

# PHOTRONICS INC

## FORM 10-K405

(Annual Report (Regulation S-K, item 405))

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Sector	Technology
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# SECURITIES AND EXCHANGE COMMISSION

Washington, D. C. 20549

## FORM 10-K

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [FEE REQUIRED]**

For the fiscal year ended ...October 31, 1996...

OR

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 [NO FEE REQUIRED]**

For the transition period from..... to .....

Commission file number...0-15451...

...PHOTRONICS, INC....

(Exact name of registrant as specified in its charter)

...Connecticut...

(State or other jurisdiction of  
incorporation or organization)

...06-0854886...

(I.R.S. Employer  
Identification No.)

...1061 East Indiantown Road, Jupiter, Florida... ..33477..

(Address of principal executive offices) (Zip Code)

...(561) 745-1222...

(Registrant's telephone number, including area code)

**SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:**

Name of each exchange on which

Title of each class registered

None

**SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:**

.....Common Stock, \$0.01 par value per share.....

(Title of Class)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ..X.. No .....

Indicate by check mark if disclosure of delinquent filers pursuant to

Item 405 of Regulation S-K is not contained herein, and will not be contained to the best of registrant's knowledge in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [X]

As of December 31, 1996, 11,837,490 shares of the registrant's Common Stock were outstanding. The aggregate market value of registrant's voting stock held by non-affiliates of the registrant as of December 31, 1996 was approximately \$278,630,000.

**DOCUMENTS INCORPORATED BY REFERENCE**

Proxy Statement for the 1997  
Annual Meeting of Shareholders  
to be held on March 20, 1997.

Incorporated into Part  
III of this Form 10-K.



## PART I

### ITEM 1. BUSINESS

#### General

Photronics, Inc. (the "Company") is a leading manufacturer of photomasks, which are high precision photographic quartz plates containing microscopic images of electronic circuits. Photomasks are a key element in the manufacture of semiconductors and are used as masters to transfer circuit patterns onto semiconductor wafers during the fabrication of integrated circuits and, to a lesser extent, other types of electrical components.

During fiscal 1996, the Company significantly expanded its operations outside of the United States through the acquisition of existing photomask operations located in Europe and the establishment of manufacturing operations in Singapore. In addition, the Company acquired an equity interest in a photomask manufacturing operation in Korea. The Company also continued its aggressive investment program in its manufacturing operations in the United States with the construction of new state-of-the-art manufacturing facilities and the addition of leading edge manufacturing systems to its manufacturing operations.

As part of its expansion into the European photomask market, on January 24, 1996, the Company acquired the photomask manufacturing assets of Plessey Semiconductors Limited ("Plessey") and became the photomask supplier to Plessey. The transaction included the purchase of the photomask manufacturing assets of Plessey and a lease to occupy the facilities previously utilized by Plessey for manufacturing photomasks. The operations acquired represent a modern photomask manufacturing operation located in the Manchester, United Kingdom, region, which were dedicated to supporting Plessey's internal requirements for photomasks. The acquisition was funded with available cash reserves. The Company has continued to operate this facility in place while it is constructing a new facility for the relocation of these operations on land owned by it in the Manchester area. It is expected that the new facility will commence operations in the second half of fiscal 1997.

On April 1, 1996, the Company acquired the Litomask Division ("Litomask") of Centre Suisse d'Electronique et de Microtechnique, S.A. ("CSEM") located in Neuchatel, Switzerland. The transaction included the purchase of the photomask manufacturing assets of CSEM and a lease to occupy the facilities previously utilized by CSEM for manufacturing photomasks. The operations acquired represent a modern photomask manufacturing operation which supported CSEM and its shareholders as well as outside customers. The acquisition was funded with available cash reserves. As part of the transaction, CSEM retained a minority interest in the Photronics subsidiary company which holds the acquired operations, subject to Photronics' right to acquire this retained interest. The Company continues to operate this facility in place.

In May, 1996, the Company acquired a minority interest in P.K. Limited of Korea ("PKL"), formerly a division Anam S&T Co. PKL is an independent photomask manufacturer maintaining an advanced manufacturing operation in Korea. The Company has an option to acquire additional equity interests in PKL which, if acquired, would give the Company a majority interest. The initial investment in PKL was funded with available cash reserves.

In August and October 1996, the Company held official grand openings of its new state-of-the-art manufacturing facilities in Singapore and Allen, Texas, respectively. As part of the establishment of the Allen, Texas facility, the Company relocated its manufacturing operations in Dallas, Texas to the new facility and vacated its Dallas premises. In August 1996, the Company also commenced construction of an Austin, Texas facility on land owned by it. It is expected that the Austin facility will commence operations late in fiscal 1997 or early fiscal 1998.

In addition to its other efforts during 1996, the Company has continued to focus on maintaining technological leadership at its existing facilities. As a result, the Company has increased its research and development activities and has continued to invest in advanced manufacturing equipment to allow it to meet future technological and volume demands.

The Company believes that its efforts have established it as a leading independent photomask manufacturer on a global basis and provided it with the facilities and expertise to continue to expand its sales base.

The Company, through its wholly owned subsidiary Beta Squared Inc. ("Beta"), sells and services wafer plasma etching systems and engages in the sale of refurbished semiconductor manufacturing equipment, engineering services and replacement parts and field service for such equipment on a third-party basis.

The Company is a Connecticut corporation, organized in 1969. Its principal executive offices are located at 1061 East Indiantown Road, Jupiter, Florida, telephone (561) 745-1222.

