
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Form 8-K

Current Report

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): 04/28/2008

KLA-TENCOR CORPORATION

(Exact name of registrant as specified in its charter)

Commission File Number: 000-09992

Delaware
(State or other jurisdiction of
incorporation)

04-2564110
(IRS Employer
Identification No.)

One Technology Drive, Milpitas, California 95035
(Address of principal executive offices, including zip code)

(408) 875-3000
(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:

- 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))
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Item 8.01. Other Events

On April 28, 2008, KLA-Tencor Corporation issued a press release announcing its proposed offering of senior notes under an automatic shelf registration statement on file with the Securities and Exchange Commission. A copy of the press release is filed herewith as Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits

(d) Exhibits

The following exhibits are filed herewith:

Exhibit

Number	Description
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99.1	Text of press release issued by KLA-Tencor Corporation dated April 28, 2008.
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Signature(s)

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.

KLA-TENCOR CORPORATION

Date: April 28, 2008

By: /s/ Brian M. Martin

Brian M. Martin
Senior Vice President and General Counsel

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<u>Exhibit No.</u>	<u>Description</u>
EX-99.1	Text of press release issued by KLA-Tencor Corporation dated April 28, 2008.

Company Contact:

Ed Lockwood	Meggan Powers (Media)
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KLA-TENCOR CORPORATION ANNOUNCES OFFERING OF SENIOR NOTES

SAN JOSE, Calif., April 28, 2008—KLA-Tencor Corporation (NASDAQ: KLAC) announced today that it intends to offer, subject to market and other conditions, senior notes under an automatic shelf registration statement on file with the Securities and Exchange Commission.

Merrill Lynch & Co. is acting as the sole book-running manager of the offering.

This press release shall not constitute an offer to sell or the solicitation of an offer to buy any securities, nor should there be any sale of these securities in any state in which such an offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state. The offering of securities may be made only by means of a prospectus. You may get a copy of the prospectus for free by visiting EDGAR on the SEC Web site <http://www.sec.gov>. Alternatively, the Company, any underwriter or any dealer participating in the offering will arrange to send you the prospectus if you request it by contacting Merrill Lynch, Pierce, Fenner & Smith Incorporated at 4 World Financial Center, New York, New York 10080, Attention: Prospectus Department, 212-449-1000.

Forward Looking Statements: All statements in this press release that are not historical are "forward-looking statements" under the federal securities laws. Such statements are subject to risks and uncertainties that could cause actual results to differ materially, including but not limited to whether or not the Company will complete the offering and the anticipated use of proceeds. Factors that might cause such differences include those described in the Company's registration statement on Form S-3 filed with the Securities and Exchange Commission on April 28, 2008, as well as the Company's periodic reports filed with the Commission. The Company expressly disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statements contained herein to reflect any change in KLA-Tencor's expectations or any change in events, conditions, or circumstances on which any such statements are based.

About KLA-Tencor: KLA-Tencor is the world leader in yield management and process control solutions for semiconductor manufacturing and related industries. Headquartered in San Jose, California, the Company has sales and service offices around the world. An S&P 500 company, KLA-Tencor is traded on the NASDAQ Global Select Market under the symbol KLAC. Additional information about the Company is available at <http://www.kla-tencor.com>.

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