UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

W	ashington, DC 20549	
	FORM 8-K	
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CURRENT REPORT

Pursuant to Section 13 or 15(d) of

The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported)

January 25, 2006

NANOMETRICS INCORPORATED

(Exact name of registrant as specified in its charter)

California (State or other jurisdiction 1- 13470 (Commission File Number) 94-2276314 (IRS Employer

of incorporation)

Identification No.)

1550 Buckeye Drive

Milpitas, California 95035

(Address of principal executive offices, including zip code)

(408) 435-9600

(Registrant s telephone number, including area code)

N/A

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- x Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- " Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- " Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- " Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01. Entry into a Material Definitive Agreement

On January 25, 2006, Nanometrics Incorporated, a California corporation (the Company), Alloy Merger Corporation (Merger Sub), a wholly-owned subsidiary of the Company and a Delaware corporation, Accent Optical Technologies, Inc., a Delaware corporation (Accent) and, solely with respect to Article IX, Sanford S. Wadler (the Stockholder Agent), entered into an Agreement and Plan of Merger and Reorganization (the Merger Agreement), as announced in the attached joint press release. Pursuant to the terms and subject to the conditions set forth in the Merger Agreement, Merger Sub will merge with and into Accent (the Merger), and Accent will continue as the surviving corporation in the Merger as a wholly owned subsidiary of the Company. The Board of Directors of the Company has approved the Merger and the Merger Agreement and has recommended that the Company is shareholders approve the Merger Agreement.

Under the terms of the Merger Agreement, upon consummation of the Merger (the Effective Time), the Company will acquire all of the outstanding capital stock of Accent in exchange for 4,900,000 shares of Company common stock plus the number of shares of Company common stock equal to the aggregate exercise price of all Accent stock options (other than Accent stock options granted between January 23, 2006 and the Effective Time) that meet the requirements of an Assumed Option (as defined in the Merger Agreement), divided by the Average Closing Price (as defined in the Merger Agreement), and rounded to the nearest whole share of Company common stock (collectively, the Aggregate Merger Consideration). Ten percent of the Aggregate Merger Consideration will be held in escrow for one year to satisfy potential indemnity claims by the Company against Accent for breaches of representations and warranties. The Company will also assume options for the number of shares of Company common stock issuable upon exercise of Accent options granted between January 23, 2006 and the Effective Time.

Accent has made customary representations, warranties and covenants, including, among others, covenants (i) to conduct its business in the ordinary course consistent with past practice during the interim period between execution of the Merger Agreement and the Effective Time; (ii) not to engage in certain kinds of transactions during such period; and (iii) not to solicit proposals relating to alternative business combination transactions.

The completion of the Merger is subject to various closing conditions, including, but not limited to (i) obtaining the approvals of the shareholders of the Company and the stockholders of Accent; (ii) no legal or regulatory restraint or prohibition preventing the consummation of the Merger; (iii) expiration or termination of the applicable Hart-Scott-Rodino Act waiting period; (iv) subject to certain exceptions, the accuracy of the representations and warranties; and (v) the absence of any material adverse effect on Accent. The Merger is intended to qualify as a reorganization for federal income tax purposes and to provide for a tax-free exchange of shares.

Concurrently with the execution of the Merger Agreement, and in consideration thereof, (i) certain shareholders of the Company entered into individual agreements with Accent whereby each such shareholder agreed to vote all of the shares of common stock of the Company beneficially owned by such shareholder in favor of the transactions contemplated by the Merger Agreement and (ii) certain stockholders of Accent entered into individual agreements with the Company whereby each such stockholder agreed to vote all of the shares of capital stock of Accent beneficially owned by such stockholder in favor of the Merger and the transactions contemplated by the Merger Agreement.

Concurrently with the execution of the Merger Agreement, and in consideration thereof, certain stockholders of Accent entered into agreements with the Company whereby each such stockholder

agreed to limit such stockholder s dispositions of the Aggregate Merger Consideration in order to facilitate an orderly market for the Company s common stock after the Effective Time for a period of one or two years, as the case may be.

Under certain circumstances, the Company has agreed to provide working capital loans of \$1.25 million at each of April 30, 2006 and June 30, 2006 if the Merger has not been completed by such dates and the Merger Agreement has not been terminated pursuant to a convertible, subordinated promissory note.

A copy of the joint press release is attached to this Current Report as Exhibit 99.1 and is incorporated herein by reference.

Item 9.01. Financial Statements and Exhibits

(c) Exhibits.

The following exhibits are filed herewith:

Exhibit No. Description

99.1 Joint Press release issued by Nanometrics Incorporated and Accent Optical Technologies, Inc. dated January 25, 2006.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: January 26, 2006

NANOMETRICS INCORPORATED

By: /s/ Douglas J. McCutcheon

Douglas J. McCutcheon

Chief Financial Officer

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EXHIBIT INDEX

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