### **Products and Services**

The Company manufactures photomasks, which are primarily used as masters to transfer circuit patterns onto semiconductor wafers. The Company's photomasks are manufactured in accordance with circuit designs provided on a confidential basis by its customers. Each circuit design consists of a series of separate patterns, each of which is imaged onto a different photomask. The resulting series of photomasks is then used by the customer to successively layer the patterns onto a semiconductor wafer. While advanced photomasks generally have an indefinite life span and are not customarily consumed by customers' manufacturing processes, the demand for photomasks has increased with the growth in the number of new semiconductor designs as applications for semiconductors have expanded and the use of application specific (or custom) integrated circuits ("ASIC") has increased. Further, the increase in complexity of integrated circuits has increased the number of photomasks used in the manufacture of a single circuit.

The Company currently manufactures photomasks using electron beam or laser-based technologies and, to a significantly lesser degree, optical-based technologies. A laser-based or electron beam system is capable of producing the finer line resolution, tighter overlay and larger die size for the larger and more complex circuits currently being designed. Laser and electron beam generated photomasks can be used with the most advanced processing techniques to produce very large scale integrated circuit ("VLSI") devices. The Company currently owns a number of CORE and ALTA laser writing systems and MEBES electron beam systems and has made commitments to purchase additional advanced systems to maintain technological superiority. The CORE and ALTA laser-based systems and the MEBES electron beam systems are the predominant lithography systems used for photomask manufacture worldwide.

Compared to laser or electron beam generated photomasks, the production of photomasks by the optical method is less expensive, but also less precise. The optical method is traditionally used on less complex and lower priced photomasks.

The first several levels of photomasks frequently are required to be delivered by the Company within 24 hours of receiving a customer's design. The ability to manufacture high quality photomasks within short time periods is dependent upon efficient manufacturing methods, high yields and high equipment reliability. The Company believes it meets these requirements and has made significant investments in manufacturing and data processing systems and statistical process control methods to optimize the manufacturing process and reduce cycle times.

Quality control is an integral part of the photomask manufacturing process. Photomasks are manufactured in temperature, humidity and particulate controlled cleanrooms because of the high level of precision, quality and yields required. Each photomask is inspected several times during the manufacturing process to ensure compliance with customer specifications. The Company has made a substantial investment in equipment to inspect and repair photomasks and to ensure that customer specifications are met. After inspection and any necessary repair, the Company utilizes technological processes to clean the photomasks prior to shipment.

In addition to the manufacture of photomasks, the Company, through Beta, manufactures, sells and services a wafer plasma etching system used in the processing of semiconductor wafers. The original system was developed by Texas Instruments Incorporated ("Texas Instruments") which licensed to Beta the right to manufacture and sell the system. Beta also sells refurbished semiconductor manufacturing equipment, engineering services and replacement parts and field service for such equipment on a third-party basis. Such activities represented approximately 5% of the Company's sales during fiscal 1996.

### **Research and Development**

The Company has ongoing research and development programs which are intended to enhance the Company's leadership in terms of technology and manufacturing efficiency. Since 1994, the Company has increased its commitment to research and development activities and current efforts include deep ultra-violet, phase-shift and optical proximity correction photomasks for advanced semiconductor manufacturing as well as large area photomasks for other applications. Phase-shift and optical proximity correction photomasks use advanced lithography techniques for enhanced resolutions of images on a semiconductor wafer. The Company incurred expenses of \$8.5 million, \$7.9 million (including a non-recurring charge of \$1.5 million in connection with an acquisition) and \$4.7 million for research and development in 1996, 1995 and 1994, respectively. The Company also leverages the investments in research and development made by its equipment and material suppliers. While the Company believes that it possesses valuable proprietary information and has received licenses under certain patents, the Company does not believe that patents are a material factor in the photomask manufacturing business and it holds only one patent.

## **Materials and Supplies**

Raw materials utilized by the Company generally include high precision quartz plates, which are used as photomask blanks, primarily obtained from Japanese suppliers (including Toppan Printing Co., Ltd. ["Toppan"] and Hoya Corporation ["Hoya"]), pellicles (which are protective transparent cellulose membranes) and electronic grade chemicals used in the manufacturing process. Such materials are generally available from a number of suppliers and the Company is not dependent on any one supplier for its raw materials. The Company has established purchasing arrangements with each of Toppan and Hoya and it is expected that the Company will purchase substantially all of its photomask blanks from Toppan and Hoya so long as their price, quality, delivery and service are competitive.

## **Sales and Marketing**

The market for photomasks consists primarily of semiconductor manufacturers and designers, both domestic and international, including semiconductor manufacturers that have the capability to manufacture photomasks. Since the mid-1980s, in the United States and Europe there has been a trend toward the divestiture or closing of captive photomask manufacturing operations by semiconductor companies, and an increase in the purchase of photomasks from independent photomask manufacturers. These trends create a greater market opportunity for the Company and the Company believes they are due to various reasons including the increasing capital requirements and costs related to these operations, the presence of a cost effective source of supply from independent suppliers such as the Company and a general desire by semiconductor manufacturers to focus on core business matters.

During the early 1990s, the total photomask market was relatively flat. This resulted from a number of factors, including: (i) recessionary pressures on the semiconductor industry; (ii) improvements in design technology which reduced the number of design iterations required to create a functioning semiconductor design; (iii) shortened photomask delivery cycles (less than 24 hours), which reduced the need for back-up photomask sets; and (iv) changes that resulted in advanced photomasks having a relatively indefinite life span which reduced the need for replacement photomasks.

Beginning in late 1993, independent manufacturers experienced increased demand as a result of several factors. First, the Company believes that semiconductor design activity increased due both to new generic semiconductor designs and proliferating use of ASICs, each of which requires a separate set of photomasks. In addition, the Company believes factors that adversely affected the photomask industry in the early 1990s no longer significantly affected the growth in demand for photomasks. Other factors include the additional semiconductor fabrication facilities established by manufacturers as well as increasing device complexity and the decreasing size of semiconductor designs. For example, according to industry statistics, a typical 16 Mbit DRAM in production today utilizes 18 photomasks compared to 14 photomasks for a 1 Mbit DRAM.

