement that is intended or which reasonably could be

Edgar Filing: NANOMETRICS INC - Form S-4/A

expected to impede, interfere with, delay, postpone or materially adversely affect the Merger and the transactions contemplated by the Merger Agreement.

Section 3 Grant of Proxy

IN FURTHERANCE AND NOT IN LIMITATION OF THE FOREGOING, IN THE EVENT OF AND TO NEGATE THE EFFECT OF A BREACH BY A STOCKHOLDER OF ANY OF THE PROVISIONS OF SECTION 2, EACH STOCKHOLDER HEREBY GRANTS TO AND APPOINTS NANOMETRICS AS ITS

* Nanometrics subsequently waived the requirement that the Accent stockholders vote in favor of this particular proposal.

B2-1

Table of Contents

IRREVOCABLE PROXY AND ATTORNEY-IN-FACT (WITH FULL POWER OF SUBSTITUTION AND RESUBSTITUTION) TO VOTE THE COVERED SHARES SOLELY AS INDICATED IN THIS AGREEMENT. EACH STOCKHOLDER SHALL RETAIN THE RIGHT TO VOTE THE COVERED SHARES HELD BY SUCH STOCKHOLDER WITH RESPECT TO ALL MATTERS NOT COVERED BY THIS AGREEMENT. EACH STOCKHOLDER INTENDS THIS PROXY TO BE IRREVOCABLE AND COUPLED WITH AN INTEREST AND SHALL TAKE SUCH FURTHER ACTION AND EXECUTE SUCH OTHER INSTRUMENTS AS MAY BE NECESSARY TO EFFECTUATE THE INTENT OF THIS PROXY. EACH STOCKHOLDER HEREBY REVOKES ANY AND ALL PREVIOUS PROXIES AND POWERS OF ATTORNEY WITH RESPECT TO SUCH STOCKHOLDER'S COVERED SHARES OR ANY OTHER VOTING SECURITIES OF ACCENT THAT RELATE TO THE ADOPTION OF THE MERGER AGREEMENT, THE MERGER AND THE OTHER MATTERS SET FORTH IN THIS AGREEMENT. THE GRANT AND APPOINTMENT OF THE PROXY AND ATTORNEY-IN-FACT PURSUANT TO THIS SECTION 3 SHALL TERMINATE IN ACCORDANCE WITH SECTION 9.

Section 4 Appraisal Rights

Holder agrees not to exercise any rights of appraisal or any dissenters' rights that Holder may have (whether under applicable law or otherwise) or could potentially have or acquire in connection with the Merger.

Section 5 Specific Performance

The parties hereto acknowledge that Accent will be irreparably harmed and there will be no adequate remedy at law for a violation of any of the covenants or agreements of Holder set forth herein. Therefore, it is agreed that, in addition to all other remedies that may be available to Accent upon any such violation of this Agreement, Accent shall have the right to enforce such covenants and agreements by specific performance, injunctive relief or by any other means available to Accent at law or in equity and Holder hereby waives any and all defenses which could exist in its favor in connection with such enforcement and waives any requirement for the security or posting of any bond in connection with such enforcement.

Section 6 No Certainty Regarding Merger

Holder acknowledges that notwithstanding Holder's execution of this Agreement, there is no certainty, and Accent makes no representation, that a Merger Agreement will be successfully negotiated, or if successfully negotiated, that the Merger will be consummated.

Section 7 Miscellaneous

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

Each of the parties hereto has caused this Voting Agreement to be executed by its duly authorized officers as of the date set forth in the introduction to this Agreement.

Section 8 Other Agreements.

(a) *No Inconsistent Agreements.* Each Stockholder covenants and agrees that such Stockholder shall not: (a) enter into any contract (including any voting agreement) with respect to any of its Covered Shares; (b) deposit any of its Covered Shares into any voting trust; or (c) grant any proxy or power of attorney with respect to any of its Covered Shares, in each case inconsistent with such Stockholder's obligations under this Agreement. *No Transfers.* Except pursuant to the exercise of the Option (as hereinafter defined), each Stockholder agrees that it shall not: (a) sell, assign, give, tender, offer, exchange or otherwise transfer any of

Table of Contents

its Covered Shares except by will or the laws of descent and distribution in the event of his or her death; (b) encumber, pledge, hypothecate or otherwise permit (including by omission) the creation or imposition of any Lien on any of its Covered Shares; or (c) enter into any Contract with respect to any of the foregoing, in each case without the prior written consent of Nanometrics.

(c) *No Registrations of Transfers*. Each Stockholder (a) agrees that it shall not request that Accent or its transfer agent register the transfer (book-entry or otherwise) of any certificate or uncertificated interest representing any of such Stockholder's Covered Shares and (b) consents to the entry of stop transfer instructions by Accent of any transfer of such Stockholder's Covered Shares, unless such transfer is made in compliance with Section 6.2.

Section 9 Termination

Subject to the next succeeding sentence, this Agreement and all of its provisions shall terminate upon the earliest to occur of (i) the time the Merger shall become effective, (ii) such date and time as the Merger Agreement shall have been terminated in accordance with its terms or (iii) twelve (12) months after the date of this Agreement.

[remainder of page intentionally left blank]

B2-3

Table of Contents

Annex C

January 25, 2006

Board of Directors

Nanometrics Incorporated

1550 Buckeye Drive

Milpitas, CA 95035

Ladies and Gentlemen:

You have requested our opinion as to the fairness, from a financial point of view, to Nanometrics Incorporated (the Company), of the Consideration (as defined below) to be paid by the Company pursuant to the terms of that certain Agreement and Plan of Merger and Reorganization, dated as of January 25, 2006 (the Agreement), by and among the Company, Merger Sub (Merger Sub) and Accent Optical Technologies, Inc. (Target).

As more specifically set forth in the Agreement, and subject to the terms, conditions and adjustments set forth in the Agreement, we understand that the Company will acquire Target through the merger of Merger Sub with and into Target with Target surviving as a wholly-owned subsidiary of the Company (the Merger or Transaction). Pursuant to the Agreement, the outstanding equity of Target is to be converted into the right to receive an aggregate of up to 4,900,000 shares of the Company's common stock plus an additional number of shares of common stock to reflect the value of the aggregate exercise price of assumed options and the aggregate consideration received by Target between the signing of the Agreement and the closing of the Transaction as the result of the exercise of stock options (the Consideration). The Company has also agreed to assume certain options granted by Target between January 23, 2006 and the closing of the transaction. The terms and conditions of the Transaction are more fully set forth in the Agreement.

SG Cowen & Co. LLC (SG Cowen), as part of its investment banking business, is continually engaged in the valuation of businesses and their securities in connection with mergers and acquisitions, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for corporate and other purposes. In the ordinary course of our business, we and our affiliates actively trade the securities of the Company for our own account and for the accounts of our customers and, accordingly, may at any time hold a long or short position in such securities.

We are acting as exclusive financial advisor to the Company in connection with the Transaction and will receive a fee from the Company for our services pursuant to the terms of our engagement letter with the Company, dated as of December 19, 2005, a portion of which is contingent upon the consummation of the Transaction. We will also receive a fee for providing this Opinion. SG Cowen and its affiliates in the ordinary course of business have from time to time provided, and in the future may continue to provide, commercial and investment banking services to the Company. In addition, TCW, which owns approximately 10% of the currently outstanding shares of the Company's Common Stock, is an indirect majority owned subsidiary of Societe Generale, which is the parent company of SG Cowen.

In connection with our opinion, we have reviewed and considered such financial and other matters as we have deemed relevant, including, among other things:

a draft of the Agreement dated January 23, 2006;

certain publicly available financial and other information for the Company and certain other relevant financial and operating data furnished to SG Cowen by Company management;

Edgar Filing: NANOMETRICS INC - Form S-4/A

certain publicly available financial and other information for Target and certain other relevant financial and operating data furnished to SG Cowen by Target and Company management;

C-1

Table of Contents

Nanometrics Incorporated

January 25, 2006

Page 2

certain internal financial analyses, financial forecasts, reports and other information concerning the Company (the Company Forecasts) and the Target (the Target Forecasts), prepared by the management of the Company and Target, and the amounts and timing of the cost savings and related expenses expected to result from the Transaction furnished to us by the management of the Company and Target (the Expected Synergies);

First Call estimates (First Call Estimates) and financial projections in Wall Street analyst reports (Wall Street Projections) for the Company;

discussions we have had with certain members of the managements of each of the Company and Target concerning the historical and current business operations, financial conditions and prospects of the Company and Target, the Expected Synergies and such other matters we deemed relevant;

certain operating results and the reported price and trading histories of the shares of the common stock of the Company as compared to operating results and the reported price and trading histories of certain publicly traded companies we deemed relevant;

certain financial terms of the Transaction as compared to the financial terms of certain selected business combinations we deemed relevant;

certain pro forma financial effects excluding the amortization of transaction related intangibles and other one-time and non-recurring items of the Transaction on an accretion/dilution basis; and

such other information, financial studies, analyses and investigations and such other factors that we deemed relevant for the purposes of this opinion.

In conducting our review and arriving at our opinion, we have, with your consent, assumed and relied, without independent investigation, upon the accuracy and completeness of all financial and other information provided to us by the Company and Target, respectively, or which is publicly available. We have not undertaken any responsibility for the accuracy, completeness or reasonableness of, or independently to verify, such information. In addition, we have not conducted nor have assumed any obligation to conduct any physical inspection of the properties or facilities of the Company or the Target. At the request of the Company, we have not contacted any customers of the Company or Target to ascertain what their likely reaction might be to a Transaction. We have further relied upon the assurance of management of the Company that they are unaware of any facts that would make the information provided to us incomplete or misleading in any respect. We have, with your consent, assumed that the financial forecasts and description of Expected Synergies which we examined were reasonably prepared by the management of the Company on bases reflecting the best currently available estimates and good faith judgments of such management as to the future performance of the Company and Target, and such projections and synergies, and the Wall Street Projections utilized in our analyses, provide a reasonable basis for our opinion.

We have not made or obtained any independent evaluations, valuations or appraisals of the assets or liabilities of the Company or Target, nor have we been furnished with such materials. With regard to accounting matters and an assessment of the financial condition and sufficiency of the internal controls of Target, we have relied exclusively on Company management's own assessment. With respect to all legal matters relating to the Company and Target, we have relied on the advice of legal counsel to the Company. Our services to the Company in connection with the Transaction have been comprised of rendering an opinion from a financial point of view with respect to the Consideration. Our opinion is necessarily based upon economic and market conditions and other circumstances as they exist and can be evaluated by us on the date hereof. It

Edgar Filing: NANOMETRICS INC - Form S-4/A

should be understood that although subsequent developments may affect our opinion, we do not have any obligation to update, revise or reaffirm our opinion and we expressly disclaim any responsibility to do so.

C-2

Table of Contents

Nanometrics Incorporated

January 25, 2006

Page 3

For purposes of rendering our opinion we have assumed in all respects material to our analysis, that the representations and warranties of each party contained in the Agreement are true and correct, that each party will perform all of the covenants and agreements required to be performed by it under the Agreement and that all conditions to the consummation of the Transaction will be satisfied without waiver thereof. We have assumed that the final form of the Agreement will be substantially similar to the last draft reviewed by us. We have also assumed that all governmental, regulatory and other consents and approvals contemplated by the Agreement will be obtained and that in the course of obtaining any of those consents no restrictions will be imposed or waivers made that would have an adverse effect on the contemplated benefits of the Transaction. You have informed us, and we have assumed, that the Transaction will be treated as a tax-free reorganization.

It is understood that this letter is intended for the benefit and use of the Board of Directors of the Company in its consideration of the Transaction and may not be used for any other purpose or be reproduced, disseminated, quoted or referred to at any time, in any manner or for any purpose without our prior written consent. This letter does not constitute a recommendation to any stockholder as to how such stockholder should vote with respect to the Transaction. We have not been requested to opine as to, and our opinion does not in any manner address, the Company's underlying business decision to effect the Transaction. Furthermore, we express no view as to the price or trading range for shares of the common stock of the Company following the consummation of the Transaction.

Based upon and subject to the foregoing, including the various assumptions and limitations set forth herein, it is our opinion that, as of the date hereof, the Consideration in the Transaction is fair, from a financial point of view, to the Company.

Very truly yours,

/s/ SG Cowen & Co.
SG Cowen & Co.

C-3

Table of Contents

Annex D

January 24, 2006

Board of Directors

Accent Optical Technologies, Inc.

131 NW Hawthorne Avenue, Suite 101

Bend, Oregon 97701

Members of the Board of Directors:

Accent Optical Technologies, Inc. (the Company), Nanometrics Incorporated (the Acquiror) and Alloy Merger Corporation, a newly formed, wholly owned subsidiary of the Acquiror (the Acquisition Sub), propose to enter into an Agreement and Plan of Merger and Reorganization (the Agreement) pursuant to which the Acquisition Sub will be merged with the Company in a transaction (the Merger) in which the outstanding shares of the Company's Series A preferred stock, par value \$0.01 (the Series A Preferred Stock), convertible preferred stock, par value \$0.01 (the Convertible Preferred Stock) and common stock, par value \$0.00001 per share (the Common Stock, and together with the Series A Preferred Stock and the Convertible Preferred Stock, the Company Shares), will be converted into the right to receive, in the aggregate, 4,900,000 shares (the Consideration) of the common stock of the Acquiror, no par value (the Acquiror Shares).

You have asked us whether, in our opinion, the Consideration is fair from a financial point of view to the holders of the Company Shares.

In arriving at the opinion set forth below, we have, among other things:

- (1) Reviewed certain publicly available business and financial information relating to the Company and the Acquiror that we deemed to be relevant;
- (2) Reviewed certain information, including financial forecasts, relating to the business, earnings, cash flow, assets, liabilities and prospects of the Company and the Acquiror furnished to us by the Company and the Acquiror, respectively, as well as the amount and timing of the cost savings and related expenses and synergies expected to result from the Merger (the Expected Synergies) furnished to us by the Company;
- (3) Conducted discussions with members of senior management of the Company and the Acquiror concerning the matters described in clauses 1 and 2 above, as well as their respective businesses and prospects before and after giving effect to the Merger and the Expected Synergies;
- (4) Reviewed the valuation multiples for the Company and the Acquiror and compared them with those of certain publicly traded companies that we deemed to be relevant;
- (5) Reviewed the results of operations of the Company and the Acquiror and compared them with those of certain publicly traded companies that we deemed to be relevant;
- (6) Compared the proposed financial terms of the Merger with the financial terms of certain other transactions that we deemed to be relevant;

Edgar Filing: NANOMETRICS INC - Form S-4/A

- (7) Participated in certain discussions and negotiations among representatives of the Company and the Acquiror and their financial advisors;
- (8) Reviewed the potential pro forma impact of the Merger;
- (9) Reviewed a draft dated January 22, 2006 of the Agreement; and
- (10) Reviewed such other financial studies and analyses and took into account such other matters as we deemed necessary, including our assessment of general economic, market and monetary conditions.

D-1

Table of Contents

In preparing our opinion, we have assumed and relied on the accuracy and completeness of all information supplied or otherwise made available to us, discussed with or reviewed by or for us, or publicly available, and we have not assumed any responsibility for independently verifying such information or undertaken an independent evaluation or appraisal of any of the assets or liabilities of the Company or the Acquiror, nor have we evaluated the solvency or fair value of the Company or the Acquiror under any state or federal laws relating to bankruptcy, insolvency or similar matters. In addition, we have not assumed any obligation to conduct any physical inspection of the properties or facilities of the Company or the Acquiror. With respect to the financial forecast information and the Expected Synergies furnished to or discussed with us by the Company or the Acquiror, we have assumed that they have been reasonably prepared and reflect the best currently available estimates and judgment of the Company's or the Acquiror's management as to the expected future financial performance of the Company or the Acquiror, as the case may be, and the Expected Synergies. We have also assumed that the final form of the Agreement will be substantially similar to the last draft reviewed by us.

Our opinion is necessarily based upon market, economic and other conditions as they exist and can be evaluated on, and on the information made available to us as of, the date hereof. We have assumed that in the course of obtaining the necessary regulatory or other consents or approvals (contractual or otherwise) for the Merger, no restrictions, including any divestiture requirements or amendments or modifications, will be imposed that will have a material adverse effect on the contemplated benefits of the Merger.

