

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

SCHEDULE 14A

**Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No.)**

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-12

KLA-Tencor Corporation

(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - (1) Title of each class of securities to which the transaction applies:
 - (2) Aggregate number of securities to which the transaction applies:
 - (3) Per unit price or other underlying value of the transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
 - (4) Proposed maximum aggregate value of the transaction:
 - (5) Total fee paid:
- Fee paid previously with preliminary materials.
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
 - (1) Amount Previously Paid:
 - (2) Form, Schedule or Registration Statement No.:
 - (3) Filing Party:
 - (4) Date Filed:



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MR ANDREW SAMPLE
1234 AMERICA DRIVE
ANYWHERE, IL 60661

**IMPORTANT ANNUAL STOCKHOLDERS' MEETING
INFORMATION — YOUR VOTE COUNTS!**

Stockholders' Meeting Notice

1234 5678 9012 345

**Important Notice Regarding the Availability of Proxy Materials for the
KLA-Tencor Corporation Stockholders' Meeting to be Held on November 3, 2010**

In compliance with recent Securities and Exchange Commission rules, you are receiving this notice that the proxy materials for the annual stockholders' meeting are available on the Internet. Follow the instructions below to view the materials and vote online or request a copy. The items to be voted on and location of the annual meeting are on the reverse side. Your vote is important!

This communication presents only an overview of the more complete proxy materials that are available to you on the Internet. We encourage you to access and review all of the important information contained in the proxy materials before voting. The proxy statement and annual report to stockholders are available at:

www.envisionreports.com/klac



Easy Online Access — A Convenient Way to View Proxy Materials and Vote

When you go online to view materials, you can also vote your shares.

Step 1: Go to www.envisionreports.com/klac to view the materials.

Step 2: Click on **Cast Your Vote** or **Request Materials**.

Step 3: Follow the instructions on the screen to log in.

Step 4: Make your selection as instructed on each screen to select delivery preferences and vote.

When you go online, you can also help the environment by consenting to receive electronic delivery of future materials.



Obtaining a Copy of the Proxy Materials – If you want to receive a paper or email copy of these documents, you must request one. There is no charge to you for requesting a copy. Please make your request for a copy as instructed on the reverse side on or before October 24, 2010 to facilitate timely delivery.



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Stockholder Meeting Notice

KLA-Tencor Corporation's Annual Meeting of Stockholders will be held on November 3, 2010 in Multipurpose Rooms East and West in Building Three of the Company's Milpitas facility, located at Three Technology Drive, Milpitas, California 95035, at 12:00 p.m. Pacific Standard Time.

Proposals to be voted on at the meeting are listed below along with the Board of Directors' recommendations.

The Board of Directors recommends a vote **FOR** each of the Class III Director Nominees (Proposal 1) and a vote **FOR** Proposal 2:

1. To elect as Class III Directors the four candidates nominated by the Company's Board of Directors to each serve for a three-year term, each until his or her successor is duly elected:
01 - Edward W. Barnholt, 02 - Emiko Higashi, 03 - Stephen P. Kaufman, 04 - Richard P. Wallace
2. To ratify the appointment of PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for the fiscal year ending June 30, 2011.

In their discretion, the proxy holders are authorized to vote on all such matters as may properly come before the meeting or at any adjournment or postponement thereof.

PLEASE NOTE – YOU CANNOT VOTE BY RETURNING THIS NOTICE. To vote your shares you must vote online or request a paper copy of the proxy materials to receive a proxy card. If you wish to attend and vote at the meeting, please bring this notice with you.

Directions to KLA-Tencor Corporation's 2010 Annual Meeting

From Highway 237 Heading East:

Exit at McCarthy Boulevard. At the stoplight, turn right onto McCarthy Boulevard. At the next intersection, turn right onto Technology Drive. KLA-Tencor is on the right side.

From Highway 237 Heading West:

Exit at McCarthy Boulevard. At the stoplight, turn left onto McCarthy Boulevard (this will take you back over the freeway). At the next intersection, turn right onto Technology Drive. KLA-Tencor is on the right side.

Directions to KLA-Tencor Corporation's 2010 annual meeting are available in the proxy statement, which can be viewed at www.envisionreports.com/klac.



Here's how to order a copy of the proxy materials and select a future delivery preference:

Paper copies: Current and future paper delivery requests can be submitted via the telephone, Internet or email options below.

Email copies: Current and future email delivery requests must be submitted via the Internet following the instructions below.

If you request an email copy of current materials you will receive an email with a link to the materials.

PLEASE NOTE: You must use the number in the shaded bar on the reverse side when requesting a set of proxy materials.

- g **Internet** – Go to www.envisionreports.com/klac. Click **Cast Your Vote** or **Request Materials**. Follow the instructions to log in and order a paper or email copy of the current meeting materials and submit your preference for email or paper delivery of future meeting materials.
- g **Telephone** – Call us free of charge at 1-866-641-4276 using a touch-tone phone and follow the instructions to log in and order a paper copy of the materials by mail for the current meeting. You can also submit a preference to receive a paper copy for future meetings.
- g **Email** – Send an email to investorvote@computershare.com with "Proxy Materials KLA-Tencor Corporation" in the subject line. Include in the message your full name and address, plus the number located in the shaded bar on the reverse, and state in the email that you want a paper copy of current meeting materials. You can also state your preference to receive a paper copy for future meetings.

To facilitate timely delivery, all requests for a paper copy of the proxy materials must be received by October 24, 2010.

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