The Company conducts its marketing activities through a staff of full-time sales personnel and customer service representatives who work closely with the Company's general management and technical personnel. In addition to the sales personnel at the Company's manufacturing facilities in Brookfield, Connecticut; Milpitas and Sunnyvale, California; Colorado Springs, Colorado; Allen, Texas; Manchester, United Kingdom; Neuchatel, Switzerland and Singapore, the Company has sales offices in Carlsbad, California; Austin, Texas; Raleigh, North Carolina, Hillsboro, Oregon; Lancaster, United Kingdom; and Taiwan.

The Company supports international customers through both its domestic and foreign facilities. The Company also has sub-contract manufacturing arrangements in Taiwan. The Company considers its presence in international markets important to attracting new customers, to providing global solutions to its existing customers and to service certain customers' manufacturing foundries outside of the United States, principally in the Pacific Rim. Current customers include companies in Taiwan, Singapore, the United Kingdom, Canada, Germany, Japan, Switzerland, Italy and Australia. For a statement of the amount of net sales, operating income or loss, and identifiable assets attributable to the Company's geographic areas of operations, see Note 13 to the Consolidated Financial Statements.

The Company has continually expanded its customer base. However, as a result of the acquisition of the Company's Dallas, Texas operation in 1993, Texas Instruments has become a more significant customer of the Company, representing approximately 26% of net sales in 1996, and the loss of Texas Instruments or a significant decrease in the amount of the purchases by Texas Instruments from the Company could have a material adverse effect on the Company. During 1996, no single customer other than Texas Instruments accounted for more than 10% of the Company's net sales. The Company's five largest customers, in the aggregate, accounted for approximately 45% of net sales. In addition to Texas Instruments, the Company's major customers include Analog Devices, Inc., LSI Logic Corp., Motorola, Inc. and VLSI Technology, Inc. During fiscal 1996, the Company sold its products and services to approximately 400 customers.

The Company typically negotiates an established price for a customer's orders based on the customer's specifications in order to expedite the placement of individual purchase orders. Some of these prices may remain in effect for an extended period. The Company also negotiates prices, and occasionally enters into purchase arrangements, based on the understanding that, so long as the Company's performance is competitive, the Company will receive a specified percentage of that customer's photomask requirements. As part of the acquisition of the Company's Dallas, Texas operation, the Company assumed an agreement with Texas Instruments, which continues until March 31, 2000 and provides that the Company is Texas Instruments' principal photomask supplier so long as the Company's price, quality, service and delivery are competitive. The agreement also requires the Company to ensure that prices charged to Texas Instruments are not less favorable than those otherwise extended by the Company to other customers with similar specifications, volume, delivery and other requirements.

## **Backlog**

The first several levels of photomasks for a circuit are sometimes required to be shipped within one day of receiving a customer's design. Because of the short period between order and shipment dates (typically from one day to two weeks) for the principal portion of the Company's sales, the dollar amount of current backlog is not considered to be a reliable indication of future sales volume.

## **Competition**

The photomask industry is highly competitive and most of the Company's customers utilize more than one photomask supplier. The Company's ability to compete depends primarily upon the consistency of product quality and timeliness of delivery, as well as pricing, technical capability and service. The Company also believes that proximity to customers is an important factor in certain markets. Certain competitors have considerably greater financial and other resources than the Company. The Company believes that it is able to compete effectively because of its dedication to customer service, its investment in state-of-the-art photomask equipment and its experienced technical employees.

There has been a decrease since the mid-1980s in the number of independent manufacturers as a result of some independents being acquired or discontinuing operations. The Company believes that entry into the market by a new independent manufacturer would require a major investment of capital, a significant period of time to establish a commercially viable operation and additional time to attain meaningful market share and achieve profitability. In prior years, competition and relatively flat demand led to pressure to reduce prices which the Company believes contributed to the decrease in the number of independent manufacturers. Although independent photomask manufacturers have experienced increased demand since late 1993, there can be no assurance that past trends in pricing and demand will not re-emerge.

Based upon market information available to it, the Company believes that it is one of the four largest independent photomask manufacturers in the world and the largest in the United States. Competitors in the United States include DuPont Photomasks ("DuPont") and Align-Rite International ("Align-Rite"); and in the international market, Dai Nippon Printing, Toppan, Hoya, DuPont, Taiwan Mask Corp., Innova, Align-Rite and Compugraphics. In addition, some of the Company's customers possess their own facilities for manufacturing photomasks and certain manufacturers market their photomask manufacturing services to outside customers as well as to their internal organization. The Company competes for business with these and other companies' internal facilities.

## **Employees**

As of October 31, 1996, the Company employed a total of approximately 900 persons on a full-time basis. The Company believes that it offers competitive compensation and other benefits and that its employee relations are good. Except for employees in the United Kingdom, none of the Company's employees is represented by a union.

## ITEM 1A. EXECUTIVE OFFICERS OF REGISTRANT

The names of the executive officers of the Company are set forth below, together with the positions held by each person in the Company. All executive officers are elected annually by the Board of Directors and serve until their successors are duly elected and qualified.

NAME AND AGE -----	POSITION -----	SERVED AS AN OFFICER SINCE -----
Constantine S. Macricostas, 61	Chairman of the Board, Chief Executive Officer and Director	1974
Michael J. Yomazzo, 54	President, Chief Operating Officer and Director	1977
Jeffrey P. Moonan, 40	Senior Vice President, General Counsel and Secretary	1988
Robert J. Bollo, 52	Vice President/Finance and Chief Financial Officer	1994

The terms of certain financing for the Company specify that if Mr. Macricostas ceases to maintain day-to-day control of the Company, Mr. Yomazzo, or another acceptable replacement, must assume such duties, otherwise the Company may be declared in default.