We are acting as financial advisor to the Company in connection with the Merger and will receive a fee from the Company for our services, a significant portion of which is contingent upon the consummation of the Merger. In addition, the Company has agreed to indemnify us for certain liabilities arising out of our engagement. In addition, in the ordinary course of our business, we may actively trade the Acquiror Shares for our own account and for the accounts of customers and, accordingly, may at any time hold a long or short position in such securities.

This opinion is for the use and benefit of the Board of Directors of the Company. Our opinion does not address the merits of the underlying decision by the Company to engage in the Merger and does not constitute a recommendation to any stockholder as to how such stockholder should vote on, or consent to, the proposed Merger or any matter related thereto. In addition, you have not asked us to address, and this opinion does not address, the fairness to, or any other consideration of, the holders of any class of securities, creditors or other constituencies of the Company, other than the holders of the Company Shares.

We are not expressing any opinion herein as to the prices at which the Acquiror Shares will trade following the announcement or consummation of the Merger.

On the basis of and subject to the foregoing, we are of the opinion that, as of the date hereof, the Consideration is fair from a financial point of view to the holders of the Company Shares.

Very truly yours,

/s/ MERRILL LYNCH, PIERCE, FENNER & SMITH

INCORPORATED
MERRILL LYNCH, PIERCE, FENNER & SMITH
INCORPORATED

JCM

Table of Contents

Annex E-1

SHAREHOLDER AGREEMENT

THIS SHAREHOLDER AGREEMENT (this *Agreement*) is entered into as of January 24, 2006, by and between Nanometrics Incorporated, a California corporation (the *Parent*), and (the *Shareholder*) of Accent Optical Technologies, Inc., a Delaware corporation (the *Company*).

WITNESSETH:

WHEREAS, Parent, Alloy Merger Corporation, a Delaware corporation and a wholly owned subsidiary of Parent (*Merger Sub*), the Company and Sanford S. Wadler (the *Stockholder Agent*) are entering into an Agreement and Plan of Merger and Reorganization (the *Reorganization Agreement*) concurrently herewith pursuant to which Merger Sub will merge with and into the Company (the *Merger*), whereupon (A) the Company will become a wholly owned subsidiary of Parent, and (B) all outstanding shares of capital stock of the Company (the *Company Capital Stock*) will be converted into the right to receive a number of shares of common stock of Parent as set forth therein.

WHEREAS, for all purposes of and under this Agreement capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed thereto in the Reorganization Agreement.

WHEREAS, the Shareholder is the beneficial owner (as determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended) of the shares of Company Capital Stock and options to acquire shares of Company Capital Stock, each as set forth on the signature page of this Agreement.

WHEREAS, in consideration of the execution of the Reorganization Agreement by the Company, the Shareholder is hereby agreeing to limit such Shareholder's dispositions of the Parent Common Stock that such Shareholder will receive as consideration of such Shareholder's interests in Company Capital Stock or upon exercise of options, so as to facilitate orderly market for the Parent's common stock after the consummation of the Merger.

NOW, THEREFORE, in consideration of the premises and the covenants and agreements set forth in the Reorganization Agreement and in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and accepted, the parties hereto hereby agree as follows:

1. *Certain Definitions*. Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed to them in the Reorganization Agreement. For purposes of this Agreement, the following terms shall have the following respective meanings:

(a) *Expiration Date* shall mean the earlier to occur of (i) such date and time as the Reorganization Agreement shall have been validly terminated in accordance with its terms and conditions or (ii) the second anniversary of such date and time as the Merger shall become effective in accordance with its terms and conditions.

(b) *Person* shall mean any individual, any corporation, limited liability company, general or limited partnership, business trust, unincorporated association or other business organization or entity, or any governmental body or authority.

(c) *Shares* shall mean (i) all voting securities of Parent beneficially owned by the Shareholder as of the effective date of the Merger and (ii) all voting securities of Parent which the Shareholder purchases or acquires beneficial ownership of after the date of this Agreement and prior to the Expiration Date, including, without limitation, any shares issued or issuable upon the conversion, exercise or exchange, as the case may be, of any shares held by the Shareholder which are convertible into, or exercisable or exchangeable for,

Table of Contents

voting securities of Parent. Notwithstanding the foregoing, however, shares shall not include any voting securities of Parent acquired by Shareholder in open market purchases on the Nasdaq National Market after the date of this Agreement.

(d) *Transfer* shall mean a direct or indirect: (i) sale, pledge, encumbrance, grant of an option with respect to, transfer or disposal of a security or any interest in such security, or (ii) entrance into an agreement or commitment providing for the sale of, pledge of, encumbrance of, grant of an option with respect to, transfer of or disposition of such security or any interest therein.

(e) *Unrestricted Shares* shall mean (a) initially one twenty fourth (1/24) of the Shares and on the first day of each subsequent calendar month after the Effective Time an additional one twenty fourth (1/24th) of the Shares; minus (b) the number of Shares previously Transferred in accordance with Section 2(b)(i), (ii), (v) or (vi) of this Agreement (all as properly adjusted to reflect any Shares Transferred pursuant to Sections 2(b)(iii) and 2(b)(iv) of this Agreement).

2. Transfer of Shares.

(a) *No Transfer of Shares other than Pursuant to this Agreement.* The Shareholder hereby agrees that, at all times during the period commencing with the date of this Agreement until the Expiration Date, the Shareholder shall not cause or permit any Transfer of any of the Shares (or any securities convertible into or exercisable or exchangeable for Shares), or any interest in the foregoing, to be effected unless in accordance with the terms and conditions of this Agreement.

(b) *Orderly Disposition of Shares.* Notwithstanding the foregoing, the Shareholder may Transfer Shares held by the Shareholder after the Effective Time: (i) in transactions effected on a national securities exchange or through the Nasdaq Stock Market so long as the number of Shares so Transferred in any month does not exceed the lesser of (x) the number of Unrestricted Shares and (y) one eighth (1/8th) of the aggregate number of Shares and options to acquire Shares received in the Merger by such Shareholder in exchange for such Shareholder's Company Capital Stock and options to acquire Company Capital Stock, (ii) any of the Shares in connection with the exercise (cashless or otherwise) of options to acquire shares of the Parent common stock in an amount that is sufficient to satisfy the payment of any transaction costs and any tax liability incurred by that Shareholder in connection with that exercise, (iii) to a family member or trust for estate planning purposes, provided the transferee has agreed in writing to be bound by the terms of this Agreement (and any Shares Transferred by all such Persons shall be aggregated with Transfers by such Shareholder for purposes of this Section) and to hold such Shares subject to all the terms and provisions of this Agreement, (iv) to a lender pursuant to a margin loan or other secured lending obligation provided the lender has agreed in writing to be bound by the terms of this Agreement (and any Shares Transferred by such lender shall be aggregated with Transfers by such Shareholder for purposes of this Section), (v) pursuant to, and in accordance with, the terms of a Shareholder's 10b5-1 plan or arrangement with the Parent, if any, with terms and conditions consistent with the provisions of this Agreement, including the limitations set forth in this Section (and any Shares Transferred to third parties under such 10b5-1 Plan shall be aggregated with Transfers by such Shareholder for purposes of this Section) or (vi) in a transaction approved in writing by the Parent.

3. Representations, Warranties and Covenants of the Shareholder. The Shareholder hereby represents, warrants and covenants to Parent as follows:

(a) The Shareholder is the beneficial or record owner of, or exercises voting power over, the Shares. The Shares constitute the Shareholder's entire interest in the outstanding shares of voting securities of the Company and the Shareholder does not hold any other outstanding shares of Company Capital Stock or rights to acquire Company Capital Stock. No Person not a signatory to this Agreement has a beneficial interest in or a right to acquire or vote any of the Shares (other than, (i) pursuant to a Voting Agreement dated as of January 11, 2006 with Parent; (ii) if the Shareholder is a partnership, the rights and interest of persons and entities that own partnership interests in the Shareholder under the partnership agreement governing the Shareholder and applicable partnership law or (iii) if the Shareholder is a married individual

Table of Contents

and resides in a State with community property laws, the community property interest of his or her spouse to the extent applicable under such community property laws). The Shares are and will be at all times up until the Expiration Date free and clear of any security interests, liens, claims, pledges, options, rights of first refusal, co-sale rights, agreements, limitations on the Shareholder's voting rights, charges and other encumbrances of any nature (*Encumbrances*) that would adversely affect the ability of Shareholder to perform such Shareholder's obligations under this Agreement.

(b) The Shareholder has all requisite power, capacity and authority to enter into this Agreement and to perform such Shareholder's obligations under this Agreement. The execution and delivery of this Agreement by the Shareholder and the consummation by the Shareholder of the transactions contemplated hereby have been duly authorized by all necessary action, if any, on the part of the Shareholder. This Agreement has been duly executed and delivered by the Shareholder and constitutes a valid and binding obligation of the Shareholder, enforceable against the Shareholder in accordance with its terms, subject only to the effect, if any, of (a) applicable bankruptcy and other similar laws affecting the rights of creditors generally and (b) rules of law governing specific performance, injunctive relief and other equitable remedies.

(c) The execution and delivery of this Agreement by the Shareholder does not, and the Shareholder's performance of the obligations under this Agreement will not: (a) conflict with, or result in any violation of any order, decree or judgment applicable to the Shareholder or by which the Shareholder or any of the Shareholder's properties or the Shares are bound; or (b) result in any breach of or constitute a default (with notice or lapse of time, or both) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of any Encumbrance on, any of the Shares pursuant to any contract to which the Shareholder is a party or by which the Shareholder or any of the Shareholder's properties (including the Shares) is bound or affected. The execution and delivery of this Agreement by the Shareholder does not, and the performance of this Agreement by the Shareholder will not, require the consent of any third party.

(d) There is (a) no action, suit, proceeding, claim, arbitration or investigation pending before any Governmental Entity or, to the Shareholder's actual knowledge, threatened against, and (b) no judgment, decree or order against, (i) the Shareholder, or (ii) any of (A) the Shareholder's affiliates, (B) the Shareholder's or its affiliates' respective properties, (C) the Shareholder's officers or directors (in the case of a corporate entity (in their capacities as such)), or (D) the Shareholder's respective partners (in the case of a partnership), in the case of each of (i) and (ii) that, individually or in the aggregate, would reasonably be expected to materially delay or impair the Shareholder's ability to consummate the transactions contemplated by this Agreement.

4. *Additional Documents.* The Shareholder hereby agrees to execute and deliver any additional documents necessary or desirable, in the reasonable opinion of the Company, to carry out the intent of this Agreement. If Shareholder is a married person, Shareholder's spouse has executed and delivered to Parent a signature page to this Agreement.

5. *Confidentiality.* The Shareholder shall hold any information regarding this Agreement, the Merger, the Reorganization Agreement and the transactions contemplated thereby, in strict confidence and shall not divulge any such information to any third person until such time as the Merger has been publicly disclosed by the Parent. Neither the Shareholder, nor any of its affiliates shall issue or cause the publication of any press release or other public announcement with respect to this Agreement, the Merger, the Reorganization Agreement or the other transactions contemplated thereby without the prior written consent of the Parent, except as may be required by law or by any listing agreement with, or the policies of, the Nasdaq Stock Market or an applicable national securities exchange in which circumstance such announcing party shall make reasonable efforts to consult with the Parent to the extent practicable.

6. *Termination.* This Agreement shall terminate and shall have no further force or effect after the Expiration Date.

Table of Contents

7. *Miscellaneous.*

(a) *Notices.* All notices and other communications hereunder shall be in writing and shall be deemed given on (i) the date of delivery, if delivered personally or by commercial delivery service, or (ii) on the date of confirmation of receipt (or the next Business Day, if the date of confirmation of receipt is not a Business Day), if sent via facsimile (with confirmation of receipt), to the parties hereto at the following address (or at such other address for a party as shall be specified by like notice):

(i) If to Parent or Merger Sub:
1550 Buckeye Drive

Milpitas, California 95035

Attention: John D. Heaton

Facsimile No.: 408.232.5910

Telephone No.: 408.435.9600

With a copy to (which shall not constitute notice):

Wilson Sonsini Goodrich & Rosati, Professional Corporation

650 Page Mill Road

Palo Alto, California 94304-1050

Attention: Aaron J. Alter

Julia Reigel

Facsimile No.: 650-493-6811

Telephone No.: 650-493-9300

(ii) If to the Shareholder:
Attention:

Facsimile No.:

Telephone No.:

(b) *Interpretation.* When a reference is made in this Agreement to Sections or Exhibits, such reference shall be to a Section of or an Exhibit to this Agreement unless otherwise indicated. The words include, includes and including when used herein shall be deemed in each case to be followed by the words without limitation. The phrases the date of this Agreement, the date hereof, and terms of similar import, unless the context otherwise requires, shall be deemed to refer to the date first above written.

(c) *Specific Performance; Injunctive Relief.* The parties hereto acknowledge that the Company will be irreparably harmed and that there will be no adequate remedy at law for a violation of any of the covenants or agreements of the Shareholder set forth herein. Therefore, it is agreed that, in addition to any other remedies that may be available to the Company upon any such violation of this Agreement, the Company shall have the

Edgar Filing: NANOMETRICS INC - Form S-4/A

right to enforce such covenants and agreements by specific performance, injunctive relief or by any other means available to the Company at law or in equity and the Shareholder hereby waives any and all defenses which could exist in its favor in connection with such enforcement and waives any requirement for the security or posting of any bond in connection with such enforcement.

(d) *Counterparts*. This Agreement may be executed in one or more counterparts, all of which shall be considered one and the same instrument and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other parties hereto; it being understood that all parties need not sign the same counterpart.

(e) *Entire Agreement; Nonassignability; Parties in Interest*. This Agreement and the documents and instruments and other agreements specifically referred to herein or delivered pursuant hereto (i) constitute the entire agreement among the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter

E1-4

Table of Contents

hereof and (ii) are not intended to confer, and shall not be construed as conferring, upon any person other than the parties hereto any rights or remedies hereunder. Neither this Agreement nor any of the rights, interests, or obligations under this Agreement may be assigned or delegated, in whole or in part, by operation of law or otherwise, by the Shareholder without the prior written consent of the Company, and any such assignment or delegation that is not consented to shall be null and void. This Agreement, together with any rights, interests or obligations of the Company hereunder, may be assigned or delegated in whole or in part by the Company without the consent of or any action by the Shareholder upon notice by the Company to the Shareholder as herein provided. Subject to the preceding sentence, this Agreement shall be binding upon, inure to the benefit of, and be enforceable by, the parties hereto and their respective successors and assigns (including any person to whom any Shares are sold, transferred or assigned).

(f) *Amendment; Waiver.* Subject to the provisions of applicable law, the parties hereto may amend this Agreement at any time pursuant to an instrument in writing signed on behalf of each of the parties hereto. At any time, any party hereto may, to the extent legally allowed, waive any inaccuracies in the representations and warranties made to such party contained herein or in any document delivered pursuant hereto and waive compliance with any of the agreements or conditions for the benefit of such party contained herein. Any agreement on the part of a party hereto to any such waiver shall be valid only if set forth in an instrument in writing signed on behalf of such party. Without limiting the generality or effect of the preceding sentence, no delay in exercising any right under this Agreement shall constitute a waiver of such right, and no waiver of any breach or default shall be deemed a waiver of any other breach or default of the same or any other provision in this Agreement.

(g) *Severability.* In the event that any provision of this Agreement, or the application thereof, becomes or is declared by a court of competent jurisdiction to be illegal, void or unenforceable, the remainder of this Agreement shall continue in full force and effect and shall be interpreted so as reasonably to effect the intent of the parties hereto. The parties hereto further agree to use their commercially reasonable efforts to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that shall achieve, to the extent possible, the economic, business and other purposes of such void or unenforceable provision.

(h) *Remedies Cumulative.* Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party shall be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy shall not preclude the exercise of any other remedy.

