## FORM 4

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

OMB APPROVAL
OMB Number: 3235-0287
Estimated average burden
hours per response... 0.5

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

A (First)	(Middle)	KLA 7	TENC	OR (	$\neg \cap DD$	FTZT .				5. Relationship of Reporting Person(s) to Issuer					
` ′	(Middle)				KLA TENCOR CORP [KLAC]							(Check all applicable) Director 10% Owner			
(Last) (First) (Middle) C/O KLA-TENCOR CORPORATION, ONE TECHNOLOGY DRIVE			3. Date of Earliest Transaction (Month/Day/Year) 07/05/2012							X Officer (give title below) Other (specify below)  SVP & Chief Accounting Officer					
(Street) MILPITAS, CA 95035			4. 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					
(State)	(Zip)			Tabl	e I - No	n-Der	ivative :	Securities	Acqui	red. Dispo	osed of, or l	Beneficially (	Owned		
1	Date	2A. Deemed Execution Date, if		, if (	3. Trans	action				5. Amount of Securities			6. Ownership	Beneficial	
		(Month/Day/Year)		ear)	Code	V	Amour	(A) or (D)	Price	(Instr. 3 a	nd 4)		or Indirect (I)	Ownership (Instr. 4)	
	07/05/2012				S <sup>(1)</sup>		348	D D		297			D		
estricted										23,650	<u>(4)</u>		D		
separate line for	Table II - I	Derivativ	e Secui	rities	Acquir	Pers cont the f	ons whained if	no respon n this for splays a of, or Ben	m are currer eficiall	not requally valid	ired to res	spond unle	ss	1474 (9-02)	
	3A. Deemed Execution Date any	4. Transaction Code		5. Nu of De See Ac (A Di of (Ir	5.		6. Date Exercisable and Expiration Date (Month/Day/Year)		7. Ti Amo Unde Secu	ount of erlying rities r. 3 and	Security (Instr. 5)	Derivative Securities Beneficially Owned Following Reported	Ownersh Form of Derivativ Security: Direct (I or Indire (s) (I)	Beneficia Ownershi (Instr. 4)	
			ode V	7 (A	(D)				n Title	or					
	(Street) 6035 (State)  Destricted  Separate line for Date	(Street)  (Street)  (State)  (Zip)  2. Transaction Date (Month/Day/Year)  07/05/2012  Destricted  Table II - I  (Month/Day/Year)  3. Transaction Date (Month/Day/Year)  A. Deemed Execution Date (Month/Day/Year)	(Street)  (Street)  (Street)  (State)  (Zip)  2. Transaction Date Execution any (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date (e.g., puts (e.g., puts (Month/Day/Year))  3. Transaction Date (Month/Day/Year)  3. Transaction Date (Month/Day/Year)  3. Transaction Date (Month/Day/Year)  3. Transaction Date (Month/Day/Year)  3. Transaction Date (Month/Day/Year)	(Street)  4. If Amendment  (State)  2. Transaction Date (Month/Day/Year)  2. Transaction Date any (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date any (Month/Day/Year)  (Month/Day/Year)  Table II - Derivative Secun (e.g., puts, calls, Date  3. Transaction Date Execution Date, if Transaction Date (Transaction Date)	(Street)  (Street)  (Street)  (State)  (State)  (State)  (State)  (Zip)  (A. If Amendment, Date of Execution Date, if any (Month/Day/Year)  (Month/Day/Year)	(Street)  4. If Amendment, Date Originals (State)  (State)  2. Transaction Date (Month/Day/Year)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date, if any (Month/Day/Year)  (Month/Day/Year)  Code  (Instr. 8)  Code (Instr. 8)	(Street)  4. If Amendment, Date Original Fig. 1935  (State)  (Zip)  Table I - Non-Der  2. Transaction Date (Month/Day/Year)  2. Transaction Date, if any (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date, if any (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date, if any (Month/Day/Year)  (Month/Day/Year)  Table II - Derivative Securities Acquired, Diversities (Month/Day/Year)  3. Transaction Date (e.g., puts, calls, warrants, options)  Table II - Derivative Securities Acquired, Diversities (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  4. Transaction Date (Instr. 