For the past five years each of the executive officers of the Company held the office shown, except as follows:

Mr. Macricostas also serves as a Director of Nutmeg Federal Savings and Loan Association, of InteliData Technologies Corporation, a provider of caller identification based telecommunications devices, smart telephone and on-line electronic information services, and the DII Group, Inc., a supplier of integrated electronic manufacturing products and services.

Michael J. Yomazzo has been President and Chief Operating Officer since January 1994. From November 1990 until January 1994, he served as Executive Vice President and Chief Financial Officer.

Jeffrey P. Moonan has been Senior Vice President since January 1994 and General Counsel and Secretary since July 1988. From July 1989 until January 1994, he also served as Vice President/Administration.

Robert J. Bollo has been Vice President/Finance and Chief Financial Officer since November 1994. From August 1994 to November 1994, he served as Director of Finance. From April 1992 to July 1994, he was a Principal of CFO Associates, Inc., a financial management firm. Prior to April 1992, he was with Kollmorgen Corporation, serving as a Vice President since January 1990 and Controller and Chief Accounting Officer from February 1985 until January 1990.

## ITEM 2. DESCRIPTION OF PROPERTY

The Company's properties include buildings in which the Company currently conducts manufacturing operations or is constructing facilities for future manufacturing operations. The following table presents certain information about the Company's manufacturing facilities.

Location	Facility Size (sq.ft.)	Type of Interest
Brookfield, CT (Building #1)	19,600	Owned
Brookfield, CT (Building #2)	20,000	Leased
Milpitas, CA (2 buildings)	49,000	Leased
Sunnyvale, CA (3 buildings)	40,000	Owned
Colorado Springs, CO	27,000	Leased
Allen, TX	60,000	Owned
Austin, TX (under construction)	50,000	Owned
Oldham, UK (current facility)	13,000	Leased
Manchester, UK (new facility under construction)	42,000	Owned
Neuchatel, Switzerland	7,000	Leased
Singapore	20,000	Leased

Lease terms range from less than one year for facilities from which the Company is planning to relocate, to up to five years with options to renew for other facilities. In addition, the Company leases office space in Jupiter, Florida; Austin, Texas; Carlsbad, California; Hillsboro, Oregon and certain adjacent property in Brookfield, Connecticut.

The Company believes it has made adequate arrangements for the lease or ownership of its current manufacturing facilities and continually evaluates opportunities for further expansion, both domestically and internationally.

The leased properties in Brookfield, Connecticut, are leased from entities controlled by Constantine S. Macricostas under fixed lease rates which were determined by reference to fair market value rates at the beginning of the respective lease term.

For the year ended October 31, 1996, the Company leased real property and equipment at an aggregate annual rental of approximately \$2.3 million and \$3.3 million, respectively.

Other than new manufacturing facilities or equipment which have not yet been placed into service, the Company believes it substantially utilized its facilities during the 1996 fiscal year.

### **ITEM 3. LEGAL PROCEEDINGS**

The Company is not a party to any material pending legal proceedings, nor is the property of the Company subject to any such proceedings.

### **ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS**

No matter was submitted to a vote of security holders during the fourth quarter of the Company's fiscal year ended October 31, 1996.

## **PART II**

### **ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED**

#### **STOCKHOLDERS MATTERS**

The Common Stock of the Company is traded in the over-the-counter market on the NASDAQ National Market System (NMS) under the symbol PLAB. The table below shows the range of high and low sale prices per share for each quarter for fiscal year 1996 and 1995, as reported on the NASDAQ NMS. All per share prices have been adjusted for a three-for-two stock split effected in March 1995.

	High -----	Low -----
Fiscal Year Ended October 31, 1996:		
Quarter Ended January 31, 1996	\$32.75	\$19.25
Quarter Ended April 30, 1996	27.50	18.75
Quarter Ended July 31, 1996	30.00	19.75
Quarter Ended October 31, 1996	35.00	24.75
Fiscal Year Ended October 31, 1995:		
Quarter Ended January 31, 1995	\$20.50	\$16.00
Quarter Ended April 30, 1995	24.50	19.17
Quarter Ended July 31, 1995	36.00	21.75
Quarter Ended October 31, 1995	40.48	25.50

On December 31, 1996, the closing sale price for the Common Stock as reported by NASDAQ was \$27.25. Based on information available to the Company, the Company believes it has approximately 7,500 beneficial shareholders.

The Company has not paid any cash dividend to date and, for the foreseeable future, anticipates that earnings will continue to be retained for use in its business.

## ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data is derived from the Company's consolidated financial statements. The data should be read in conjunction with the consolidated financial statements and notes thereto and other financial information included elsewhere in this Form 10-K. Common stock and per share amounts have been restated to give effect for the three-for-two stock split effected in March 1995.