(i) *Governing Law.* This Agreement shall be governed by and construed in accordance with the laws of the State of California without reference to such state's principles of conflicts of law. Each of the parties hereto irrevocably consents to the exclusive jurisdiction of any court located within the State of California, in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein, agrees that process may be served upon them in any manner authorized by the laws of the State of California for such persons and waives and covenants not to assert or plead any objection which they might otherwise have to such jurisdiction and such process.

(j) *Rules of Construction.* The parties hereto agree that they have been represented by counsel during the negotiation, preparation and execution of this Agreement and, therefore, waive the application of any law, regulation, holding or rule of construction providing that ambiguities in an agreement or other document shall be construed against the party drafting such agreement or document.

(k) **WAIVER OF JURY TRIAL.** EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT, OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE ACTIONS OF ANY PARTY HERETO IN NEGOTIATION, ADMINISTRATION, PERFORMANCE OR ENFORCEMENT HEREOF.

Table of Contents

Annex E-2

SHAREHOLDER AGREEMENT

THIS SHAREHOLDER AGREEMENT (this *Agreement*) is entered into as of January 24, 2006, by and between Nanometrics Incorporated, a California corporation (the *Parent*), and Bio-Rad Laboratories, Inc., a Delaware Corporation and shareholder (the *Shareholder*) of Accent Optical Technologies, Inc., a Delaware corporation (the *Company*).

WITNESSETH:

WHEREAS, Parent, Alloy Merger Corporation, a Delaware corporation and a wholly owned subsidiary of Parent (*Merger Sub*), and the Company are entering into an Agreement and Plan of Merger and Reorganization (the *Reorganization Agreement*) concurrently herewith pursuant to which Merger Sub will merge with and into the Company (the *Merger*), whereupon (A) the Company will become a wholly owned subsidiary of Parent, and (B) all outstanding shares of capital stock of the Company (the *Company Capital Stock*) will be converted into the right to receive a number of shares of common stock of Parent as set forth therein.

WHEREAS, for all purposes of and under this Agreement capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed thereto in the Reorganization Agreement.

WHEREAS, the Shareholder is the beneficial owner (as determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934, as amended) of the shares of Company Capital Stock and options to acquire shares of Company Capital Stock, each as set forth on the signature page of this Agreement.

WHEREAS, in consideration of the execution of the Reorganization Agreement by the Company, the Shareholder is hereby agreeing to limit such Shareholder's dispositions of the Parent Common Stock that such Shareholder will receive as consideration of such Shareholder's interests in Company Capital Stock or upon exercise of options, so as to facilitate orderly market for the Parent's common stock after the consummation of the Merger.

NOW, THEREFORE, in consideration of the premises and the covenants and agreements set forth in the Reorganization Agreement and in this Agreement, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and accepted, the parties hereto hereby agree as follows:

1. *Certain Definitions*. Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed to them in the Reorganization Agreement. For purposes of this Agreement, the following terms shall have the following respective meanings:

(a) *Expiration Date* shall mean the earlier to occur of (i) such date and time as the Reorganization Agreement shall have been validly terminated in accordance with its terms and conditions or (ii) the first anniversary of such date and time as the Merger shall become effective in accordance with its terms and conditions.

(b) *Person* shall mean any individual, any corporation, limited liability company, general or limited partnership, business trust, unincorporated association or other business organization or entity, or any governmental body or authority.

(c) *Shares* shall mean (i) all voting securities of Parent beneficially owned by the Shareholder as of the effective date of the Merger and (ii) all voting securities of Parent which the Shareholder purchases or acquires beneficial ownership of after the date of this Agreement and prior to the Expiration Date, including, without limitation, any shares issued or issuable upon the conversion, exercise or exchange, as the case may be, of any shares held by the Shareholder which are convertible into, or exercisable or exchangeable for, voting securities of Parent.

E2-1

Table of Contents

(d) *Transfer* shall mean a direct or indirect: (i) sale, pledge, encumbrance, grant of an option with respect to, transfer or disposal of a security or any interest in such security, or (ii) entrance into an agreement or commitment providing for the sale of, pledge of, encumbrance of, grant of an option with respect to, transfer of or disposition of such security or any interest therein.

2. *Transfer of Shares.*

(a) *No Transfer of Shares other than Pursuant to this Agreement.* The Shareholder hereby agrees that, at all times during the period commencing with the date of this Agreement until the Expiration Date, the Shareholder shall not cause or permit any Transfer of any of the Shares (or any securities convertible into or exercisable or exchangeable for Shares), or any interest in the foregoing, to be effected unless in accordance with the terms and conditions of this Agreement.

(b) *Orderly Disposition of Shares.* Notwithstanding the foregoing, the Shareholder may Transfer Shares held by the Shareholder after the Effective Time: (i) in transactions effected on a national securities exchange or through the Nasdaq Stock Market so long as the number of Shares so Transferred in any one month period does not exceed 1/12th of the aggregate number of Shares and options to acquire Shares received in the Merger by such Shareholder in exchange for such Shareholder's Company Capital Stock and options to acquire Company Capital Stock, (ii) any of the Shares in connection with the exercise (cashless or otherwise) of options to acquire shares of the Parent common stock in an amount that is sufficient to satisfy the payment of any transaction costs and any tax liability incurred by that Shareholder in connection with that exercise, (iii) to a family member or trust for estate planning purposes, provided the transferee has agreed in writing to be bound by the terms of this Agreement (and any Shares Transferred by all such Persons shall be aggregated with Transfers by such Shareholder for purposes of this Section) and to hold such Shares subject to all the terms and provisions of this Agreement, (iv) pursuant to, and in accordance with, the terms of a Shareholder's 10b5-1 plan or arrangement with the Parent, if any, with terms and conditions consistent with the provisions of this Agreement, including the limitations set forth in this Section (and any Shares Transferred to third parties under such 10b5-1 Plan shall be aggregated with Transfers by such Shareholder for purposes of this Section) or (v) in a transaction approved in writing by the Parent.

3. *Representations, Warranties and Covenants of the Shareholder.* The Shareholder hereby represents, warrants and covenants to Parent as follows:

(a) The Shareholder is the beneficial or record owner of, or exercises voting power over, the Shares. The Shares constitute the Shareholder's entire interest in the outstanding shares of voting securities of the Company and the Shareholder does not hold any other outstanding shares of Company Capital Stock or rights to acquire Company Capital Stock. No Person not a signatory to this Agreement has a beneficial interest in or a right to acquire or vote any of the Shares (other than, (i) pursuant to a Voting Agreement dated as of January 25, 2006 with Parent; (ii) if the Shareholder is a partnership, the rights and interest of persons and entities that own partnership interests in the Shareholder under the partnership agreement governing the Shareholder and applicable partnership law or (iii) if the Shareholder is a married individual and resides in a State with community property laws, the community property interest of his or her spouse to the extent applicable under such community property laws). The Shares are and will be at all times up until the Expiration Date free and clear of any security interests, liens, claims, pledges, options, rights of first refusal, co-sale rights, agreements, limitations on the Shareholder's voting rights, charges and other encumbrances of any nature (*Encumbrances*) that would adversely affect the ability of Shareholder to perform such Shareholder's obligations under this Agreement.

(b) The Shareholder has all requisite power, capacity and authority to enter into this Agreement and to perform such Shareholder's obligations under this Agreement. The execution and delivery of this Agreement by the Shareholder and the consummation by the Shareholder of the transactions contemplated hereby have been duly authorized by all necessary action, if any, on the part of the Shareholder. This Agreement has been duly executed and delivered by the Shareholder and constitutes a valid and binding

Table of Contents

obligation of the Shareholder, enforceable against the Shareholder in accordance with its terms, subject only to the effect, if any, of (a) applicable bankruptcy and other similar laws affecting the rights of creditors generally and (b) rules of law governing specific performance, injunctive relief and other equitable remedies.

(c) The execution and delivery of this Agreement by the Shareholder does not, and the Shareholder's performance of the obligations under this Agreement will not: (a) conflict with, or result in any violation of any order, decree or judgment applicable to the Shareholder or by which the Shareholder or any of the Shareholder's properties or the Shares are bound; or (b) result in any breach of or constitute a default (with notice or lapse of time, or both) under, or give to others any rights of termination, amendment, acceleration or cancellation of, or result in the creation of any Encumbrance on, any of the Shares pursuant to any contract to which the Shareholder is a party or by which the Shareholder or any of the Shareholder's properties (including the Shares) is bound or affected. The execution and delivery of this Agreement by the Shareholder does not, and the performance of this Agreement by the Shareholder will not, require the consent of any third party.

(d) There is (a) no action, suit, proceeding, claim, arbitration or investigation pending before any Governmental Entity or, to the Shareholder's actual knowledge, threatened against, and (b) no judgment, decree or order against, (i) the Shareholder, or (ii) any of (A) the Shareholder's affiliates, (B) the Shareholder's or its affiliates' respective properties, (C) the Shareholder's officers or directors (in the case of a corporate entity (in their capacities as such)), or (D) the Shareholder's respective partners (in the case of a partnership), in the case of each of (i) and (ii) that, individually or in the aggregate, would reasonably be expected to materially delay or impair the Shareholder's ability to consummate the transactions contemplated by this Agreement.

4. *Additional Documents.* The Shareholder hereby agrees to execute and deliver any additional documents necessary or desirable, in the reasonable opinion of the Company, to carry out the intent of this Agreement. If Shareholder is a married person, Shareholder's spouse has executed and delivered to Parent a signature page to this Agreement.

5. *Confidentiality.* The Shareholder shall hold any information regarding this Agreement, the Merger, the Reorganization Agreement and the transactions contemplated thereby, in strict confidence and shall not divulge any such information to any third person until such time as the Merger has been publicly disclosed by the Parent. Neither the Shareholder, nor any of its affiliates shall issue or cause the publication of any press release or other public announcement with respect to this Agreement, the Merger, the Reorganization Agreement or the other transactions contemplated thereby without the prior written consent of the Parent, except as may be required by law or by any listing agreement with, or the policies of, the Nasdaq Stock Market or an applicable national securities exchange in which circumstance such announcing party shall make reasonable efforts to consult with the Parent to the extent practicable.

6. *Termination.* This Agreement shall terminate and shall have no further force or effect after the Expiration Date.

Table of Contents

7. *Miscellaneous.*

(a) *Notices.* All notices and other communications hereunder shall be in writing and shall be deemed given on (i) the date of delivery, if delivered personally or by commercial delivery service, or (ii) on the date of confirmation of receipt (or the next Business Day, if the date of confirmation of receipt is not a Business Day), if sent via facsimile (with confirmation of receipt), to the parties hereto at the following address (or at such other address for a party as shall be specified by like notice):

(i) If to Parent or Merger Sub:
1550 Buckeye Drive

Milpitas, California 95035

Attention: John D. Heaton

Facsimile No.: 408.232.5910

Telephone No.: 408.435.9600

With a copy to (which shall not constitute notice):

Wilson Sonsini Goodrich & Rosati, Professional Corporation

650 Page Mill Road

Palo Alto, California 94304-1050

Attention: Aaron J. Alter

Julia Reigel

Facsimile No.: 650-493-6811

Telephone No.: 650-493-9300

(ii) If to the Shareholder:
Bio-Rad Laboratories, Inc.

Attention:

Facsimile No.:

Telephone No.:

(b) *Interpretation.* When a reference is made in this Agreement to Sections or Exhibits, such reference shall be to a Section of or an Exhibit to this Agreement unless otherwise indicated. The words include, includes and including when used herein shall be deemed in each case to be followed by the words without limitation. The phrases the date of this Agreement, the date hereof, and terms of similar import, unless the context otherwise requires, shall be deemed to refer to the date first above written.

Edgar Filing: NANOMETRICS INC - Form S-4/A

(c) *Specific Performance; Injunctive Relief.* The parties hereto acknowledge that the Company will be irreparably harmed and that there will be no adequate remedy at law for a violation of any of the covenants or agreements of the Shareholder set forth herein. Therefore, it is agreed that, in addition to any other remedies that may be available to the Company upon any such violation of this Agreement, the Company shall have the right to enforce such covenants and agreements by specific performance, injunctive relief or by any other means available to the Company at law or in equity and the Shareholder hereby waives any and all defenses which could exist in its favor in connection with such enforcement and waives any requirement for the security or posting of any bond in connection with such enforcement.

(d) *Counterparts.* This Agreement may be executed in one or more counterparts, all of which shall be considered one and the same instrument and shall become effective when one or more counterparts have been signed by each of the parties and delivered to the other parties hereto; it being understood that all parties need not sign the same counterpart.

(e) *Entire Agreement; Nonassignability; Parties in Interest.* This Agreement and the documents and instruments and other agreements specifically referred to herein or delivered pursuant hereto (i) constitute

E2-4

Table of Contents

the entire agreement among the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, both written and oral, among the parties with respect to the subject matter hereof and (ii) are not intended to confer, and shall not be construed as conferring, upon any person other than the parties hereto any rights or remedies hereunder. Neither this Agreement nor any of the rights, interests, or obligations under this Agreement may be assigned or delegated, in whole or in part, by operation of law or otherwise, by the Shareholder without the prior written consent of the Company, and any such assignment or delegation that is not consented to shall be null and void. This Agreement, together with any rights, interests or obligations of the Company hereunder, may be assigned or delegated in whole or in part by the Company without the consent of or any action by the Shareholder upon notice by the Company to the Shareholder as herein provided. Subject to the preceding sentence, this Agreement shall be binding upon, inure to the benefit of, and be enforceable by, the parties hereto and their respective successors and assigns (including any person to whom any Shares are sold, transferred or assigned).

(f) *Amendment; Waiver.* Subject to the provisions of applicable law, the parties hereto may amend this Agreement at any time pursuant to an instrument in writing signed on behalf of each of the parties hereto. At any time, any party hereto may, to the extent legally allowed, waive any inaccuracies in the representations and warranties made to such party contained herein or in any document delivered pursuant hereto and waive compliance with any of the agreements or conditions for the benefit of such party contained herein. Any agreement on the part of a party hereto to any such waiver shall be valid only if set forth in an instrument in writing signed on behalf of such party. Without limiting the generality or effect of the preceding sentence, no delay in exercising any right under this Agreement shall constitute a waiver of such right, and no waiver of any breach or default shall be deemed a waiver of any other breach or default of the same or any other provision in this Agreement.

(g) *Severability.* In the event that any provision of this Agreement, or the application thereof, becomes or is declared by a court of competent jurisdiction to be illegal, void or unenforceable, the remainder of this Agreement shall continue in full force and effect and shall be interpreted so as reasonably to effect the intent of the parties hereto. The parties hereto further agree to use their commercially reasonable efforts to replace such void or unenforceable provision of this Agreement with a valid and enforceable provision that shall achieve, to the extent possible, the economic, business and other purposes of such void or unenforceable provision.

(h) *Remedies Cumulative.* Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party shall be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy shall not preclude the exercise of any other remedy.

(i) *Governing Law.* This Agreement shall be governed by and construed in accordance with the laws of the State of California without reference to such state's principles of conflicts of law. Each of the parties hereto irrevocably consents to the exclusive jurisdiction of any court located within the State of California, in connection with any matter based upon or arising out of this Agreement or the matters contemplated herein, agrees that process may be served upon them in any manner authorized by the laws of the State of California for such persons and waives and covenants not to assert or plead any objection which they might otherwise have to such jurisdiction and such process.

(j) *Rules of Construction.* The parties hereto agree that they have been represented by counsel during the negotiation, preparation and execution of this Agreement and, therefore, waive the application of any law, regulation, holding or rule of construction providing that ambiguities in an agreement or other document shall be construed against the party drafting such agreement or document.

(k) **WAIVER OF JURY TRIAL.** EACH OF THE PARTIES HERETO HEREBY IRREVOCABLY WAIVES ALL RIGHT TO TRIAL BY JURY IN ANY ACTION, PROCEEDING OR COUNTERCLAIM (WHETHER BASED ON CONTRACT, TORT, OR OTHERWISE) ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE ACTIONS OF ANY PARTY HERETO IN NEGOTIATION, ADMINISTRATION, PERFORMANCE OR ENFORCEMENT HEREOF.