8)  Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)  Date	(Street)  4. If Amendment, Date Original Filed(Month 1997) (State)  (State)  (Zip)  Table I - Non-Derivative State	(Street)  4. If Amendment, Date Original Filed(Month/Day/Year)  (State)  (Zip)  Table I - Non-Derivative Securities Acquired (A) or Disposed (Instr. 8)  (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date (Instr. 8)  (Month/Day/Year)  (Month/Day/Year)  (A) or Disposed (Instr. 8)  (A) or Code V Amount (D)  (A) or Disposed of, or Ben (e.g., puts, calls, warrants, options, convertible securities (Acquired (A) or Derivative Securities Acquired (A) or Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3)  (Month/Day/Year)	(Street)  4. If Amendment, Date Original Filed(Month/Day/Year)  (State)  (Zip)  Table I - Non-Derivative Securities Acquired Execution Date (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  (A) or Disposed of (D) (Instr. 3, 4 and 5)  (A) or Disposed of (D) (Instr. 3)  (B) Date (Month/Day/Year)  (Month/Day/Year)	(Street)  4. If Amendment, Date Original Filed(Month/Day/Year)  (State)  7. Table I - Non-Derivative Securities Acquired, Disposed of (Month/Day/Year)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)  (Month/Day/Year)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)	Street	4. If Amendment, Date Original Filed(Month/Day/Year)  (State)  7 Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned Following Reporting Person  8 A. Deemed Reporting I  8 Code (Month/Day/Year)  107/05/2012  8 (Li) 348 (2) D S 48.6  8 Persons who respond to the collection of information contained in this form are not required to the form displays a currently valid OMB control number (e.g., puts, calls, warrants, options, convertible securities)  13 Transaction Date (Execution Date, if Transaction Date (Month/Day/Year)  14. If Amendment, Date Original Filed(Month/Day/Year)  15. Amount of Disposed of, or Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4)  16. Individual or Joint/Group Filingy X. Form filed by One Reporting Person  16. Individual or Joint/Group Filingy X. Form filed by One Reporting Person  16. Individual or Joint/Group Filingy X. Form filed by One Reporting I  16. Individual or Joint/Group Filingy X. Form filed by One Reporting I  18. End (Instr. 3 and 4)  18. Price of Polivative Securities Acquired (A) or Beneficially Owned (E.g., puts, calls, warrants, options, convertible securities)  18. Transaction Date (Month/Day/Year)  18. Price of Code (Instr. 3)  18. Price of One Polivative Securities (Instr. 4)  18. Price of One Polivative Securities (Inst	4. If Amendment, Date Original Filed(Month/Day/Year)  (State)  (Zip)  Table I - Non-Derivative Securities Acquired (Instr. 3, 4 and 5)  2. Transaction Date (Month/Day/Year)  (Month/Day/Year)	

	Relationships							
Reporting Owner Name / Address	Director	10% Owner	Officer	Other				
Kirloskar Virendra A C/O KLA-TENCOR CORPORATION ONE TECHNOLOGY DRIVE MILPITAS, CA 95035			SVP & Chief Accounting Officer					

## **Signatures**

Jeffrey S. Eisenberg as attorney-in-fact for Virendra A. Kirloskar	07/06/2012
**Signature of Reporting Person	Date

### **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) These sales were effected pursuant to a Rule 10b5-1 trading plan adopted by the Reporting Person on December 12, 2011.
- (2) These 348 shares of KLA-Tencor common stock were acquired by the Reporting Person under the KLA-Tencor Employee Stock Purchase Plan on June 30, 2012.
- (3) Each restricted stock unit ("RSU") represents a contingent right to receive one share of KLA-Tencor common stock.
- (4) Does not include performance-based RSUs, if any, held by the Reporting Person for which an assessment has not yet been made regarding the achievement of the applicable performance goals. Any such holdings will be reported on Form 4 within two business days of the date such assessment is made.

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.