IXIA Form SC 13G/A January 25, 2010 CUSIP NO. 45071R109

13G

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

#### SCHEDULE 13G

Under the Securities Exchange Act of 1934 (Amendment No. 3)\*

> IXIA (Name of Issuer)

Common Stock (Title of Class of Securities)

45071R109

(CUSIP Number)

December 31, 2009 (Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- X Rule 13d-1(b)
- o Rule 13d-1(c)
- o Rule 13d-1(d)

\*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that

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section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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1. NAMES OF REPORTING PERSONS.

Franklin Resources, Inc.

### 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

- (a)
- (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

6.

#### NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:

5. SOLE VOTING POWER

(See Item 4) SHARED VOTING POWER

(See Item 4)

#### 7. SOLE DISPOSITIVE POWER

(See Item 4)

#### 8. SHARED DISPOSITIVE POWER

(See Item 4)

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### 9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

2,248,136

- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES 0
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

3.6%

12. TYPE OF REPORTING PERSON

HC, CO (See Item 4)

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1. NA	MES OF REPORTING PERSONS.		

Charles B. Johnson

## 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

- (a)
- (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

USA

## NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:

5. SOLE VOTING POWER

(See Item 4)

## 6. SHARED VOTING POWER

(See Item 4)

## 7. SOLE DISPOSITIVE POWER

(See Item 4)

## 8. SHARED DISPOSITIVE POWER

(See Item 4)

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- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

3.6%

#### 12. TYPE OF REPORTING PERSON

HC, IN (See Item 4)

CUSIP NO	O. 45071R109	13G	Page 4 of 13
1.	NAMES OF REPORTING PERSONS.		
	Rupert H. Johnson, Jr.		

### 2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP

- (a)
- (b) X
- 3. SEC USE ONLY
- 4. CITIZENSHIP OR PLACE OF ORGANIZATION

USA

### NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:

5. SOLE VOTING POWER

(See Item 4)

### 6. SHARED VOTING POWER

(See Item 4)

### 7. SOLE DISPOSITIVE POWER

(See Item 4)

#### 8. SHARED DISPOSITIVE POWER

(See Item 4)

9. AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

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- 10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES o
- 11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

3.6%

### 12. TYPE OF REPORTING PERSON

HC, IN (See Item 4)

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Item 1.

(a) Name of Issuer

IXIA

(b) Address of Issuer's Principal Executive Offices

26601 West Agoura Road Calabasas, CA 91302

Item 2.

- (a) Name of Person Filing
  - (i): Franklin Resources, Inc.
  - (ii): Charles B. Johnson
  - (iii): Rupert H. Johnson, Jr.
- (b) Address of Principal Business Office or, if none, Residence

(i), (ii), and (iii): One Franklin Parkway San Mateo, CA 94403-1906

(c) Citizenship

(i): Delaware(ii) and (iii): USA

(d) Title of Class of Securities

Common Stock

(e) CUSIP Number

45071R109

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Item 3. If this statement is filed pursuant to \$ 240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

- (a) o Broker or dealer registered under section 15 of the Act (15 U.S.C. 78o).
- (b) o Bank as defined in section 3(a)(6) of the Act (15 U.S.C. 78c).
- (c) o Insurance company as defined in section 3(a)(19) of the Act (15 U.S.C. 78c).
- (d) o Investment company registered under section 8 of the Investment Company Act of 1940 (15 U.S.C 80a-8).