Table of Contents

Annex F

ESCROW AGREEMENT

THIS ESCROW AGREEMENT (this *Agreement*) is made and entered into as of January 25, 2006, by and among Nanometrics Incorporated, a California corporation (*Parent*), Alloy Merger Corporation, a Delaware corporation and wholly owned subsidiary of Parent (*Merger Sub*), Sanford Wadler, an individual (the *Stockholder Agent*), and U.S Stock Transfer Corporation, a California company (the *Depository Agent*).

RECITALS

A. Parent, Merger Sub, Accent Optical Technologies, Inc., a Delaware corporation (the *Company*), and the Stockholder Agent, have entered into an Agreement and Plan of Merger and Reorganization, of even date herewith (as may be amended from time to time, the *Merger Agreement*), a copy of which is attached hereto as *Exhibit A*, providing, among other things, for the acquisition of the Company by Parent pursuant to the merger of Merger Sub with and into the Company (the *Merger*). Capitalized terms that are used but not defined herein shall have the respective meanings ascribed thereto in Merger Agreement.

B. Pursuant to *Section 1.6(f)* of the Merger Agreement, 490,000 shares of Parent Common Stock (the *Escrow Shares*) are to be delivered to and deposited with the Depository Agent and held in an escrow fund (the *Escrow Fund*) in order to secure the performance of the Company's and the former stockholders of the Company as of the Closing Date of the Merger (*Effective Time Company Stockholders*) indemnification obligations under the Merger Agreement.

C. The Stockholder Agent has been appointed as agent for, and to act on behalf of, the Effective Time Company Stockholders to undertake certain obligations specified in the Merger Agreement.

D. The parties hereto desire to set forth additional terms and conditions relating to the operation of the Escrow Fund.

NOW, THEREFORE, in consideration of the foregoing premises, and the representations, warranties, covenants and other agreements set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged and accepted by the parties, and intending to be legally bound hereby, the parties hereto hereby agree as follows:

1. *Escrow Fund.*

(a) On the Closing Date of the Merger, Parent shall deliver the Escrow Shares, without any act of any Effective Time Company Stockholder or the Stockholder Agent, to the Depository Agent. The Depository Agent agrees to accept delivery of the Escrow Shares and to hold such Escrow Shares in escrow subject to the terms and conditions of this Agreement.

(b) The Escrow Fund shall, subject to the terms and conditions of the Merger Agreement and this Agreement, be held as security for the indemnification obligations of the Effective Time Company Stockholders pursuant to *Article IX* of the Merger Agreement. The Escrow Fund shall be held and distributed by the Depository Agent in accordance with the provisions of this Agreement and the Merger Agreement.

2. *Rights and Obligations of the Parties.* The Depository Agent shall be entitled to such rights and shall perform such duties as depository agent as set forth herein (collectively, the *Duties*), in accordance with the provisions of this Agreement. Parent and the Stockholder Agent shall be entitled to their respective rights and shall perform their respective duties and obligations as set forth herein and as set forth in the Merger Agreement, in accordance with the provisions of this Agreement and the Merger Agreement.

Table of Contents

3. Duties of Depositary Agent.

(a) The Duties of the Depositary Agent shall include the following: the Depositary Agent shall (i) safeguard and treat the Escrow Fund as a trust fund in accordance with the provisions of this Agreement, and shall hold the Escrow Fund in a separate account, apart from any other funds or accounts of the Depositary Agent or any other Person and (ii) hold and dispose of the Escrow Fund only in accordance with the provisions of this Agreement.

(b) Following the Closing, the Duties of the Depositary Agent with respect to the Escrow Shares may be altered, amended, modified or revoked only by a writing signed by the Parent, the Depositary Agent and the Stockholder Agent.

4. Dividends, Etc.; Voting of Escrow Shares

(a) *Dividends, Etc.* Any securities distributed in respect of or in exchange for any of the Escrow Shares, whether by way of stock dividends, stock splits or otherwise, shall be delivered to the Depositary Agent, who shall hold such securities in the Escrow Fund on behalf of the Effective Time Company Stockholders. Such securities shall be considered Escrow Shares for purposes hereof. Any cash dividends or property (other than securities) distributed in respect of the Escrow Shares shall promptly be distributed by the Depositary Agent to the Effective Time Company Stockholders in accordance with Section 5(f).

(b) *Voting of Shares.* The Stockholder Agent shall have the right, in his sole discretion, on behalf of the Effective Time Company Stockholders, to direct the Depositary Agent in writing as to the exercise of any voting rights pertaining to the Escrow Shares, and the Depositary Agent shall comply with any such written instructions. In the absence of such instructions, the Depositary Agent shall not vote any of the Escrow Shares. The Stockholder Agent shall have no obligation to solicit consents or proxies from the Effective Time Company Stockholders for purposes of any such vote. The Depositary Agent shall promptly forward to the Stockholder Agent copies of all materials delivered to the Depositary Agent with respect to the Escrow Shares.

(c) *Transferability.* The respective interests of the Effective Time Company Stockholders in the Escrow Shares shall not be assignable or transferable, other than by operation of law. Notice of any such assignment or transfer by operation of law shall be given to the Depositary Agent and the Parent, and no such assignment or transfer shall be valid until such notice is given.

5. Distribution of Escrow Shares.

(a) *Distribution by Depositary Agent.* The Depositary Agent shall distribute the Escrow Shares only in accordance with (i) a written instrument delivered to the Depositary Agent that is executed by both Parent and the Stockholder Agent and that instructs the Depositary Agent as to the distribution of some or all of the Escrow Shares, (ii) an order of a court of competent jurisdiction, a copy of which is delivered to the Depositary Agent by either Parent or the Stockholder Agent, that instructs the Depositary Agent as to the distribution of some or all of the Escrow Shares, or (iii) the provisions of Sections 5(b), (c) or (d) hereof.

(b) *Indemnification Claim Procedures Prior to Termination Date.* On or before the first anniversary of the Closing Date of the Merger (the *Termination Date*), Parent may deliver to the Depositary Agent a certificate signed by any officer of Parent (an *Officer's Certificate*):

(i) stating that an indemnified party has paid, suffered, incurred or sustained (or reasonably and in good faith anticipates that it may pay, suffer, incur or sustain) Losses for which such indemnified party is entitled to indemnification pursuant to the Merger Agreement;

(ii) stating the amount of such Losses (which, in the case of Losses not yet paid, suffered, incurred, sustained, may be the maximum amount reasonably anticipated to be so paid, suffered, incurred or sustained);

Table of Contents

(iii) specifying in reasonable detail (based upon the information then possessed by Parent) the individual items of such Losses included in the amount so stated and the nature of the claim for indemnification to which such Losses relate; and

(iv) the specific provisions of the Merger Agreement that form the basis for such claim for indemnification of such Losses.

At the time of delivery of any Officer's Certificate to the Depositary Agent, Parent shall deliver a duplicate copy of such Officer's Certificate to the Stockholder Agent, and for a period of twenty (20) Business Days after such delivery to the Depositary Agent and the Stockholder Agent of such Officer's Certificate, the Depositary Agent shall make no disbursement of Escrow Shares pursuant to this Section 5(b) unless the Depositary Agent shall have received written authorization from the Stockholder Agent to make such delivery or disbursement. After the expiration of such 20-Business Day period, the Depositary Agent shall deliver or disburse Escrow Shares having a value equal to such Losses from the Escrow Fund to Parent in accordance with this Section 5(b); *provided, however*, that no such delivery may be made if and to the extent the Stockholder Agent shall object in a written statement to any claim or claims made in the Officer's Certificate, and such statement shall have been delivered to the Depositary Agent and to Parent prior to the expiration of such 20-Business Day period.

(c) *Distribution to the Stockholder Agent.* On or before the Termination Date, the Stockholder Agent may deliver to Depositary Agent a certificate or certificates (each, a Stockholder Agent Certificate) requesting disbursement of Escrow Shares with an aggregate value of up to \$100,000.

(d) *Value of Escrow Shares.* For the purposes of determining the number of Escrow Shares to be delivered to Parent or the Stockholder Agent, as applicable, out of the Escrow Fund pursuant to Sections 5(b) and (c), the Escrow Shares shall be valued at the average of the closing prices of Parent Common Stock for the ten (10) trading days ending two (2) trading days prior to the time that an Officer's Certificate or Stockholder Agent Certificate is delivered to the Depositary Agent. Parent and the Stockholder Agent shall certify such determined value in a certificate signed by both Parent and the Stockholder Agent, and shall deliver such certificate to the Depositary Agent.

(e) *Distribution Following Termination Date.* Within 20 Business days after the Termination Date, the Depositary Agent shall distribute to the Effective Time Company Stockholders that number of Escrow Shares, if any, then held in escrow less any Escrow Shares to be delivered to the Stockholder Agent pursuant to Section 5(c). Notwithstanding the foregoing, if Parent has previously delivered to the Depositary Agent a copy of an Officers' Certificate and the Depositary Agent has not received written notice of the resolution of the claim covered thereby, the Depositary Agent, upon written instructions received from the Parent and the Stockholder Agent shall retain in escrow after such Termination Date such number of Escrow Shares as have a value (as defined in Section 4) equal to 100% of (i) the Losses covered by such Officers' Certificate or (ii) the estimated amount of Losses set forth in such Officers' Certificate, as the case may be. Any Escrow Shares so retained in escrow shall be distributed only in accordance with the terms of clauses (i) or (ii) of Section 5(a) hereof.

(f) *Method of Distribution.* Any distribution of all or a portion of the Escrow Shares (or cash or other property pursuant to Section 4(a)) to the Effective Time Company Stockholders shall be made by delivery of a check, in the case of a cash payment, other property (as described in Section 4(a)) or stock certificates, as applicable, issued in the name of the Effective Time Company Stockholders, with the distribution to the individual Effective Time Company Stockholders to be determined by multiplying the aggregate cash, other property or Escrow Shares being distributed by the percentages set forth opposite such holders' respective names on *Attachment A* hereto; *provided, however*, that the Depositary Agent shall withhold the distribution of the portion of the cash, other property or Escrow Shares otherwise distributable to an Effective Time Company Stockholder who has not, according to a written notice provided by the Parent to the Depositary Agent and the Stockholder Agent, prior to such distribution, surrendered pursuant to the terms of the Merger Agreement his, her or its stock certificates formerly representing shares of stock of the Company. Any such cash, other property or withheld shares shall be delivered to the Parent promptly after the Termination Date,

Table of Contents

and shall be delivered by the Parent to the Effective Time Company Stockholders to whom such cash, other property or shares would have otherwise been distributed upon surrender of their Company Certificates. Distributions to the Effective Time Company Stockholders shall be made by mailing checks, other property or stock certificates, as applicable, to such holders at their respective addresses shown on *Attachment A* (or such other address as may be provided in writing to the Depositary Agent by any such holder). No fractional Escrow Shares shall be distributed to Effective Time Company Stockholders pursuant to this Agreement. Instead, the number of shares that each Effective Time Company Stockholder shall receive shall be rounded up or down to the nearest whole number (provided that the Stockholder Agent shall have the authority to effect such rounding in such a manner that the total number of whole Escrow Shares to be distributed equals the number of Escrow Shares then being distributed).

6. Exculpatory Provisions.

(a) The Depositary Agent shall be obligated only for the performance of such Duties as are specifically set forth herein and may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed to be genuine and to have been signed or presented by the proper party or parties. The Depositary Agent shall not be liable for forgeries or false impersonations. The Depositary Agent shall not be liable for any act done or omitted hereunder as depositary agent except for gross negligence, willful misconduct or breach of this Agreement. The Depositary Agent shall in no case or event be liable for any representations or warranties of the Company for punitive, incidental or consequential damages. Any act done or omitted pursuant to the advice or opinion of counsel shall be conclusive evidence of the good faith of the Depositary Agent.

(b) In the event of a dispute between the parties hereto, the Depositary Agent is hereby expressly authorized to disregard any and all notifications given by any of the parties hereto or by any other person, excepting only memoranda of agreement signed by both Parent and the Stockholder Agent and orders or process of courts of law to which the Depositary Agent shall be entitled to conclusively rely and shall distribute the Escrow Fund in accordance with the terms thereof, and is hereby expressly authorized to comply with and obey orders, judgments or decrees of any court. In case the Depositary Agent obeys or complies with any such order, judgment or decree of any court, the Depositary Agent shall not be liable to any of the parties hereto or to any other person by reason of such compliance, notwithstanding any such order, judgment, or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

(c) The Depositary Agent shall not be liable in any respect on account of the identity, authority or rights of the other parties executing or delivering or purporting to execute or deliver the Merger Agreement, this Agreement or any documents or papers deposited or called for thereunder or hereunder.

(d) The Depositary Agent shall not be liable for the outlawing of any rights under any statute of limitations with respect to the Merger Agreement, this Agreement or any documents deposited with the Depositary Agent.

7. Resignation and Removal of the Depositary Agent. The Depositary Agent may resign as Depositary Agent at any time with or without cause, with respect to the Escrow Fund by giving at least thirty (30) calendar days prior written notice to each of Parent and the Stockholder Agent, such resignation to be effective thirty (30) calendar days following the date such notice is given. In addition, Parent and the Stockholder Agent may jointly remove the Depositary Agent as depositary agent at any time with or without cause, by an instrument executed by Parent and the Stockholder Agent (which may be executed in counterparts) given to the Depositary Agent, which instrument shall designate the effective date of such removal. In the event of any such resignation or removal, a successor depositary agent, which shall be a bank or trust company organized under the laws of the United States of America or of the State of California having (or if such bank or trust company is a member of a bank company, its bank holding company shall have) a combined capital and surplus of not less than \$50,000,000, shall be appointed by Parent on the terms of this Agreement with the written approval of the Stockholder Agent, which approval shall not be unreasonably withheld or delayed. Any such successor

Table of Contents

depository agent shall deliver to Parent and the Stockholder Agent, a written instrument accepting such appointment, and thereupon it shall succeed to all the rights and duties of the depository agent hereunder and shall be entitled to receive possession of the Escrow Fund. Upon receipt of the identity of the successor Depository Agent, the Depository Agent shall deliver the Escrow Fund then held hereunder to the successor Depository Agent.

8. *Fees.* Parent shall pay the Depository Agent such fees as are established by the Fee Schedule attached hereto as *Exhibit B*.

9. *Further Instruments.* If the Depository Agent reasonably requires other or further instruments in connection with its performance of the Duties, the necessary parties hereto shall join in furnishing such instruments.

10. *Disputes.* It is understood and agreed that should any dispute arise with respect to the delivery and/or ownership or right of possession of the cash and/or other property held by the Depository Agent hereunder, the Depository Agent is authorized and directed to act in accordance with, and in reliance upon, the provisions of this Agreement.

11. *Indemnification.* In consideration of the Depository Agent's acceptance of this appointment, Parent, Merger Sub and the Stockholder Agent, on behalf of the Effective Time Company Stockholders and not individually, jointly and severally, agree to indemnify and hold the Depository Agent harmless as to any liability incurred by it to any person, firm or corporation by reason of its having accepted such appointment or in carrying out the provisions of this Agreement, and to reimburse the Depository Agent for all its costs and expenses (including, without limitation, counsel fees and expenses) reasonably incurred by reason of any matter as to which such indemnity is paid pursuant to this *Section 11*; *provided, however*, that no indemnity need be paid in case of the Depository Agent's gross negligence, willful misconduct or breach of this Agreement.

12. *General.*

(a) *Notice.* All notices, demands and other communications required or permitted hereunder shall be in writing and may be telexed or faxed, which shall be followed forthwith by letter, and such notice, request, demand or other communication shall be deemed to have been received on the next business day following dispatch and acknowledgement of receipt by the recipient's telex or fax machine. In addition, notices hereunder may be delivered by hand, in which event the notice shall be deemed effective when delivered, or by overnight courier, in which event the notice shall be deemed to have been received on the next business day following delivery to such courier. Notices, requests, demands and other communications may not be given by regular or certified mail. All notices and other communications under this Agreement shall be given to the parties hereto at the following addresses:

If to Parent, Merger Sub or the Surviving Corporation to:

Nanometrics Incorporated

1550 Buckeye Drive

Milpitas, California 95035

Facsimile No.: 408.232.5910

Attn: Chief Executive Officer

Table of Contents

with a copy (which shall not constitute notice) to:

Wilson Sonsini Goodrich & Rosati,

Professional Corporation

650 Page Mill Road

Palo Alto, California 94304-1050

Facsimile No.: 650.493.6811

Attention: Aaron J. Alter

Julia Reigel

If to the Stockholder Agent to:

Bio-Rad Laboratories, Inc.