### Years Ended October 31,

	1996	1995	1994	1993	1992
(in thousands, except per share amounts)					
<b>OPERATING DATA:</b>					
Net sales	\$160,071	\$125,299	\$80,696	\$48,363	\$41,305
Costs and expenses:					
Cost of sales	98,267	76,683	51,204	32,048	27,142
Selling, general and administrative	21,079	17,127	10,517	6,580	5,746
Research and development	8,460	7,899	4,738	2,744	2,549
Operating income	32,265	23,590	14,237	6,991	5,868
Interest income	1,601	1,627	568	547	866
Interest expense	(160)	(141)	(75)	(101)	(102)
Other income (expense), net	197	4,766	571	(1)	87
Income before income taxes and cumulative effect of change in accounting for income taxes	33,903	29,842	15,301	7,436	6,719
Provision for income taxes	12,900	11,210	5,202	2,528	2,352
Income before cumulative effect of change in accounting for income taxes	21,003	18,632	10,099	4,908	4,367
Cumulative effect of change in accounting for income taxes	-	-	237	-	-
Net income	\$ 21,003	\$ 18,632	\$10,336	\$ 4,908	\$ 4,367
Net income per share:					
Income before cumulative effect of change in accounting for income taxes	\$1.74	\$1.66	\$1.01	\$0.59	\$0.55
Cumulative effect of change in accounting for income taxes	-	-	0.02	-	-
Net income	\$1.74	\$1.66	\$1.03	\$0.59	\$0.55
Weighted average number of common shares outstanding	12,101	11,207	10,062	8,372	7,998

### October 31,

	1996	1995	1994	1993	1992
<b>BALANCE SHEET DATA:</b>					
Working capital	\$ 21,613	\$ 49,653	\$32,329	\$17,577	\$20,771
Property, plant and equipment	123,666	72,063	39,205	41,585	25,418
Total assets	211,903	174,218	98,346	74,441	52,026
Long-term debt	1,987	1,809	495	1,051	1,698
Shareholders' equity	156,417	134,045	80,402	62,626	44,011
Cash dividends declared per share	-	-	-	-	-

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Results of Operations for the  
Years Ended October 31, 1996, 1995 and 1994

### Overview

Photronics established itself as a multi-national Company during the fiscal year ended October 31, 1996, acquiring two European operations, opening a new, state-of-the-art manufacturing facility in Singapore and acquiring a minority interest in PK Limited, a leading independent photomask manufacturer in Korea. With the international expansion in fiscal 1996, the Company expanded its five domestic manufacturing site network to a global manufacturing network comprised of nine manufacturing facilities, supporting semiconductor manufacturers in the Asian, European and North American markets. Foreign and export sales represented approximately 18% of total sales in fiscal 1996 compared with approximately 11% and 13% in fiscal 1995 and 1994, respectively. The Company expects that the percentage of sales to foreign markets will increase as a result of this expansion.

The European expansion included the acquisition of the photomask manufacturing operations and assets of Plessey Semiconductors Limited ("Plessey") located in Oldham, United Kingdom, on January 24, 1996, and the Litomask Division ("Litomask") of Centre Suisse d'Electronique et de Microtechnique S.A. ("CSEM") located in Neuchatel, Switzerland, on April 1, 1996 (see Note 6 to the Consolidated Financial Statements). Individually, neither of these acquisitions had a material effect on the results of operations in fiscal 1996.

Sales and gross margins in fiscal 1996 were also affected by the increased demand for higher technology photomasks, which have higher average selling prices. To meet the customers' advanced photomask needs and position itself for future growth, the Company continues to make substantial investments in manufacturing technology and capacity both at existing facilities and in new facilities. In addition to the Singapore plant, the Company completed construction of its new state-of-the-art facility in Allen, Texas, to which it relocated its Dallas operation in the fourth quarter of fiscal 1996. Further, construction is currently in progress on new facilities in Manchester, United Kingdom, to which its Oldham, United Kingdom, operation will be relocated in fiscal 1997, and on the Company's tenth manufacturing plant, a new facility near Austin, Texas, which is expected to be operational in late fiscal 1997 or early fiscal 1998.

The Company acquired the photomask manufacturing operations and assets of Hoya Micro Mask, Inc. ("Micro Mask") in Sunnyvale, California, on December 1, 1994, and Microphase Laboratories, Inc. ("Microphase") in Colorado Springs, Colorado, on June 20, 1995. The acquisition of Micro Mask contributed significantly to the Company's growth in fiscal 1995 and, to a lesser extent, in fiscal 1996. Except for a non-recurring charge in fiscal 1995 to research and development expenses (see Note 6 to the Consolidated Financial Statements), the financial results of the new Colorado facility did not have a material effect on the Company's results of operations or financial position.

## **Sales**

Net sales in fiscal 1996 increased 27.8% to \$160.1 million compared with net sales of \$125.3 million in the prior fiscal year. The majority of the growth was from increased shipments to customers from existing facilities due to greater manufacturing capacity resulting from the Company's capital expansion program, and from increased average selling prices due to a larger proportion of higher technology photomask shipments in fiscal 1996. Approximately 20% of the increase is attributable to the European acquisitions, including sales to Plessey under a long-term supply agreement which was executed in connection with the acquisition. The increase in sales was also favorably affected by the inclusion of a full year's sales for the Company's Colorado and Sunnyvale facilities which were acquired during fiscal 1995 and increased sales from the Company's wholly owned subsidiary, Beta Squared, Inc. ("Beta"). Net sales for fiscal 1995 represented an increase of 55.3% over fiscal 1994 sales of \$80.7 million. Approximately one-half of the fiscal 1995 increase was attributable to the inclusion of the Company's new Sunnyvale facility, commencing December 1, 1994. Furthermore, shipments to customers from existing facilities increased due to stronger demand generally and greater manufacturing capacity as the Company implemented its capacity expansion program.

## **Cost of Sales**

Cost of sales for fiscal 1996 increased 28.1% to \$98.3 million compared to \$76.7 million for the prior fiscal year. These increases resulted principally from increases in sales volume, including those resulting from the Company's recent acquisitions. To meet the increased production demands, the Company has increased its staffing levels and manufacturing capacity, resulting in, among other things, increased labor costs, depreciation expense and equipment maintenance costs. As a percentage of net sales, cost of sales increased slightly to 61.4% in fiscal 1996, compared with 61.2% in fiscal 1995. Improvements from higher capacity utilization of the Company's installed equipment base and a more favorable mix of advanced photomasks were offset by the absorption of increased costs resulting from manufacturing capacity expansion and lower margins generally at recently acquired operations, at Beta, and on sales contracted to foreign manufacturing partners. The Company anticipates that its fixed operating costs will increase in connection with its continuing capacity expansion. While cost of sales may increase initially, the Company expects to match these higher costs with continued increases in revenues as the new facilities and equipment progress to a higher level of utilization.

