

GROSS LAWRENCE A
Form 3
October 25, 2006

FORM 3 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

OMB APPROVAL

OMB Number: 3235-0104
Expires: January 31, 2005
Estimated average burden hours per response... 0.5

INITIAL STATEMENT OF BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,
Section 17(a) of the Public Utility Holding Company Act of 1935 or Section
30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *

Â GROSS LAWRENCE A
(Last) (First) (Middle)

C/O KLA-TENCOR CORPORATION,Â 160 RIO ROBLES
(Street)

SAN JOSE,Â CAÂ 95134
(City) (State) (Zip)

2. Date of Event Requiring Statement

(Month/Day/Year)
10/16/2006

3. Issuer Name and Ticker or Trading Symbol
KLA TENCOR CORP [klac]

4. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director 10% Owner
 Officer Other
(give title below) (specify below)
EVP-Legal and Interim GC

5. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Beneficially Owned

1. Title of Security
(Instr. 4)

2. Amount of Securities Beneficially Owned
(Instr. 4)

3. Ownership Form:
Direct (D)
or Indirect (I)
(Instr. 5)

4. Nature of Indirect Beneficial Ownership
(Instr. 5)

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

SEC 1473 (7-02)

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Table II - Derivative Securities Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security
(Instr. 4)

2. Date Exercisable and Expiration Date
(Month/Day/Year)

Date Exercisable Expiration Date

3. Title and Amount of Securities Underlying Derivative Security
(Instr. 4)

Title Amount or Number of

4. Conversion or Exercise Price of Derivative Security

5. Ownership Form of Derivative Security: Direct (D)

6. Nature of Indirect Beneficial Ownership
(Instr. 5)

Shares or Indirect
(I)
(Instr. 5)

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | |
|--|---------------|-----------|----------------------------|-------|
| | Director | 10% Owner | Officer | Other |
| GROSS LAWRENCE A C/O KLA-TENCOR CORPORATION 160 RIO ROBLES SAN JOSE, CA 95134 | Â | Â | Â EVP-Legal and Interim GC | Â |

Signatures

Lawrence A. Gross 10/25/2006

**Signature of Reporting Person Date

Explanation of Responses:

No securities are beneficially owned

- * If the form is filed by more than one reporting person, *see* Instruction 5(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).

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Remarks:

No Securities Owned

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.