1000 Alfred Nobel Drive

Hercules, CA 94547

Facsimile: 510.741.5815

Attention: Sanford Wadler

with a copy (which shall not constitute notice) to:

Perkins Coie LLP

1120 NW Couch, 10th Floor

Portland, Oregon 97209

Attention: Neil M. Nathanson

Facsimile No.: 503.727.2222

If to the Depositary Agent:

U. S. Stock Transfer Corporation

1745 Gardena Ave.

Glendale, CA 91204-2991

Attention: Richard Brown

Facsimile No.: 818.502.0674

Edgar Filing: NANOMETRICS INC - Form S-4/A

or to such other address or facsimile number as any party may have furnished in writing to the other parties in the manner provided above. Any notice addressed to the Depositary Agent shall be effective only upon receipt.

(b) *Amendment and Termination.* This Agreement may be amended or terminated if, but only if, such amendment or termination is in writing and is signed by each of Parent and the Stockholder Agent (who shall act on behalf of the other Effective Time Company Stockholders), and upon written notice to the Depositary Agent at any time given jointly by Parent and the Stockholder Agent, but the duties or responsibilities of the Depositary Agent may not be amended or modified without its consent.

(c) *Waiver.* Any term or condition of this Agreement may be waived at any time by the party that is entitled to the benefit thereof, but no such waiver shall be effective unless set forth in a written instrument duly executed by or on behalf of the party waiving such term or condition. No waiver by any party of any term or condition of this Agreement, in any one or more instances, shall be deemed to be or construed as a waiver of the same or any other term or condition of this Agreement on any future occasion. All remedies, either under this Agreement or by law or otherwise afforded, will be cumulative and not alternative.

(d) *No Assignment; Binding Effect.* Neither this Agreement nor any right, interest or obligation hereunder may be assigned (by operation of Law or otherwise) by any party without the prior written consent of the other parties and any attempt to do so will be void; provided, however, that the Stockholder Agent may assign this Agreement to his successor without the prior written consent of the other parties. Subject to the preceding sentence, this Agreement is binding upon, inures to the benefit of and is enforceable by the parties hereto and their respective successors and assigns.

Table of Contents

(e) *Headings.* The headings and table of contents used in this Agreement have been inserted for convenience of reference only and do not define or limit the provisions hereof.

(f) *Invalid Provisions.* If any provision of this Agreement is held to be illegal, invalid or unenforceable under any present or future Law, and if the rights or obligations of any party hereto under this Agreement will not be materially and adversely affected thereby, (i) such provision will be fully severable, (ii) this Agreement will be construed and enforced as if such illegal, invalid or unenforceable provision had never comprised a part hereof, (iii) the remaining provisions of this Agreement will remain in full force and effect and will not be affected by the illegal, invalid or unenforceable provision or by its severance herefrom and (iv) in lieu of such illegal, invalid or unenforceable provision, there will be added automatically as a part of this Agreement a legal, valid and enforceable provision as similar in terms to such illegal, invalid or unenforceable provision as may be possible.

(g) *Governing Law.* This Agreement shall be governed by and construed in accordance with the domestic laws of the State of Delaware, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other jurisdiction) that would cause the application of the laws of any jurisdiction other than the State of Delaware.

(h) *Construction.* The parties hereto agree that this Agreement is the product of negotiation between sophisticated parties and individuals, all of who were represented by counsel, and each of who had an opportunity to participate in and did participate in the drafting of each provision hereof. Accordingly, ambiguities in this Agreement, if any, shall not be construed strictly or in favor of or against any party hereto but rather shall be given a fair and reasonable construction without regard to the rule of *contra proferentem*.

(i) *Counterparts.* This Agreement may be executed in any number of counterparts, each of which when so executed shall constitute an original copy hereof, but all of which together shall constitute one instrument. Any counterpart may be executed and delivered by means of a facsimile or other electronic transmission.

(j) *Specific Performance.* The parties hereto agree that irreparable damage would occur in the event that any of the provisions of this Agreement were not performed in accordance with its specific terms or were otherwise breached. It is agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being in addition to any other remedy to which they are entitled at law or in equity.

13. *Tax Reporting Matters.* Within 30 calendar days of the Closing Date, Parent and the Effective Time Company Stockholders each agree to provide the Depository Agent with appropriate Forms W-9 (or Forms W-8, in the case of non-U.S. persons) and other forms and documents to the Depository Agent that the Depository Agent may reasonably request (collectively, *Tax Reporting Documentation*). The parties hereto understand that, if such Tax Reporting Documentation is not so certified to the Depository Agent, the Depository Agent may be required by the Internal Revenue Code of 1986, as amended, to withhold a portion of any payments made to the Effective Time Company Stockholders pursuant to this Agreement.

14. *Patriot Act Compliance.* To help the government fight the funding of terrorism and money laundering activities, federal law requires all financial institutions to obtain, verify and record information that identifies each person who opens an account. For a non-individual person such as a business entity, a charity, a trust or other legal entity the Depository Agent will ask for documentation to verify its formation and existence as a legal entity. The Depository Agent may also ask to see financial statements, licenses, identification and authorization documents from individuals claiming authority to represent the entity or other relevant documentation. Parent and the Stockholder Agent each agree to provide all such information and documentation as to themselves as requested by Depository Agent to ensure compliance with federal law.

Table of Contents

Annex G-1

NANOMETRICS INCORPORATED

BRUCE RHINE EMPLOYMENT AGREEMENT

This Agreement is entered into as of January 25, 2006 by and between Nanometrics Incorporated (the Company), and Bruce Rhine (Executive).

RECITALS

A. Concurrently with the execution of this Agreement, the Company and Accent Optical Technologies, Inc. (Aluminum) have entered into an Agreement and Plan of Merger and Reorganization by and among the Company, Aluminum, Alloy Merger Corporation and certain other parties dated as of the date hereof (the Merger Agreement) pursuant to which the Company intends to acquire Aluminum. Capitalized terms not otherwise defined herein will have the definitions given to such terms in the Merger Agreement.

B. Executive is a major shareholder and key employee of Aluminum and as a condition and mutual inducement to the Merger, and to preserve the value of the business being acquired by the Company after the Merger, the Merger Agreement contemplates, among other things, that Executive will enter into this Agreement which will become effective on the Effective Date (as defined in Section 11), provided that the Executive is still employed by Aluminum on such date.

AGREEMENT

1. **Duties and Scope of Employment.**

(a) **Positions and Duties.** As of the Effective Date, Executive will serve as Chief Strategy Officer of the Company reporting to John Heaton, the Company's Chief Executive Officer. Executive will render such business and professional services in the performance of his duties, consistent with Executive's position within the Company, as shall reasonably be assigned to him by John Heaton. The period of Executive's employment under this Agreement is referred to herein as the Employment Term.

(b) **Obligations.** During the Employment Term, Executive will perform his duties faithfully and to the best of his ability and will devote his substantially all of business efforts and time to the Company. For the duration of the Employment Term, Executive agrees not to actively engage in any other employment, occupation or consulting activity for any direct or indirect remuneration without the prior approval of the Company's Board of Directors (the Board). Exceptions are outlined in Attached Exhibit A.

(c) **Place of Employment.** Executive's residence and principal place for performing his duties and obligations hereunder shall be Bend, Oregon; provided, however, that Executive will be expected to engage in travel for up to 30% of the time spent in performance of services hereunder as the Company may reasonably request or as may be required for the proper performance of services hereunder.

2. **At-Will Employment.** The parties agree that Executive's employment with the Company will be at-will employment and may be terminated at any time with or without cause or notice. Executive understands and agrees that neither his job performance nor promotions, commendations, bonuses or the like from the Company give rise to or in any way serve as the basis for modification, amendment, or extension, by implication or otherwise, of his employment with the Company.

3. **Base Salary.** During the Employment Term, the Company will pay Executive as compensation for his services a base salary at the annualized rate of **\$250,000.00** (the Base Salary). The Base Salary will be paid periodically in accordance with the Company's normal payroll practices and be subject to the usual, required withholding.

G1-1

Table of Contents

4. **Employee Benefits.** During the Employment Term, Executive will be entitled to participate in the employee benefit plans currently and hereafter maintained by the Company of general applicability to other senior executives of the Company, including, without limitation, the Company's group medical, dental, vision, disability, life insurance, and flexible-spending account plans. The Company reserves the right to cancel or change the benefit plans and programs it offers to its employees at any time.
5. **Vacation.** Executive will be entitled to paid vacation in accordance with the Company's vacation policy, with the timing and duration of specific vacations mutually and reasonably agreed to by the parties hereto.
6. **Board Membership.** Promptly upon the execution of this Agreement, the Board of Directors of the Company will appoint Executive as a Director of the Company, to fill an existing vacancy on the Company's Board of Directors. During his service to the Company, the Company will nominate Executive as a Director with respect to each election of Directors of the Company by its shareholders and use reasonable efforts to cause him to be elected as a Director.
7. **Expenses.** The Company will reimburse Executive for reasonable travel, entertainment or other expenses incurred by Executive in the furtherance of or in connection with the performance of Executive's duties hereunder, in accordance with the Company's expense reimbursement policy as in effect from time to time.
8. **Confidential Information and Other Requirements.** Executive agrees to complete the Company's Employment Application and enter into the Company's standard Employee Patent & Confidential Information Agreement (the Confidential Information Agreement) upon commencing employment hereunder. For purposes of federal immigration law, Executive agrees to provide to the Company documentary evidence of Executive's identity and eligibility for employment in the United States. Such documentation must be provided to the Company within three (3) business days of the Effective Date.
9. **Employee Obligations.**
- (a) **Noncompete.** Beginning on the Effective Date and ending on the one (1) year anniversary of the termination of Executive's employment with the Company for any reason, the Executive shall not, other than on behalf of the Company, directly or indirectly, without the prior written consent of the Company, engage as (i) an employee, agent, consultant, advisor, independent contractor, proprietor, partner, officer, director, or otherwise of, (ii) have any ownership interest in (except for passive ownership of five percent (5%) or less of any entity whose securities have been registered under the Securities Act of 1933 or Section 12 of the Securities Exchange Act of 1934 or the securities laws of any other jurisdiction), or (iii) participate in the financing, operation, management, or control of, any firm, partnership, corporation, entity, or business that is in competition with any business or proposed business of the Company or any of its subsidiaries that is established as of the termination of Executive's employment with the Company. In the event that the provisions of this paragraph are deemed to exceed the time, geographic or scope limitations permitted by applicable law, then such provisions shall be, to the extent permitted by law, reformed to the maximum time, geographic or scope limitations, as the case may be, permitted by applicable laws.
- (b) **Non-Solicitation.** Beginning on the Effective Date and ending on the one (1) year anniversary of the termination of Executive's employment with the Company for any reason, Executive shall not, directly or indirectly, without the prior written consent of the Company, solicit, encourage or take any other action that is intended to induce or encourage, or has the effect of inducing or encouraging, any employee or customer of the Company or its subsidiaries to terminate his or her employment with or customer relationship to the Company or its subsidiaries.
- (c) **Reasonableness.** Executive acknowledges that the limitations of time, geography and scope of activity agreed to in this Section are reasonable because, among other things, (i) the Company is engaged in a highly competitive industry, (ii) the Executive is receiving significant compensation in connection with the

Table of Contents

Merger and this Agreement, and (iii) the Executive will be able to obtain suitable and satisfactory employment without violation of this Section.

(d) **Understanding of Covenants.** Executive represents that he (i) is familiar with the foregoing covenants not to compete and not to solicit, and (ii) is fully aware of his obligations hereunder.

10. **Assignment.** This Agreement will be binding upon and inure to the benefit of (a) the heirs, executors and legal representatives of Executive upon Executive's death and (b) any successor of the Company. Any such successor of the Company will be deemed substituted for the Company under the terms of this Agreement for all purposes. For this purpose, successor means any person, firm, corporation or other business entity which at any time, whether by purchase, merger or otherwise, directly or indirectly acquires all or substantially all of the assets or business of the Company. None of the rights of Executive to receive any form of compensation payable pursuant to this Agreement may be assigned or transferred except by will or the laws of descent and distribution. Any other attempted assignment, transfer, conveyance or other disposition of Executive's right to compensation or other benefits will be null and void.

11. **Notices.** All notices, requests, demands and other communications called for hereunder shall be in writing and shall be deemed given (i) on the date of delivery if delivered personally, (ii) one (1) day after being sent by a well established commercial overnight service, or (iii) four (4) days after being mailed by registered or certified mail, return receipt requested, prepaid and addressed to the parties or their successors at the following addresses, or at such other addresses as the parties may later designate in writing:

If to the Company:

Nanometrics Incorporated

1550 Buckeye Drive

Milpitas, CA 95035

Attn: Larry Hong, Human Resources Manager

If to Executive:

12. **Effective Date.** The Closing Date (as defined in the Merger Agreement) will be the Effective Date of this Agreement and this Agreement will be null and void and have no effect unless the Merger contemplated by the Merger Agreement is consummated.

13. **Severability.** In the event that any provision hereof becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement will continue in full force and effect without said provision.

14. **Waiver of Breach.** The waiver of a breach of any term or provision of this Agreement, which must be in writing, will not operate as or be construed to be a waiver of any other previous or subsequent breach of this Agreement.

15. **Arbitration.**

(a) **General.** In consideration of Executive's service to the Company, its promise to arbitrate all employment related disputes and Executive's receipt of the compensation, pay raises and other benefits paid to Executive by the Company, at present and in the future, Executive agrees that any and all controversies, claims, or disputes with anyone (including the Company and any employee, officer, director, shareholder or benefit plan

Table of Contents

of the Company in their capacity as such or otherwise) arising out of, relating to, or resulting from Executive's service to the Company under this Agreement or otherwise or the termination of Executive's service with the Company, including any breach of this Agreement, shall be subject to binding arbitration under the Arbitration Rules set forth in California Code of Civil Procedure Section 1280 through 1294.2, including Section 1283.05 (the Rules) and pursuant to California law. Disputes which Executive agrees to arbitrate, and thereby agrees to waive any right to a trial by jury, include any statutory claims under state or federal law, including, but not limited to, claims under Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, the Age Discrimination in Employment Act of 1967, the Older Workers Benefit Protection Act, the California Fair Employment and Housing Act, the California Labor Code, claims of harassment, discrimination or wrongful termination and any statutory claims. Executive further understands that this Agreement to arbitrate also applies to any disputes that the Company may have with Executive.

(b) **Procedure.** Executive agrees that any arbitration will be administered by the American Arbitration Association (AAA) and that a neutral arbitrator will be selected in a manner consistent with its National Rules for the Resolution of Employment Disputes. The arbitration proceedings will allow for discovery according to the rules set forth in the *National Rules for the Resolution of Employment Disputes or California Code of Civil Procedure*. Executive agrees that the arbitrator shall have the power to decide any motions brought by any party to the arbitration, including motions for summary judgment and/or adjudication and motions to dismiss and demurrers, prior to any arbitration hearing. Executive agrees that the arbitrator shall issue a written decision on the merits. Executive also agrees that the arbitrator shall have the power to award any remedies, including attorneys' fees and costs, available under applicable law. Executive understands the Company will pay for any administrative or hearing fees charged by the arbitrator or AAA except that Executive shall pay the first \$200.00 of any filing fees associated with any arbitration Executive initiates. Executive agrees that the arbitrator shall administer and conduct any arbitration in a manner consistent with the Rules and that to the extent that the AAA's National Rules for the Resolution of Employment Disputes conflict with the Rules, the Rules shall take precedence.

(c) **Remedy.** Except as provided by the Rules, arbitration shall be the sole, exclusive and final remedy for any dispute between Executive and the Company. Accordingly, except as provided for by the Rules, neither Executive nor the Company will be permitted to pursue court action regarding claims that are subject to arbitration. Notwithstanding, the arbitrator will not have the authority to disregard or refuse to enforce any lawful Company policy, and the arbitrator shall not order or require the Company to adopt a policy not otherwise required by law which the Company has not adopted.