Cost of sales for fiscal 1995 increased 49.8% over fiscal 1994 cost of sales of \$51.2 million. This increase resulted principally from increases in sales volume, including those resulting from the Micro Mask acquisition. Staffing levels were increased to meet production demands and higher employee incentive compensation expenses were incurred as a result of the Company's performance. The addition of manufacturing capacity resulted in increased equipment-related costs, including maintenance and depreciation. However, as a percentage of net sales, cost of sales in fiscal 1995 decreased to 61.2% from 63.4% in fiscal 1994. This improvement was due primarily to the continued higher capacity utilization and greater operating efficiencies afforded by sales volume increases, most notably at the Company's Dallas, Texas, operation which was acquired from Toppan Printronics (USA), Inc. on October 1, 1993, and a more favorable mix of more complex photomasks.

## **Selling, General and Administrative Expenses**

Selling, general and administrative expenses increased 23.1% to \$21.1 million in fiscal 1996 compared to \$17.1 million in fiscal 1995. Nearly half of the increase was due to the addition of the Company's foreign operations. The remaining increase primarily is attributable to the inclusion of a full year's expenses for the Company's Colorado and Sunnyvale facilities which were acquired during fiscal 1995 and increased staffing levels to accommodate the Company's significant growth, partially offset by lower incentive compensation expense. As a percentage of net sales, selling, general and administrative expenses decreased to 13.2% for fiscal 1996 compared to 13.7% in the prior fiscal year, largely due to the lower level of employee incentive compensation expense in fiscal 1996. Selling, general and administrative expenses in fiscal 1995 increased 62.9% over fiscal 1994 expenses of \$10.5 million. This increase was principally due to the inclusion of the Company's Sunnyvale facility and higher employee incentive compensation expenses resulting from the Company's performance. Moreover, increased staffing levels and other associated costs were incurred in the latter part of 1994 and in 1995 to accommodate the Company's business expansion. As a percentage of net sales, selling, general and administrative expenses in fiscal 1995 increased to 13.7% from 13.0% in fiscal 1994.

## **Research and Development**

Research and development expenses for fiscal 1996 increased 7.1% to \$8.5 million from \$7.9 million for the prior fiscal year. In connection with the Microphase acquisition in fiscal 1995, the Company recorded a one-time charge of \$1.5 million, representing amounts assigned to certain Microphase research and development projects, principally for the manufacture of large area masks, which were expensed upon acquisition. Excluding this non-recurring charge, research and development expenses for fiscal 1996 increased approximately 32% compared to fiscal 1995. This increase reflects the expansion of the Company's research and development organization and the resulting increase in its development efforts that have focused on new high-end, more complex photomasks utilizing phase shift, optical proximity correction and deep ultra-violet technologies, and on large area photomasks. As a percentage of net sales, excluding the Microphase charge, research and development expenses increased slightly to 5.3% in fiscal 1996 from 5.1% in fiscal 1995. Research and development expenses in fiscal 1995, excluding the Microphase charge, increased approximately 35% over fiscal 1994 expenses of \$4.7 million. As a percentage of net sales, research and development expenses, excluding the Microphase charge, declined to 5.1% in fiscal 1995 from 5.9% of net sales in fiscal 1994 because of the substantial increase in net sales.

## **Other Income and Expense**

Interest income for fiscal 1996 remained fairly constant at \$1.6 million. Other income, net, decreased to \$197,000 for fiscal 1996 compared to \$4.8 million for the prior fiscal year principally due to the \$5.1 million net gain from the sales of equity investments during fiscal 1995. Gains on disposition of investments in fiscal 1994 totaled \$831,000. Minority interest expense and foreign currency transaction gains or losses were not significant in fiscal 1996.

## **Income Taxes**

For fiscal 1996, the Company provided Federal, state and foreign income taxes at an estimated combined effective annual tax rate of 38.0% as compared to 37.6% in fiscal 1995 and 34.0% in fiscal 1994. The increase in the Company's estimated tax rate primarily is the result of a decrease in tax-exempt investment income for fiscal 1996. The change in the estimated tax rate from fiscal 1994 to fiscal 1995 was the result of a larger portion of income being subject to the 35% incremental Federal income tax rate and a greater portion of the Company's income being generated in California following the Micro Mask acquisition. In 1994, the Company recognized the cumulative effect of the adoption of SFAS 109, "Accounting for Income Taxes," resulting in a benefit of \$237,000, or \$0.02 per share.

## **Net Income**

Net income for fiscal 1996 amounted to \$21.0 million, or \$1.74 per share, compared with \$18.6 million, or \$1.66 per share, in fiscal 1995 and \$10.3 million, or \$1.03 per share, in fiscal 1994. Excluding the non-recurring research and development charge and the net gain from the sale of equity investments in the third quarter of fiscal 1995 which increased prior year net income by approximately \$2 million, or \$0.16 per share, net income for fiscal 1996 increased approximately 26%. Earnings per share were based on 12.1 million weighted average shares outstanding in fiscal 1996, compared with 11.2 million shares in 1995 and 10.1 million shares in 1994. The increases in weighted average shares outstanding in fiscal 1996 and 1995 principally are the result of a public offering of 1.5 million shares in April and May 1995 and the issuance of approximately 100,000 shares in connection with the Microphase acquisition in June 1995. All share and earnings per share amounts reflect a three-for-two stock split effected in March 1995.

