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): February 5, 2015

KLA-TENCOR CORPORATION

| (Exact name of registrant as specified in its charter) | | | | |
|---|--|-------------------------------------|--------------------------------------|--|
| | Delaware | 000-09992 | 04-2564110 | |
| | (State or other jurisdiction of incorporation) | (Commission File Number) | (I.R.S. Employer Identification No.) | |
| | One Technology Drive, Milpitas, California | | 95035 | |
| | (Address of principal executive offices) | | (Zip Code) | |
| | Registrant's telephone number, including area code: (408) 875-3000 | | | |
| (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)) | | | |

Item 8.01 Other Events.

On February 5, 2015, KLA-Tencor Corporation (the "Company") issued a press release announcing that the Company's Board of Directors has declared a cash dividend of \$0.50 per share on the Company's common stock. Such dividend shall be payable on March 2, 2015 to the Company's stockholders of record as of the close of business on February 17, 2015. A copy of the press release is attached hereto as Exhibit 99.1.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

The following exhibit is filed herewith:

Exhibit No. Description

99.1 Text of press release issued by KLA-Tencor Corporation dated February 5, 2015

SIGNATURES

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

KLA-TENCOR CORPORATION

Date: February 5, 2015 By: /s/ BRIAN M. MARTIN

Name: Brian M. Martin

Title: Executive Vice President and General Counsel

EXHIBIT INDEX

Exhibit No. Description

99.1 Text of press release issued by KLA-Tencor Corporation dated February 5, 2015

FOR IMMEDIATE RELEASE

Investor Relations:

Media Relations:

Ed Lockwood

Sr. Director, Investor Relations

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Meggan Powers Sr. Director, Corporate Communications (408) 875-8733

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KLA-TENCOR DECLARES REGULAR CASH DIVIDEND FOR THE THIRD QUARTER OF FISCAL YEAR 2015

MILPITAS, Calif., Feb. 5, 2015-KLA-Tencor Corporation (NASDAQ: KLAC) today announced that its board of directors has declared a quarterly cash dividend of \$0.50 per share on its common stock payable on March 2, 2015 to KLA-Tencor stockholders of record as of the close of business on Feb. 17, 2015.

About KLA-Tencor: KLA-Tencor Corporation, a leading provider of process control and yield management solutions, partners with customers around the world to develop state-of-the-art inspection and metrology technologies. These technologies serve the semiconductor, LED, and other related nanoelectronics industries. With a portfolio of industry-standard products and a team of world-class engineers and scientists, the company has created superior solutions for its customers for more than 35 years. Headquartered in Milpitas, Calif., KLA-Tencor has dedicated customer operations and service centers around the world. Additional information may be found at www.kla-tencor.com (KLAC-F)