

NANOMETRICS INC  
Form 4  
May 14, 2007

**FORM 4**

**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).

**STATEMENT OF CHANGES IN 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 \*  
COATES VINCENT J

(Last) (First) (Middle)

C/O NANOMETRICS  
INCORPORATED, 1550  
BUCKEYE DRIVE

(Street)

MILPITAS, CA 95035

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
NANOMETRICS INC [NANO]

3. Date of Earliest Transaction  
(Month/Day/Year)  
05/10/2007

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

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)  
Chairman of the Board & Sec

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 Acquired, Disposed of, or Beneficially Owned**

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 Following Reported Transaction(s) (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Ownership (Instr. 4)			
			Code	V	Amount	(A) or (D)	Price			
Common Stock	05/10/2007		P		19,200	A	\$ 5.81	3,476,886	I	See footnote <sup>(1)</sup>
Common Stock	05/10/2007		P		600	A	\$ 5.82	3,477,486	I	See footnote <sup>(1)</sup>
Common Stock	05/10/2007		P		1,000	A	\$ 5.83	3,478,486	I	See footnote <sup>(1)</sup>
Common Stock	05/11/2007		P		2,100	A	\$ 6.24	3,480,586	I	See footnote <sup>(1)</sup>
Common Stock	05/11/2007		P		200	A	\$ 6.25	3,480,786	I	See footnote <sup>(1)</sup>

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Common Stock	05/11/2007	P	200	A	\$ 6.26	3,480,986	I	See footnote <u>(1)</u>
Common Stock	05/11/2007	P	100	A	\$ 6.27	3,481,086	I	See footnote <u>(1)</u>
Common Stock	05/11/2007	P	300	A	\$ 6.28	3,481,386	I	See footnote <u>(1)</u>
Common Stock	05/11/2007	P	1,700	A	\$ 6.29	3,483,086	I	See footnote <u>(1)</u>
Common Stock	05/11/2007	P	5,400	A	\$ 6.3	3,488,486	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	2,708	A	\$ 6.11	3,491,194	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	1,000	A	\$ 6.12	3,492,194	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	300	A	\$ 6.14	3,492,494	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	700	A	\$ 6.15	3,493,194	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	1,300	A	\$ 6.16	3,494,494	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	400	A	\$ 6.17	3,494,894	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	300	A	\$ 6.18	3,495,194	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	100	A	\$ 6.19	3,495,294	I	See footnote <u>(1)</u>
Common Stock	05/14/2007	P	3,200	A	\$ 6.2	3,498,494	I	See footnote <u>(1)</u>
Common Stock						120	D	

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

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(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	3. Transaction Date (Month/Day/Year)	3A. Deemed Execution Date, if any (Month/Day/Year)	4. Transaction Code (Instr. 8)	5. Number of Derivative	6. Date Exercisable and Expiration Date (Month/Day/Year)	7. Title and Amount of Underlying Securities	8. Price of Derivative Security (Instr. 5)	9. Nu Deriv Secur Bene
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Derivative Security	Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares	(Instr. 3 and 4)

## Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
COATES VINCENT J C/O NANOMETRICS INCORPORATED 1550 BUCKEYE DRIVE MILPITAS, CA 95035	X	X	Chairman of the Board & Sec	
Vincent J Coates Separate Property Trust C/O NANOMETRICS INCORPORATED 1550 BUCKEYE DRIVE MILPITAS, CA 95035		X		

## Signatures

/s/ Vincent J. Coates 05/14/2007  
 \*\*Signature of Reporting Person Date

/s/ Vincent J. Coates, Trustee, Vincent J. Coates Separate Property Trust 05/14/2007  
 \*\*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) Shares held of record by the Vincent J. Coates Separate Property Trust, U/D/T dated August 7, 1981, for which Mr. Coates acts as trustee.
- 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.