

# FORM 5

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

OMB APPROVAL  
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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).
- Form 3 Holdings Reported
- Form 4 Transactions Reported

### ANNUAL 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

1. Name and Address of Reporting Person* NICHOLS STUART J			2. Issuer Name and Ticker or Trading Symbol KLA TENCOR CORP [i#ek7jye]			5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director _____ 10% Owner _____ <input checked="" type="checkbox"/> Officer (give title below) _____ Other (specify below) _____ VP and General Counsel			
(Last) (First) (Middle)			3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) 06/30/2006						
160 RIO ROBLES (Street)			4. If Amendment, Date Original Filed(Month/Day/Year)			6. Individual or Joint/Group Reporting (check applicable line) <input checked="" type="checkbox"/> Form Filed by One Reporting Person <input type="checkbox"/> Form Filed by More than One Reporting Person			
SAN JOSE, CA 95134 (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)	2A. 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 at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
				Amount	(A) or (D)	Price			
Common Stock							3,200 (U)	D	
Common Stock - Restricted Stock Units							8,300	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 2270 (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)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	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 at End of Issuer's Fiscal Year (Instr. 4)	10. Ownership Form of Derivative Security: Direct (D) or Indirect (I) (Instr. 4)	11. Nature of Indirect Beneficial Ownership (Instr. 4)
						(A)	(D)	Date Exercisable	Expiration Date				
Non-Qualified Stock Option	\$ 26.25						11/10/2001	11/10/2010	Common Stock	4,300	4,300	D	
Non-Qualified Stock Option	\$ 29.31						10/02/2002	10/02/2011	Common Stock	12,000	12,000	D	
Non-Qualified Stock Option	\$ 32.75						04/04/2002	04/04/2011	Common Stock	6,000	6,000	D	
Non-Qualified Stock Option	\$ 33.75						10/27/2000	10/27/2009	Common Stock	21,000	21,000	D	
Non-Qualified Stock Option	\$ 34.67						11/08/2003	01/28/2013	Common Stock	6,500	6,500	D	

Non-Qualified Stock Option	\$ 37.05					11/08/2003	11/08/2012	Common Stock	3,250		3,250	D	
Non-Qualified Stock Option	\$ 40.66					10/27/2004	08/02/2014	Common Stock	2,250		2,250	D	
Non-Qualified Stock Option	\$ 41.79					09/21/2005	09/21/2014	Common Stock	15,000		15,000	D	
Non-Qualified Stock Option	\$ 44.6875					08/13/2001	08/13/2010	Common Stock	12,000		12,000	D	
Non-Qualified Stock Option	\$ 45.16					10/27/2004	04/26/2014	Common Stock	3,750		3,750	D	
Non-Qualified Stock Option	\$ 47.95					09/26/2006	09/26/2012	Common Stock	15,000		15,000	D	
Non-Qualified Stock Option	\$ 51.229					11/08/2003	07/30/2013	Common Stock	3,250		3,250	D	
Non-Qualified Stock Option	\$ 53.86					10/27/2004	10/27/2013	Common Stock	6,000		6,000	D	
Non-Qualified Stock Option	\$ 58.10					10/27/2004	01/27/2014	Common Stock	3,000		3,000	D	

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
NICHOLS STUART J 160 RIO ROBLES SAN JOSE, CA 95134			VP and General Counsel	

## Signatures

Stuart J. Nichols	08/11/2006
<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) Includes 689 shares acquired through the Employee Stock Purchase Plan during the fiscal year.

### Remarks:

Voluntary filing to report all holdings as of 6/30/2006

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

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