## **Liquidity and Capital Resources**

The Company's cash, cash equivalents and short-term investments decreased \$25.2 million during fiscal 1996, largely as a result of \$55.8 million of capital expenditures for building construction and equipment in connection with the Company's expansion of manufacturing capacity and \$12.4 million for the acquisitions of the photomask manufacturing operations and assets of Plessey and Litomask and the investment in PK Limited. Offsetting these decreases were cash provided by operating activities totaling \$38.6 million, \$2.8 million from sales of stock under employee stock option and purchase plans and the receipt of approximately \$1 million of local government financial incentives to be utilized for the Company's new Manchester (UK) operation.

Accounts receivable increased to \$24.8 million at October 31, 1996, from \$17.9 million at October 31, 1995, primarily as a result of higher year-end sales levels, including sales by the new foreign operations, and slower collections generally. Inventories increased to \$8.0 million at October 31, 1996, from \$6.4 million at October 31, 1995, primarily due to general increases to accommodate the escalating sales volume and the addition of the foreign facilities. Other current assets increased to \$6.2 million at October 31, 1996, from \$3.4 million at October 31, 1995, primarily due to an increase in prepaid income taxes and prepaid expenses at the newly acquired foreign operations.

Property, plant and equipment increased to \$123.7 million at October 31, 1996, from \$72.1 million at October 31, 1995. Deposits on and purchases of equipment, building construction at the new Allen, Texas and Singapore plants, and construction in progress on the new Manchester and Austin, Texas facilities totaled \$55.8 million and fixed assets totaling \$8.1 million were acquired in connection with the Plessey and Litomask acquisitions. These increases were offset by depreciation expense totaling \$12.1 million. Intangible assets decreased to \$9.3 million at October 31, 1996, from \$10.3 million at October 31, 1995, primarily due to amortization expense in fiscal 1996.

Investments increased to \$13.2 million at October 31, 1996, from \$12.3 million at October 31, 1995, due to the Company's investment in PK Limited, offset by a decrease in the fair values of the Company's available-for-sale investments during fiscal 1996.

Accounts payable increased to \$34.2 million at October 31, 1996, from \$17.9 million at October 31, 1995, primarily due to increased payables related to the completion of new facilities during the fourth quarter, recent major equipment purchases, the addition of the foreign operations and a higher level of purchases generally due to the Company's growth. Other accrued liabilities decreased to \$4.2 million at October 31, 1996, from \$6.1 million at October 31, 1995. This decrease is largely attributable to the settlement of fees in connection with the conclusion of several of the Company's expansion projects, together with lower sales, use and property tax liabilities because of the resolution of related assessments.

The Company did not incur any long-term debt during 1996. Long-term debt increased \$178,000 due to the imputation of interest on the obligation incurred in connection with the Micro Mask acquisition. Deferred income taxes decreased to \$7.5 million at October 31, 1996, from \$8.3 million at October 31, 1995, largely due to a reduction in unrealized gains on investments. Other liabilities increased to \$2.1 million at October 31, 1996, from \$265,000 at October 31, 1995, principally due to financial incentives received in connection with the Company's new Manchester operations, and minority interest associated with the Company's Swiss subsidiary.

The Company's commitments represent on-going investments in additional manufacturing capacity as well as advanced equipment for research and development of the next generation of higher technology, more complex photomasks. At October 31, 1996, the Company had commitments outstanding for capital expenditures of approximately \$54 million, including commitments for the new facilities in Austin, Texas and Manchester, U.K. Additional commitments are expected to be incurred during fiscal 1997.

The Company will use its working capital, bank credit lines and other available sources of capital to finance its future fixed asset expenditures. The Company believes that its currently available resources, together with its capacity for substantial growth and its accessibility to other debt and equity financing sources, are sufficient to satisfy its cash requirements for the foreseeable future.

**ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

**INDEX TO CONSOLIDATED FINANCIAL STATEMENTS**

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## **Independent Auditors' Report**

Board of Directors and Shareholders  
Photronics, Inc.  
Jupiter, Florida

We have audited the accompanying consolidated balance sheets of Photronics, Inc. and subsidiaries at October 31, 1996 and 1995, and the related consolidated statements of earnings, shareholders' equity and cash flows for each of the three years in the period ended October 31, 1996. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the consolidated financial position of Photronics, Inc. and its subsidiaries as of October 31, 1996 and 1995, and the results of their operations and their cash flows for each of the three years in the period ended October 31, 1996 in conformity with generally accepted accounting principles.

As discussed in Note 1 to the consolidated financial statements, in 1994 the Company changed its method of accounting for investments and income taxes.

### **DELOITTE & TOUCHE LLP**

Hartford, Connecticut  
December 9, 1996

## PHOTRONICS, INC. AND SUBSIDIARIES

## Consolidated Balance Sheet

October 31, 1996 and 1995

(dollars in thousands)

Assets	1996	1995
-----	-----	-----
Current assets:		
Cash and cash equivalents	\$ 18,766	\$ 35,644
Short-term investments	7,918	16,221
Accounts receivable (less allowance for doubtful accounts of \$235 in 1996 and \$195 in 1995)	24,750	17,857
Inventories	7,992	6,357
Other current assets	6,154	3,380
	-----	-----
Total current assets	65,580	79,459
Property, plant and equipment	123,666	72,063
Intangible assets (less accumulated amortization of \$3,256 in 1996 and \$2,156 in 1995)	9,305	10,289
Investments	13,239	12,329
Other assets	113	78
	-----	-----
	\$211,903	\$174,218
	=====	=====

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES

Consolidated Balance Sheet

October 31, 1996 and 1995

(dollars in thousands, except per share amounts)