(d) **Availability of Injunctive Relief.** In addition to the right under the Rules to petition the court for provisional relief, Executive agrees that any party may also petition the court for injunctive relief where either party alleges or claims a violation of this Agreement or the Confidentiality Agreement or any other agreement regarding trade secrets, confidential information, nonsolicitation or Labor Code §2870. In the event either party seeks injunctive relief, the prevailing party shall be entitled to recover reasonable costs and attorneys' fees.

(e) **Administrative Relief.** Executive understands that this Agreement does not prohibit Executive from pursuing an administrative claim with a local, state or federal administrative body such as the Department of Fair Employment and Housing, the Equal Employment Opportunity Commission or the workers' compensation board. This Agreement does, however, preclude Executive from pursuing court action regarding any such claim.

(f) **Voluntary Nature of Agreement.** Executive acknowledges and agrees that Executive is executing this Agreement voluntarily and without any duress or undue influence by the Company or anyone else. Executive further acknowledges and agrees that Executive has carefully read this Agreement and that Executive has asked any questions needed for Executive to understand the terms, consequences and binding effect of this Agreement and fully understand it, including that Executive is waiving Executive's right to a jury trial. Finally, Executive agrees that Executive has been provided an opportunity to seek the advice of an attorney of Executive's choice before signing this Agreement.

Table of Contents

16. Integration. This Agreement, together with the Option Plan, Option Agreement and the Confidential Information Agreement represents the entire agreement and understanding between the parties as to the subject matter herein and supersedes all prior or contemporaneous agreements whether written or oral. No waiver, alteration, or modification of any of the provisions of this Agreement will be binding unless in writing and signed by duly authorized representatives of the parties hereto.

17. Tax Withholding. All payments made pursuant to this Agreement will be subject to withholding of applicable taxes.

18. Governing Law. This Agreement will be governed by the laws of the State of California (with the exception of its conflict of laws provisions).

19. Acknowledgment. Executive acknowledges that he has had the opportunity to discuss this matter with and obtain advice from his private attorney, has had sufficient time to, and has carefully read and fully understands all the provisions of this Agreement, and is knowingly and voluntarily entering into this Agreement.

20. Counterparts. This Agreement may be executed in counterparts, and each counterpart will have the same force and effect as an original and will constitute an effective, binding agreement on the part of each of the undersigned.

G1-5

Table of Contents

Annex G-2

EMPLOYMENT AGREEMENT

This Employment Agreement (this Agreement) is made and entered into as of April 21, 2005 by and between Accent Optical Technologies, Inc. (the Company), and Bruce Crawford (Employee).

RECITALS

Employee is currently employed by the Company as Executive Vice President and Chief Operating Officer, in Company's San Jose, California office;

The Company desires to promote Employee to the position of President and Chief Operating Officer (COO), which requires Employee to relocate to the Company's Bend, Oregon facility.

NOW, THEREFORE, in consideration of the mutual promises, terms, covenants and conditions set forth herein, and the performance of each, the parties hereto, intending to be legally bound, agree as follows:

AGREEMENTS

1. **Term.** The term of this Agreement shall begin on April 21, 2005 (the Effective Date) and, except as otherwise provided herein, shall continue for a period of five (5) years, unless earlier terminated in accordance with the terms of this Agreement (the Term).

2. **Position and Duties.** The Company will promote Employee to President and Chief Operating Officer. Employee shall be responsible for all operational aspects of the Company including, in addition to Employee's current responsibilities, sales, marketing, Advanced Technology Center, human resources, and, as requested by the CEO, attendance at all board meetings including presentation of the operations review portion of each board meeting. In addition, Employee shall have such responsibilities, duties and authorities as are assigned to him by the Company's Chief Executive Officer. Employee shall fulfill his duties and responsibilities in a reasonable and appropriate manner and in compliance with the Company's policies and practices and the laws and regulations that apply to the Company's operation and administration. Employee shall devote his full business time and attention to the business and affairs of the Company and shall not be engaged in, or employed by, any other business enterprise without the written approval of the Chief Executive Officer of the Company.

3. **Compensation.** For services rendered by Employee, the Company shall compensate Employee as follows:

(a) **Salary.** During the Term, the gross annual salary payable to Employee shall be \$213,000 per year, payable on a regular basis in accordance with the Company's standard payroll procedures, but not less than monthly (such annual salary is referred to herein as the Salary). In the sole discretion of the Company's Board of Directors, the amount of Employee's Salary may be increased or decreased by the Company from the time-to-time.

(b) **Employee Benefits.** Employee shall be entitled to participate in all employee benefit plans and programs generally available to management employees of the Company, as such plans and programs may be amended, modified, added or terminated from time-to-time. The Company shall provide such coverage on terms consistent with those provided to other top executives of the Company.

(c) **Relocation Expenses.** As part of this promotion, Employee will be required to locate his family from San Jose, California to Bend, Oregon. The Company shall reimburse Employee for the following items:

(i) Subject to the Company's Relocation Policy, moving expenses associated with the move of Employee's household goods from San Jose, California to Bend, Oregon;

Table of Contents

(ii) The cost necessary to prepare Employee's California homes for resale up to One Thousand Dollars (\$1,000), net to Employee (said amount will be grossed up to include an additional amount to reimburse Employee the amount, if any, of applicable income taxes payable in connection with this reimbursement);

(iii) Travel and lodging expenses for two house hunting trips from San Jose to Bend, one to include Employee and his spouse and one to include Employee, his spouse, and two children.

(d) Stock Options. Subject to Board approval, Employee will be granted options to (500,000) shares of Company stock. Said options will be granted at fair market value and will be subject to the Company's Stock Option Plan. Said options will vest over a four year period or earlier in the event of a termination by the Company without Good Cause or a termination by the Employee for Good Reason, as defined herein.

4. Place of Performance. Employee will relocate by the end of August and shall carry out his duties and responsibilities hereunder principally in and from the Bend, Oregon facility.

5. Termination: Rights on Termination. Employee's employment and the Term may be terminated in any one of the following ways:

(a) Termination by the Company for Good Cause or Termination by the Employee Without Good Reason.

(i) Termination by the Company for Good Cause. The Company may terminate the Term and Employee's employment for Good Cause, effective immediately after written notice is provided to the Employee. Good Cause shall mean: (A) willful and repeated failure to comply with the lawful instructions of the Board or the Chief Executive Officer, (B) willful misconduct in the performance of duties, (C) Employee's dishonesty, fraud or willful misconduct with respect to the business or affairs of the Company; or (D) Employee's conviction of a felony or conviction of a misdemeanor involving theft, fraud, dishonesty, or other act of moral turpitude.

(ii) Termination by the Employee Without Good Reason. Employee may terminate the Term and his employment hereunder without Good Reason, effective thirty (30) days after written notice is provided to the Company. During all or any portion of such notice period, the Company may request that Employee not report to work. Good Reason shall mean one or more of the following conditions which the Company fails to cure within fifty (50) days of having received written notice from Employee of the facts and circumstances that he contends constitutes Good Reason (the Notice to Cure): (A) a material reduction in Employee's responsibilities not mutually agreed upon; (B) a reduction in Employee's Salary greater than fifteen percent (15%); (C) a Company demand that Employee relocate more than 50 miles from the Bend, Oregon area, and (D) the occurrence of a change of control of the Company; however, Employee will remain during a 6-month transition period after such change in control upon written request of the CEO. If the Company fails to cure the conditions identified in the Notice to Cure within fifty (50) days of the Company's receipt of the Notice to Cure, then Employee shall have fifty (50) days from the date of the Notice of Cure in which to exercise his right to terminate his employment for Good Reason pursuant to this paragraph 5(b)(ii). Employee's failure to exercise such termination right within the 50 day period shall constitute a waiver of the conditions set forth in the applicable Notice to Cure.

If any payments or benefits to be provided pursuant to this Agreement are determined to be deferred compensation (as such term is defined in Code Section 409A), then Change of Control shall have the same meaning as defined in Code Section 409A for all purposes relating to such payment of benefits. Otherwise, Change of Control shall mean that any of the following events has occurred with respect to the Company: The acquisition by any Person (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934 (the 1934 Act)) of Beneficial Ownership (as defined in Rule 13d-3 promulgated under the 1934 Act) of 50% or more of either (i) the then outstanding shares of common stock of the Company (Stock), or (ii) the combined voting power of the outstanding voting securities of the Company entitled to vote generally in the election of Directors; provided, however, that for purposes of this subparagraph, the following transactions shall

Table of Contents

not constitute a Change of Control: (A) any acquisition of such Stock or voting power directly from the Company through a public offering of shares of Stock of the Company, (B) any acquisition of such Stock or voting power by the Company; (C) any acquisition of such Stock or voting power by any employee benefit plan (or related trust) sponsored or maintained by the Company or any corporation controlled by the Company; or (D) any acquisition of such Stock or voting power by any Person who, prior to such acquisition, had Beneficial Ownership of 50% or more of (i) the then outstanding shares of Stock, or (ii) the combined voting power of the outstanding voting securities of the Company entitled to vote generally in the election of Directors,

(b) Termination by the Company Without Good Cause or Termination by Employee for Good Reason.

(i) Termination by the Company Without Good Cause. At any time during the Term, the Company may, without Good Cause and for any reason whatsoever, terminate the Term and Employee's employment, effective thirty (30) days after written notice is provided to Employee. During such notice period, the Company may request that Employee not report to work.

(ii) Termination by Employee for Good Reason. At any time during the Term, Employee may terminate the Term and his employment hereunder for Good Reason, effective thirty (30) days after he provides written notice to the Company of (A) the facts and circumstances constituting Good Reason, and (B) his intent to terminate his employment for Good Reason. During such notice period, the Company may request that Employee not report to work.

(iii) Rights on Termination by the Company Without Good Cause or by Employee for Good Reason. In the event Employee's employment is terminated by the Company without Good Cause or by Employee for Good Reason prior to the expiration of the Term of this Agreement, the Company shall pay or provide Employee the following severance benefits: (A) one (1) year of Salary, payable according to Company's regular payroll schedule; (B) if Employee elects continued coverage under the Company's health insurance plan for himself and/or his qualified dependents pursuant to the Consolidated Omnibus Budget Reconciliation Act (COBRA), the Company shall pay the costs of that continued COBRA coverage for a period of twelve (12) months following the termination of Employee's employment and reimburse Employee the amount, if any, of applicable income, taxes payable in connection with, this COBRA benefit; and (C) in accordance with the conditions and limitations set forth in Company's Relocation Policy and in an amount not to exceed \$50,000 (the Maximum Amount), reimbursement for moving expenses, home sale preparation expenses and two house hunting trips for Employee's relocation back to San Jose, California as follows: (i) up to 100% of the Maximum Amount, if Employee's employment is terminated by the Company without Good Cause or by the Employee for Good Reason during the first or second year of the Term, (ii) up to 80% of the Maximum Amount if Employee's employment is terminated by the Company without Good Cause or by the Employee for Good Reason during the third year of the Term, (iii) up to 60% of the Maximum Amount if Employee's employment is terminated by the Company without Good Cause or by the Employee for Good Reason during the fourth year of the Term, and (iv) up to 40% of the Maximum Amount if Employee's employment is terminated by the Company without Good Cause or by the Employee for Good Reason during the fifth year of the Term.

(c) Termination for Death or Disability. The Employee's employment hereunder shall terminate immediately upon his death or upon a determination that the Employee is disabled, as defined in the Company's long-term disability insurance policy or plan (or, if no such policy or plan is then in effect, upon a good faith determination by the Board that the Employee suffers a physical or mental impairment that renders Employee unable to perform his duties on a full-time basis, for a period of more than ninety (90) consecutive working days, or for more than one-hundred twenty (120) non-consecutive working days). Upon disability termination, Employee shall be entitled to long-term disability under Company long-term disability program and relocation in accordance with 5(B)(iii)(C). All rights and obligations of the Company and Employee under this Agreement shall cease as of the effective date of termination.

(d) Payment Through Termination. Upon termination of Employee's employment for any reason provided for in this Agreement, Employee shall be entitled to receive all compensation earned and all benefits

Table of Contents

and reimbursements due through the effective date of termination. In addition, the Company shall offer Employee and his qualified dependents continued coverage under the Company's health insurance plan, as required by COBRA, at Employee's cost (except as otherwise provided herein), so long as Employee or his dependents are eligible for COBRA coverage. No other compensation or benefits will be due or payable to Employee subsequent to termination, except as provided by this paragraph 5 or any other applicable agreements or benefit arrangements between the Company and Employee or required by law.

(e) Provisions that Survive Termination of Agreement. All rights and obligations of the Company and Employee under this Agreement shall cease as of the effective date of termination, except that the Company's obligations, if any, under paragraph 5 shall survive such termination in accordance with its terms.

(f) Right to Offset. In the event of any termination of Employee's employment under this Agreement for any reason, the Company's obligation to make any payments hereunder shall be subject to offset for any loans or other obligations that Employee has with the Company. All payments and benefits payable under this Agreement are gross payments subject to applicable withholdings with the exception of relocation expenses and COBRA benefits, specifically identified in Paragraph 3(c)(ii) and 5(b)(iii), which are to be paid net.

(g) Compliance with Code Section 409A. The parties believe, based on current information and guidance from the Internal Revenue Service and Treasury Department, that no payment or benefit contemplated by this Agreement is subject to Code Section 409A. If Company later reasonably determines that any such payment or benefit is likely to be subject to Code Section 409A, then the parties will work in good faith to modify the terms of such payments) or benefits) so that they are either (a) no longer subject to Code Section 409A, or (b) in full compliance with Code Section 409A.

6. No Conflicting Agreements. Employee hereby represents and warrants to the Company that the execution of this Agreement by Employee and his employment by the Company and the performance of his duties hereunder will not violate or be a breach of any agreement with a former employer, client or any other person or entity.

7. Assignment; Binding Effect. Employee understands that he has been selected for employment by the Company on the basis of his personal qualifications, experience and skills. Employee agrees, therefore, that he cannot assign all or any portion of his performance under this Agreement. The Company may assign this Agreement only to the purchaser of substantially all of the assets of the Company, provided that any such assignee shall assume this Agreement in a writing delivered to Employee. Subject to the preceding two sentences, this Agreement shall be binding upon, inure to the benefit of and be enforceable by the parties and their respective heirs, legal representatives, successors and assigns.

8. Complete Agreement; Waiver; Amendment. Employee and Company are parties to an Employee Proprietary Information and Invention Agreement which shall continue in full force and effect. Employee has no oral representations, understandings, or agreements with the Company or any of its officers, directors, or representatives covering the same subject matter as this Agreement. This Agreement is the final, complete, and exclusive statement of expression of the agreement between the Company and Employee with respect to the subject matter hereof, and cannot be varied, contradicted, or supplemented by evidence of any prior or contemporaneous oral or written agreements. This written Agreement may not be later modified except by a further writing signed by a duly authorized officer of the Company and Employee, and no term of this agreement may be waived except by a writing signed by the party waiving the benefit of such term.

9. Notice. Whenever any notice is required hereunder, it shall be given in writing addressed as follows:

To the Company:	Accent Optical Technologies
	131 NW Hawthorne, Suite 207
	Bend, OR 97701
To the Employee:	ATTN: Bruce Rhine
	Bruce Crawford

Table of Contents

10. Severability; Headings. If any portion of this Agreement is held invalid or inoperative, the other portions of this Agreement shall be deemed valid and operative and, so far as is reasonable and possible, effect shall be given to the intent manifested by the portion held invalid or inoperative. The paragraph headings are for reference purposes only and are not intended in any way to describe, interpret, define or limit the extent of the Agreement or of any part hereof.

