

# FORM 4

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

|  |           |
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| OMB APPROVAL                                   |           |
| OMB Number:                                    | 3235-0287 |
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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

**STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES**

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

|   |   |  |
|---|---|--|
| 1. Name and Address of Reporting Person *<br>Tsai Bin-Ming Ben        | 2. Issuer Name and Ticker or Trading Symbol<br>KLA TENCOR CORP [KLAC]                   | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable)<br><input type="checkbox"/> Director <input type="checkbox"/> 10% Owner<br><input checked="" type="checkbox"/> Officer (give title below) <input type="checkbox"/> Other (specify below)<br>Executive Vice President |
| (Last) (First) (Middle)<br>C/O KLA-TENCOR CORPORATION, 160 RIO ROBLES | 3. Date of Earliest Transaction (Month/Day/Year)<br>02/13/2007                          |  |
| (Street)<br>SAN JOSE, CA 95130  | 4. If Amendment, Date Original Filed(Month/Day/Year)                                    | 6. Individual or Joint/Group Filing (Check Applicable Line)<br><input checked="" type="checkbox"/> Form filed by One Reporting Person<br><input type="checkbox"/> Form filed by More than One Reporting Person   |
| (City) (State) (Zip)  | <b>Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned</b> |  |

| 1. Title of Security (Instr. 3)         | 2. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) |   | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) |            |          | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---|--------------------------------------|--|--------------------------------|---|---|------------|----------|---|--|---|
|   |                                      |  | Code                           | V | Amount  | (A) or (D) | Price    |   |  |   |
| Common Stock-Restricted Stock Units (1) | 02/13/2007                           |  | A                              |   | 50,000  | A          | \$ 0 (2) | 50,000  | D  |   |
| Common Stock                            |                                      |  |                                |   |   |            |          | 2,915   | D  |   |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number. SEC 1474 (9-02)

**Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)**

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) |   | 6. Date Exercisable and Expiration Date (Month/Day/Year) |     | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|---|--|--|--|--|
|  |  |                                      |  | Code                           | V | (A)  | (D) |   |  |  |  |  |

## Reporting Owners

| Reporting Owner Name / Address  | Relationships |           |                          |       |
|---|---------------|-----------|--------------------------|-------|
|   | Director      | 10% Owner | Officer                  | Other |
| Tsai Bin-Ming Ben<br>C/O KLA-TENCOR CORPORATION<br>160 RIO ROBLES<br>SAN JOSE, CA 95130 |               |           | Executive Vice President |       |

## Signatures

|  |                     |
|--|---------------------|
| Bin-Ming B Tsai                                | 02/15/2007          |
| <small>**Signature of Reporting Person</small> | <small>Date</small> |

## Explanation of Responses:

- \* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).
- \*\* Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).
- (1) Each restricted stock unit represents a contingent right to receive one share of KLAC common stock.
- (2) The restricted stock units vest in two equal installments. The first half vests two years from grant date. The second half vests after four years from grant date.

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure.

Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.