11. Agreement to Arbitrate.

(a) Agreement. The Company and Employee hereby consent to the resolution by arbitration of all claims or controversies for which a court otherwise would be authorized by law to grant relief, except as set forth below, in any way arising out of, relating to, or associated with the Employee's employment with or termination from the Company (Claims) in accordance with the provisions of the Oregon Uniform Arbitration Act, ORS § 36.600, *et seq.*, and the Federal Arbitration Act, 9 U.S.C. § 1, *et seq.* This clause shall apply to any claim or controversy that the Company may have against the Employee or that the Employee may have against the Company or against its Officers, Directors, Employees, or Agents in their capacity as such or otherwise. The Claims covered by this Agreement to Arbitrate include, but are not limited to, claims for wages or other compensation due; claims for breach of any contract or covenant, express or implied, except as excluded in the following paragraph; tort claims; claims for wrongful discharge; claims for discrimination, including but not limited to, discrimination based on race, sex, religion, national origin, age, marital status, handicap, disability, or medical condition; claims for benefits, except as excluded in the following paragraph; and claims for violation of any federal, state, or other governmental constitution, statute, ordinance, or regulation.

(b) Claims Not Covered By This Agreement. This Agreement to Arbitrate does not apply to or cover claims for workers' compensation benefits or compensation; claims for unemployment compensation benefits; any claim of any insured or beneficiary under any insurance policy or annuity contract; claims by the Company for injunctive and/or other equitable relief for unfair competition, and/or the use and/or unauthorized disclosure of confidential or proprietary information; and claims based upon any pension or benefit plan that contains an arbitration or other nonjudicial dispute resolution procedure, in which such case the provisions of such plan shall apply.

(c) Arbitration Procedures. Any arbitration brought under this Agreement shall be conducted in accordance with the National Rules for the Resolution of Employment Disputes in effect at the time the arbitration is commenced as published by the American Arbitration Association. Each party shall be responsible for paying its own administration fees, costs, and attorney's fees related to the arbitration, except where the arbitration decision requires one party to pay the other party's attorney's fees.

(d) Consideration. Each party's promise to resolve claims by arbitration in accordance with the provisions of this Agreement, rather than through the courts, is consideration for the other party's like promise.

12. Construction. No provision of this Agreement shall be construed against or interpreted to the disadvantage of Employee or the Company by any court or the government or judicial authority by reason of Employee or the Company having or being deemed to have structured or drafted such provision of this Agreement.

13. Governing Law; Forum Selection Agreement. This Agreement shall in all respects be governed by and construed in accordance with the laws of the State of Oregon, not including the choice-of-law rules thereof. In the event any suit, action, or other proceeding is brought by the Company against the Employee or by the Employee against the Company, such suit, action, or proceeding will be filed in Portland, Oregon.

[Signatures Commence on Next Page]

Table of Contents

IN WITNESS WHEREOF, the parties hereto have caused this Employment Agreement to be duly executed as of the date first written above.

ACCENT OPTICAL TECHNOLOGIES, INC.

/s/ BRUCE C. RHINE

By: Bruce C. Rhine

Title: Chief Executive Officer

EMPLOYEE:

/s/ BRUCE CRAWFORD

Bruce Crawford

G2-6

Table of Contents

Annex G-3

AGREEMENT

1. Parties.

The parties to this Agreement (the Agreement) are Accent Optical Technologies, Inc., a Delaware corporation, its successors and assigns (collectively referred to as Accent) and Reid Langrill, Accent's Chief Financial Officer, his heirs and assigns (Langrill).

2. Recitals; Definitions.

2.1 Accent expects to enter into a Definitive Merger Agreement with Nanometrics, Inc. (Nanometrics) on or before January 31, 2006 (the Agreement) which agreement will provide for a merger of Accent into Nanometrics (the Merger).

2.2 If the Merger is completed, the parties would like Langrill to continue as an employee for a period of time thereafter and then as a consultant for a period of time which Langrill is willing to do, Langrill acknowledging for such purposes that such continued employment or as a consultant may be with Accent, Nanometrics (as the successor to Accent) or an affiliate of either Accent or Nanometrics depending on the structure of the Merger.

2.3 The parties would like to provide certain additional compensation to Langrill as outlined in this agreement in lieu of severance pay, bonus pay or other payments and in consideration of Langrill continuing for a period of time as an employee, certain releases from Langrill, in consideration of being available to provide consulting services, define the terms and scope of consulting services to be provided and address certain other matters related thereto.

2.4 Langrill's employment with Accent will be terminated effective the Termination Date.

2.4 Definitions:

2.4.1 Closing Date means the date the Merger is consummated.

2.4.2 Confidentiality Agreement means Accent's standard form of employee confidentiality, nondisclosure and assignment of inventions agreement which Langrill signed on May 29, 2003.

2.4.3 Consulting Work means the services to be provided under Section of this Agreement.

2.4.4 Option Unrealized Value means, an amount equal to the (i) the fair market value of Langrill's shares of Accent Common Stock covered by the options in Exhibit A (but only considering the options shares which would then be exercisable and in the money, including option shares for such purpose for which the option had previously been exercised, using, for purposes of calculating the fair market value of such shares the Option Exchange Amount as defined in the Agreement, minus (ii) the exercise price for such option shares included in such calculation.

2.4.5 Termination Date means the date Langrill terminates employment with Accent which will be the later of (i) the Closing Date or (ii) a date designated by Nanometrics to Langrill at least two weeks prior to the Closing Date, which date will not be later than thirty (30) days following the Closing Date.

3. Benefits Provided.

3.1 Salary. Langrill will be paid at his regular rate of pay through the Termination Date, less applicable tax and other withholding, plus any benefits then owing. His regular rate of pay is \$185,000 on an annualized basis.

3.2 Severance Payment. Subject to Langrill's execution of this Agreement and the expiration of the seven day revocation period provided by the Older Workers Benefit Protection Act without Langrill's revocation,

Table of Contents

Accent agrees to pay Langrill an amount equal to the greater of the following: (i) \$185,000 or (ii) the difference between \$500,000 and the Option Unrealized Amount (Severance Amount), such Severance Amount to be reduced by applicable employee tax and other withholdings and to be paid as follows: (i) 50% within 30 days of the Closing Date, (ii) 30% within 90 days of the Closing Date and (iii) 20% on or before March 15, 2007.

3.3 Benefits. While an employee of Accent, Langrill will continue to receive the customary benefits he has received to date. Following the Closing Date, Langrill shall receive the benefits customarily extended to Nanometrics management during such employment. Following termination of employment, Langrill may continue his medical coverage, to the extent allowable by law, in accordance with the Consolidated Omnibus Budget Record Affiliation Act (COBRA).

3.4 Stock Options. Langrill shall be entitled to exercise his unexercised vested Accent stock options reflected in Exhibit A prior to the Closing Date and, to the extent such options are assumed and/or reissued by Nanometrics under the Merger Agreement with Nanometrics stock substituted thereunder, in accordance with the terms of such new, reissued or substituted options.

3.5 Waiver; Prior Employment Agreements/Understandings. Langrill waives any and all claims to wages, salary, payments, or benefits, except as set forth in this Section 3 or set forth in Section 4 of this Consulting Agreement for consulting services. Langrill hereby further agrees that this Agreement terminates any prior employment agreement or understanding, oral or otherwise, he has or may have with Accent and its affiliates, and acknowledges that this Agreement is permitted under and does not violate any terms of any such agreement or understanding, except the stock options reflected in Exhibit A and the Confidentiality Agreement.

4. Other Agreements: Consulting Relationship. Following the Termination Date, Langrill agrees to provide consulting services on the terms outlined in this Section 4.

4.1 Services. Langrill shall provide consulting services in the following areas: Accent s financial records, financial statements, corporate matters, tax matters and any other areas in which Langrill was involved during his employment with Accent as its Chief Financial Officer. Langrill further agrees to be reasonably available to assist Accent with such other tasks as may be requested by Accent s management and related to Langrill s work for Accent while an Accent employee and executive officer. Langrill agrees to devote such time as may be reasonably required to perform Langrill s duties and responsibilities under this Section 4 of the Agreement; provided, Langrill will not be required to perform more than 80 hours per month of consulting services for the three months following the Termination Date or more than 40 hours per month of consulting services during the fourth month following the Termination Date through the earlier of (i) March 15, 2007 (such number of hours being prorated for the last calendar period if less than a full month) or (ii) the actual termination date under this sentence or Section 4.3 of this Agreement (the Consulting Period); provided, if Accent determines at any time that it will not need any further consulting services under this Section 4.1, Accent shall immediately notify Langrill and the Consulting Period shall be deemed to have ended as of the date of giving of such notice by Accent. Accent acknowledges and agrees that Langrill may pursue other activities, including performing services for others (with or without compensation), during the term of this Agreement so long as such other activities do not materially interfere with Langrill s ability to provide consulting services to Accent hereunder. Accent will give Langrill reasonable notice of the need for consulting services, when possible arrange for such services to be performed by Langrill from his home or personal business office and provide for him to perform a full day of consulting services (8 hours) when working at Accent.

4.2 Compensation; Facilities. In consideration of the services to be rendered by Langrill to Accent under Section 4 of this Agreement, Accent shall pay to Langrill a fee of one hundred five dollars (\$105.00) per hour. Langrill shall monthly submit a statement of services performed during the prior calendar month and Accent shall, except to the extent that additional information or documentation is needed or such charges are contested in good faith, pay Langrill such amounts within fifteen (15) days of receipt. Langrill is not entitled to any benefits customarily extended by Accent to employees while Langrill is providing consulting services under this

Table of Contents

Section 4, including, without limitation, medical and dental insurance coverage and workers compensation benefits, and Langrill shall be obligated to pay income taxes and withholding and all payroll taxes related to the consulting compensation provided in this Section 4. Accent shall reimburse Langrill for reasonable out of pocket expenses incurred by Langrill on behalf of Accent in the performance of Langrill's duties, including travel, meals and lodging (when providing services to Accent outside its Bend, Oregon facilities. Langrill shall furnish Accent with the supporting documentation required by the Internal Revenue Code and the applicable treasury regulations for reimbursement of such expenses. Accent shall arrange for Langrill to provide full day consulting services (8 hours) when providing such services outside Bend, Oregon, in which case Langrill will not bill for travel time. Accent shall provide Langrill with a desk, secretarial services (if needed) and such other facilities as needed when working at Accent facilities, internet access and e-mail at Accent, and such supplies and services as shall be reasonably necessary to enable Langrill to perform his consulting obligations under this Agreement; provided, Accent need only supply a laptop if Langrill's laptop will not interface with Accent's system or, if available, software that will allow such interface.

4.3 Termination of Langrill Obligations. The consulting obligations may be terminated at any time by mutual agreement of the parties hereto and, in any case, will terminate immediately upon Langrill's death. The consulting obligations under this Section 4 may also be terminated earlier by Accent, at its option, if Langrill:

4.3.1 fails to perform any of his duties or responsibilities in any material respect, and he does not cure such failure within fifteen (15) days after receipt of written notice thereof from Accent.

4.3.2 engages in any act of dishonesty or other substantial and gross misconduct in the performance of Langrill's consulting duties and responsibilities under this Section 4.

4.3.3 suffers a permanent disability. For purposes of this Agreement, permanent disability shall be defined as Langrill's inability, due to illness, accident, or other cause, to perform Langrill's duties under Section 4 for a period of forty-five (45) days or more, despite reasonable accommodation by Accent, or for a period extending beyond March 15, 2007.

If the consulting obligations in this Section 4 terminate, the rights and obligations of the parties under this Section 4 shall thereupon terminate, except for the rights and obligations that accrued prior to the effective date of such termination.

4.4 independent Contractor. For purposes of the services being provided under this Section 4, Langrill acknowledges that he is not an Accent employee, but has been engaged as an independent contractor. Notwithstanding Langrill's status as an independent contractor for purposes of this Section 4, Accent agrees that it will, until instructed by Langrill to do otherwise (except as otherwise required by law), (i) withhold from Langrill's compensation paid under this Section 4 all income and employment taxes that are required to be withheld or paid by Langrill under applicable law (including, but not limited to, quarterly estimated income tax payments) and (ii) if requested by Langrill, assist Langrill in preparing and filing all tax returns and reports required by law with respect to such consulting compensation.

5. General Release. In consideration for the promises and benefits stated herein, Langrill hereby releases Accent, its affiliates, shareholders, officers, directors, employees, agents, affiliates, successors, assigns and insurers from any and all causes of action, claims, suits, damages, and demands including, but not limited to, all claims raised or which could have been raised or which could be raised for additional compensation or benefits in any form or for reinstatement, reemployment or any other claims, whether known or unknown. This release includes any and all claims, direct or indirect, which might otherwise be made under any applicable state or federal authority, including, but not limited to, any claims arising under the Oregon statutes dealing with discrimination and retaliation in employment (e.g., ORS Chapters 654, 656, 659 and 659A) and wages and hours (e.g., ORS Chapters 652 and 653), Title VII of the Civil Rights Act of 1964, the Post-Civil War Civil Right Acts (42 USC §§ 1981-1988), the Civil Rights Act of 1991, The Equal Pay Act of 1963, the Age Discrimination in Employment Act, the Older Workers Benefits Protection Act, the Americans with Disabilities Act of 1990, the Rehabilitation Act of 1973, the Vietnam Era Veterans Readjustment Assistance Act, the Fair Labor Standards

Table of Contents

Act, the Family and Medical Leave Act of 1993, and Oregon Family Leave Act, Executive Order 11246, the Employee Retirement Income Security Act, all as amended, any regulations under such laws, wage claims, commissions, expense claims, compensation claims, penalty claims, employment and placement claims, negligence or injury claims, and any other matters, things, acts, or omissions through the effective date of the execution of the Agreement, and any applicable contract, tort, or other common law theories.

6. Release of Rights under Older Workers Benefit Protection Act.

6.1 Separation Agreement Made in Accordance with the Older Workers Benefit Protection Act. Langrill acknowledges that he is releasing legal rights. In accordance with the Older Workers Benefit Protection Act (the "Act"), he acknowledges that (i) he is hereby advised in writing to consult with an attorney prior to executing this release; (ii) he is aware of certain rights to which he may be entitled under the Act; and (iii) as consideration for executing this Agreement, he has received additional benefits and compensation of value to which he would not otherwise be entitled.

6.2 Time for Consideration of Offer and Agreement. Langrill acknowledges that in accordance with the Act, Accent offered him payment and other benefits as provided herein in connection with the termination of his employment and the offer provided him with a period of 21 days from the date of receipt for consideration of the offer. He further acknowledges that he has a period of seven days from the date immediately following the date of execution of this Agreement in which he may revoke this release by written notice to Accent to Pat Huber, Corporate Controller, 131 NW Hawthorne Ave, Suite 101, Bend, OR 97701. In the event he does not exercise his right to revoke this Agreement, the Agreement shall become effective on the date immediately following the seven-day revocation period described above.

7. Confidentiality.

7.1 Return of Proprietary Information; Confidentiality Obligations. Upon termination of employment, Langrill will return all documents and property of Accent not needed for the Consulting Work. Upon termination of the Consulting Work, he shall return all remaining documents and property of Accent. Langrill acknowledges he entered the Confidentiality Agreement and that such agreement imposes certain ongoing obligations upon him regarding Accent's confidential information which agreement shall survive his termination of employment with Accent and be applicable to him. He also agrees to sign any similar agreement that Nanometrics requires of its employees.

7.2 Confidentiality of Agreement. Langrill and Accent agree to keep confidential the terms and conditions of this Agreement, including but not limited to the financial terms (collectively "Confidential Compromise Material"), except as required by law or related to the Merger. Langrill shall not disclose, directly or indirectly, expressly or implied, such information to any person or entity. Should Langrill be requested in a judicial, administrative or other proceeding to disclose Confidential Compromise Material, Langrill shall promptly notify Accent of such requests by the most expeditious means in order to enable Accent to take any reasonable and appropriate action to limit such disclosure. The Confidential Compromise Material shall be deemed to fall within the protection afforded compromises and offers to compromise by Rule 408 of the Federal Rules of Evidence and parallel state law provisions.

8. Miscellaneous

8.1 Severability. Every provision of this Agreement, except Section 7, is intended to be severable. In the event a court, arbitrator or agency of competent jurisdiction determines that any term or provision contained in this release, except Section 7, is illegal, invalid or unenforceable, such illegality, invalidity or unenforceability shall not affect the other terms and provisions of this Agreement, which shall remain binding and enforceable.

8.2 Entire Agreement; Modifications/Amendments. This Agreement contains the entire agreement and understanding of the parties, and supersedes all prior and contemporaneous agreements between them with

Table of Contents

respect to such matters. No amendments, modifications or supplements to this Agreement may be made other than by a writing signed by both parties.

8.3 No Assignment. The undersigned represent and warrant that there has been no assignment or other transfer of any interest in any action, claim, right or demand which is released hereunder.

8.4 Review, Representations and Acknowledgement. Each party to this Agreement has read this Agreement and understands its contents, meaning, intent, and legal effect, and has voluntarily executed this Agreement. No party (nor any officer, agent, employee, representative, or attorney of or for any party) has made any statement or representation to any other party regarding any fact relied upon in entering into this Agreement and no party is relying upon any statement, representation or promise of any other party (or of any agent, employee, representative, or attorney for the other party) in executing this Agreement or in making the settlement provided for herein, except as expressly stated in this Agreement. Each party assumes the risk of mistakes of fact or law.

8.5 Interpretation; Dispute Resolution; Venue; Attorneys Fees. This Agreement shall be interpreted, applied, and enforced in accordance with the laws of the State of Oregon. If a suit, action, or other proceeding of any nature whatsoever is instituted in connection with any controversy arising out of this Agreement or to enforce any rights hereunder, the prevailing party shall be entitled to recover such amount as the court or arbitrator may adjudge reasonable as attorneys' fees at trial or on any appeal or review, in addition to all other amounts provided by law. If a suit, action, or other proceeding of any nature whatsoever (including any proceeding under the U.S. Bankruptcy Code) is instituted in connection with any controversy arising out of this Agreement or to interpret or enforce any rights hereunder, the prevailing party shall be entitled to recover its attorneys', paralegals', accountants', and other experts' fees and all other fees, costs and expenses actually incurred and reasonably necessary in connection therewith, as determined by the court at a hearing or trial or on any appeal or review, in addition to all other amounts provided by law. Any action to enforce or interpret this Agreement shall be brought in the courts of Deschutes County, Oregon or the federal courts of the Oregon District.

8.6 Successors and Assigns. The benefits and obligations of this Agreement shall inure to the successors and assigns of Accent, including, as is the case under the Merger Agreement, Nanometrics and/or its affiliates, and their successors and assigns, if the Merger is consummated.

8.7 Counterpart Copies. This Agreement may be executed in one or more counterparts, each of which shall be regarded as an original instrument, and all of which together shall constitute one and the same Agreement.

8.8 Effectiveness. This Agreement shall be binding on the parties; provided, if the Merger does not occur on or before December 31, 2006, this Agreement shall be of no further force and effect. For purposes of this Agreement, the merger shall be deemed to not have occurred on or before such date if at any time either Accent or Nanometrics abandons pursuing the Merger. The parties further agree that in such event, this Agreement may not be used as evidence in any proceeding as to any compensation, including severance or incentive compensation, then owing to Langrill.

Table of Contents

8.9 Notices. Any notice given pursuant to this Agreement shall be in writing and shall be deemed given on the earlier of the date the notice is (a) personally delivered to the party to be notified, (b) mailed, postage prepaid, certified with return receipt requested, addressed as set forth below, or to such other address as a party may from time to time designate by notice to the other party (c) delivered at the party's address via courier service or (d) received by facsimile transmission or telecopy where confirmation of transmission by the sending machine occurs; provided, each party agrees to maintain at all times a street address to which notice can be delivered by courier or US mails and a facsimile number to which notice can be sent:

To Accent: Accent Optical Technologies, Inc.
 131 NW Hawthorne, Suite 101
 Bend, OR 97701
 Attn: Pat Huber, Corporate Controller
 Fax No. 541-318-1966

To Langrill: Reid Langrill
 60083 Ridgeview Drive West
 Bend, OR 97702
 Fax No. 541-318-8490

The address or fax number may be changed on three days prior notice given in accordance with the provisions of this Section 8.9.

8.10 Successors and Assigns. This agreement shall inure to the benefit of the parties, their successors and assigns; provided, (i) Langrill acknowledges that his obligations hereunder may not be assigned by him and (ii) both parties acknowledge that Nanometrics or an affiliate thereof, following the Merger, may be the successor to Accent's rights and obligations hereunder depending on the structure of the Merger.

IN WITNESS WHEREOF, the parties execute this Agreement effective January 20, 2006, as amended May 18, 2006.

ACCENT OPTICAL TECHNOLOGIES, INC.

By: /s/ BRUCE C. RHINE
 Bruce C. Rhine, CEO

/s/ REID LANGRILL

Reid Langrill

G3-6

Table of Contents

Annex H

SECTION 262 OF THE DELAWARE GENERAL CORPORATION LAW

RIGHTS OF DISSENTING STOCKHOLDERS

SECTION 262. APPRAISAL RIGHTS.

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a stock corporation and also a member of record of a nonstock corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words and also membership or membership interest of a member of a nonstock corporation; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in one or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or Series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title), § 252, § 254, § 257, §258, § 263 or § 264 of this title:

(1) Provided, however, that no appraisal rights under this section shall be available for the shares of any class or Series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of and to vote at the meeting of stockholders to act upon the agreement of merger or consolidation, were either (i) listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in subsection (f) of § 251 of this title.

(2) Notwithstanding paragraph (1) of this subsection, appraisal rights under this section shall be available for the shares of any class or Series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to §§ 251, 252, 254, 257, 258, 263 and 264 of this title to accept for such stock anything except:

- a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;
- b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or held of record by more than 2,000 holders;
- c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a. and b. of this paragraph; or
- d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a., b. and c. of this paragraph.

(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 253 of this title is not owned by the parent corporation immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

Table of Contents

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or Series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the procedures of this section, including those set forth in subsections (d) and (e) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for such meeting with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) hereof that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2) If the merger or consolidation was approved pursuant to § 228 or § 253 of this title, then, either a constituent corporation before the effective date of the merger or consolidation, or the surviving or resulting corporation within 10 days thereafter, shall notify each of the holders of any class or Series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or Series of stock of such constituent corporation, and shall include in such notice a copy of this section. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of mailing of such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger or consolidation notifying each of the holders of any class or Series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice, such second notice need only be sent to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next preceding the day on which the notice is given.

Table of Contents

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) hereof and who is otherwise entitled to appraisal rights, may file a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) hereof, upon written request, shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation and with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such written statement shall be mailed to the stockholder within 10 days after such stockholder's written request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) hereof, whichever is later.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder.

(h) After determining the stockholders entitled to an appraisal, the Court shall appraise the shares, determining their fair value exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with a fair rate of interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. In determining the fair rate of interest, the Court may consider all relevant factors, including the rate of interest which the surviving or resulting corporation would have had to pay to borrow money during the pendency of the proceeding. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, permit discovery or other pretrial proceedings and may proceed to trial upon the appraisal prior to the final determination of the stockholder entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Interest may be simple or compound, as the Court may direct. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation

Table of Contents

of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation. (Last amended by Ch. 82, L. 01, eff. 7-1-01.)

Table of Contents**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****Item 20. Indemnification of Directors and Officers**

Sections 204 (a) and 317 of the California Corporations Code authorize a corporation to indemnify its directors and officers against certain liabilities and to eliminate their liability to the corporation except in certain circumstances. The Registrant's Amended and Restated Articles of Incorporation contain a provision eliminating the liability of the Registrant's directors for monetary damages to the fullest extent permitted by California law. The Registrant's Amended and Restated Articles of Incorporation also contain a provision pursuant to which the Registrant is authorized to indemnify its directors, officers, employees and other agents through bylaw provisions in excess of the indemnification permitted by Section 317 of the California Corporations Code subject only to the applicable limits as set forth in Section 204 of the California Corporations Code. In addition, the Registrant's bylaws contain a provision limiting the liability of the Registrant's directors for monetary damages to the fullest extent permitted by California law and providing for indemnification to its directors, officers, employees and other agents.

Item 21. Exhibits and Financial Statement Schedules

(a) The following exhibits are filed herewith or incorporated herein by reference:

Exhibit Number	Description
2.1	Agreement and Plan of Merger and Reorganization, dated as of January 25, 2006, by and among Nanometrics Incorporated, Alloy Merger Corporation, Accent Optical Technologies, Inc. and Sanford S. Wadler, as Stockholder Agent. (1)
3.1	Amended and Restated Articles of Incorporation of Nanometrics Incorporated. (2)
3.2	Restated Bylaws of Nanometrics Incorporated. (3)
3.3	Certificate of Amendment of Amended and Restated Bylaws of Nanometrics Incorporated. (4)
4.1	Specimen Common Stock Certificate of Nanometrics Incorporated. (5)
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation regarding the validity of the securities registered hereunder. (6)
8.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation relating to tax matters. (6)
8.2	Opinion of Perkins Coie LLP relating to tax matters.
23.1	Consent of Deloitte & Touche Independent Registered Public Accounting Firm (related to the consolidated financial statements of Nanometrics Incorporated).
23.2	Consent of BDO Seidman, LLP, Independent Registered Public Accounting Firm (related to the consolidated financial statements of Nanometrics Incorporated).
23.3	Consent of PricewaterhouseCoopers LLP, Independent Accountants (related to the consolidated financial statements of Accent Optical Technologies, Inc.).
23.4	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibits 5.1 and 8.1). (6)
23.5	Consent of Perkins Coie LLP (included in Exhibit 8.2).
23.6	Consent of Vitale, Caturano & Company, Ltd. (related to the financial statements of Soluris, Inc.).
24.1	Power of Attorney. (6)
99.1	Consent of Cowen & Co., LLC. (6)

Table of Contents

Exhibit Number	Description
99.2	Consent of Merrill, Lynch, Pierce, Fenner & Smith Incorporated. (6)
99.3	Consent of Persons Named to Become Directors. (6)
99.4	Form of Proxy of Nanometrics Incorporated. (6)
99.5	Form of Proxy of Accent Optical Technologies, Inc. (6)
<hr/>	
(1)	Incorporated by reference to Exhibit 2.1 of Nanometrics Current Report on Form 8-K/A, filed with the SEC on February 21, 2006.
(2)	Incorporated by reference to Exhibit 3.1 of Nanometrics Annual Report on Form 10-K for the year ended December 31, 2002, filed with the SEC on March 28, 2003.
(3)	Incorporated by reference to Exhibit 3.9 of Nanometrics Annual Report of Form 10-K for the year ended December 31, 1997, filed with the SEC on April 1, 1998.
(4)	Incorporated by reference to Exhibit 3.10 of Nanometrics Annual Report on Form 10-K for the year ended December 31, 2000, filed with the SEC on March 30, 2001.
(5)	Incorporated by reference to an exhibit to Nanometrics Registration Statement on Form S-1 (File No. 2-93949), which became effective on November 28, 1984.
(6)	Previously filed.

Item 22. Undertakings

(1) The undersigned registrant hereby undertakes as follows: that prior to any public reoffering of the securities registered hereunder through use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the issuer undertakes that such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other items of the applicable form.

(2) The registrant undertakes that every prospectus (i) that is filed pursuant to paragraph (i) immediately preceding, or (ii) that purports to meet the requirements of Section 10(a)(3) of the Securities Act of 1933 (the Act), and is used in connection with an offering of securities subject to Rule 415, will be filed as a part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(4) Insofar as indemnification for liabilities arising under the Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions hereof, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the

Table of Contents

question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(5) The undersigned registrant hereby undertakes to respond to requests for information that is incorporated by reference into the prospectus pursuant to Items 4, 10(b), 11 or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of the registration statement through the date of responding to the request.

(6) The undersigned registrant hereby undertakes to supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

(7) The undersigned registrant hereby undertakes:

(A) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) under the Act if, in the aggregate, the changes in amount and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(B) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(C) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(8) The undersigned registrant hereby undertakes:

(A) That, for the purpose of determining liability under the Act to any purchaser:

(i) Each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

Table of Contents

(B) That, for the purpose of determining liability of the registrant under the Act to any purchaser in the initial distribution of the securities:

(i) The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(a) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(b) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(c) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(d) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

Table of Contents

SIGNATURE

Pursuant to the requirements of the Securities Act of 1933, as amended, Nanometrics Incorporated has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized at Milpitas, California, on June 9, 2006.

NANOMETRICS INCORPORATED

By: /s/ DOUGLAS J. McCUTCHEON
Douglas J. McCutcheon

Chief Financial Officer and Executive Vice President

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons on behalf of the registrant and in the capacities indicated on June 9, 2006.

Signature	Title
/s/ VINCENT J. COATES*	Chairman of the Board and Secretary
Vincent J. Coates	
/s/ JOHN D. HEATON	President, Chief Executive Officer and Director (Principal Executive Officer)
John D. Heaton	
/s/ DOUGLAS J. McCUTCHEON	Chief Financial Officer and Executive Vice President (Principal Financial Officer)
Douglas J. McCutcheon	
/s/ QUENTIN WRIGHT	Chief Accounting Officer (Principal Accounting Officer)
Quentin Wright	
/s/ WILLIAM OLDHAM*	Director
William Oldham	
/s/ EDMOND R. WARD*	Director
Edmond R. Ward	
/s/ STEPHEN J SMITH*	Director
Stephen J Smith	
	Director
J. Thomas Bentley	

Edgar Filing: NANOMETRICS INC - Form S-4/A

*By:

/s/ JOHN D. HEATON
John D. Heaton

as attorney in fact

II-5

Table of Contents**EXHIBIT INDEX**

Exhibit Number	Description
2.1	Agreement and Plan of Merger and Reorganization, dated as of January 25, 2006, by and among Nanometrics Incorporated, Alloy Merger Corporation, Accent Optical Technologies, Inc. and Sanford S. Wadler, as Stockholder Agent. (1)
3.1	Amended and Restated Articles of Incorporation of Nanometrics Incorporated. (2)
3.2	Restated Bylaws of Nanometrics Incorporated. (3)
3.3	Certificate of Amendment of Amended and Restated Bylaws of Nanometrics Incorporated. (4)
4.1	Specimen Common Stock Certificate of Nanometrics Incorporated. (5)
5.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation regarding the validity of the securities registered hereunder. (6)
8.1	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation relating to tax matters. (6)
8.2	Opinion of Perkins Coie LLP relating to tax matters.
23.1	Consent of Deloitte & Touche Independent Registered Public Accounting Firm (related to the consolidated financial statements of Nanometrics Incorporated).
23.2	Consent of BDO Seidman, LLP, Independent Registered Public Accounting Firm (related to the consolidated financial statements of Nanometrics Incorporated).
23.3	Consent of PricewaterhouseCoopers LLP, Independent Accountants (related to the consolidated financial statements of Accent Optical Technologies, Inc.).
23.4	Consent of Wilson Sonsini Goodrich & Rosati, Professional Corporation (included in Exhibits 5.1 and 8.1). (6)
23.5	Consent of Perkins Coie LLP (included in Exhibit 8.2).
23.6	Consent of Vitale, Caturano & Company, Ltd. (related to the financial statements of Soluris, Inc.).
24.1	Power of Attorney. (6)
99.1	Consent of Cowen & Co., LLC. (6)
99.2	Consent of Merrill, Lynch, Pierce, Fenner & Smith Incorporated. (6)
99.3	Consent of Persons Named to Become Directors. (6)
99.4	Form of Proxy of Nanometrics Incorporated. (6)
99.5	Form of Proxy of Accent Optical Technologies Inc. (6)

-
- (1) Incorporated by reference to Exhibit 2.1 of Nanometrics Current Report on Form 8-K/A, filed with the Securities and Exchange Commission on February 21, 2006.
- (2) Incorporated by reference to Exhibit 3.1 of Nanometrics Annual Report on Form 10-K for the year ended December 31, 2002, filed with the Securities and Exchange Commission on March 28, 2003.
- (3) Incorporated by reference to Exhibit 3.9 of Nanometrics Annual Report of Form 10-K for the year ended December 31, 1997, filed with the Securities and Exchange Commission on April 1, 1998.
- (4) Incorporated by reference to Exhibit 3.10 of Nanometrics Annual Report on Form 10-K for the year ended December 31, 2000, filed with the Securities and Exchange Commission on March 30, 2001.
- (5) Incorporated by reference to an exhibit to Nanometrics Registration Statement on Form S-1 (File No. 2-93949), which became effective on November 28, 1984.
- (6) Previously filed.