Liabilities and Shareholders' Equity	1996	1995
Current liabilities:		
Current portion of long-term debt	\$ 38	\$ 36
Accounts payable	34,168	17,850
Accrued salaries and wages	5,561	5,810
Other accrued liabilities	4,200	6,110
Total current liabilities	43,967	29,806
Long-term debt	1,987	1,809
Deferred income taxes	7,481	8,293
Other liabilities	2,051	265
Total liabilities	55,486	40,173
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, \$.01 par value, 2,000,000 shares authorized, none issued and outstanding	-	-
Common stock, \$.01 par value, 20,000,000 shares authorized, 11,973,290 shares issued in 1996 and 11,758,292 shares issued in 1995	120	118
Additional paid-in capital	77,833	75,083
Retained earnings	73,973	52,970
Unrealized gains on investments	4,678	6,471
Treasury stock, 136,500 shares at cost	(245)	(245)
Cumulative foreign currency translation adjustment	58	-
Deferred compensation on restricted stock	-	(352)
Total shareholders' equity	156,417	134,045
	\$211,903	\$174,218

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES

Consolidated Statement of Earnings

Years Ended October 31, 1996, 1995 and 1994

(in thousands, except per share amounts)

	1996 -----	1995 -----	1994 -----
Net sales	\$160,071	\$125,299	\$80,696
Costs and expenses:			
Cost of sales	98,267	76,683	51,204
Selling, general and administrative	21,079	17,127	10,517
Research and development	8,460	7,899	4,738
Operating income	32,265	23,590	14,237
Interest income	1,601	1,627	568
Interest expense	(160)	(141)	(75)
Other income, net	197	4,766	571
Income before income taxes and cumulative effect of change in accounting for income taxes	33,903	29,842	15,301
Provision for income taxes	12,900	11,210	5,202
Income before cumulative effect of change in accounting for income taxes	21,003	18,632	10,099
Cumulative effect of change in accounting for income taxes	-	-	237
Net income	\$ 21,003 =====	\$ 18,632 =====	\$10,336 =====
Net income per common share:			
Income before cumulative effect of change in accounting for income taxes	\$1.74	\$1.66	\$1.01
Cumulative effect of change in accounting for income taxes	-	-	0.02
Net income	\$1.74 =====	\$1.66 =====	\$1.03 =====
Weighted average number of common shares outstanding	12,101 =====	11,207 =====	10,062 =====

See accompanying notes to consolidated financial statements.

PHOTRONICS, INC. AND SUBSIDIARIES

Consolidated Statement of Shareholders' Equity

Years Ended October 31, 1996, 1995 and 1994  
(in thousands)

	Common Stock		Addi- tional	Retained	Unreal- ized Gains on	Treasury	Cumula- tive Foreign Currency Trans- lation Adjust- ment	Deferred Compensa- tion on Restricted Stock	Total Shareholders' Equity
	Shares	Amount	Paid-In Capital	Earnings	Invest- ments	Stock			
Balance at November 1, 1993	6,484	\$65	\$38,804	\$24,002	\$ -	\$(245)	\$ -	\$ -	\$ 62,626
Net income	-	-	-	10,336	-	-	-	-	10,336
Sale of common stock through employee stock option and purchase plans	124	1	1,478	-	-	-	-	-	1,479
Restricted stock awards	52	1	1,056	-	-	-	-	(1,057)	-
Amortization of restricted stock to compensation expense	-	-	-	-	-	-	-	353	353
Cumulative effect of change in accounting for investments	-	-	-	-	5,608	-	-	-	5,608
Balance at October 31, 1994	6,660	67	41,338	34,338	5,608	(245)	-	(704)	80,402
Net income	-	-	-	18,632	-	-	-	-	18,632
Sale of common stock in connection with public offering	1,500	15	29,336	-	-	-	-	-	29,351
Issuance of common stock related to acquisition	98	1	2,399	-	-	-	-	-	2,400
Sale of common stock through warrants and employee stock option and purchase plans	170	2	2,043	-	-	-	-	-	2,045
Amortization of restricted stock to compensation expense	-	-	-	-	-	-	-	352	352
Change in unrealized gains on investments	-	-	-	-	863	-	-	-	863
Three-for-two stock split	3,330	33	(33)	-	-	-	-	-	-
Balance at October 31, 1995	11,758	118	75,083	52,970	6,471	(245)	-	(352)	134,045
Net income	-	-	-	21,003	-	-	-	-	21,003
Sale of common stock through employee stock option and purchase plans	215	2	2,750	-	-	-	-	-	2,752
Foreign currency translation adjustment	-	-	-	-	-	-	58	-	58
Amortization of restricted stock to compensation expense	-	-	-	-	-	-	-	352	352
Change in unrealized gains on investments	-	-	-	-	(1,793)	-	-	-	(1,793)
Balance at October 31, 1996	11,973	\$120	\$77,833	\$73,973	\$4,678	\$(245)	\$58	\$ -	\$156,417

See accompanying notes to consolidated financial statements.

## PHOTRONICS, INC. AND SUBSIDIARIES

## Consolidated Statement of Cash Flows

Years Ended October 31, 1996, 1995 and 1994

(dollars in thousands)

	1996	1995	1994
	-----	-----	-----
Cash flows from operating activities:			
Net income	\$21,003	\$18,632	\$10,336
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization of property, plant and equipment	12,120	8,747	7,953
Amortization of intangible assets	1,100	1,039	694
Gain on disposition of investments	-	(5,110)	(831)
Deferred income taxes	1,000	(842)	847
Cumulative effect of change in accounting for income taxes	-	-	(237)
Research and development expense from acquisition	-	1,484	-
Other	626	377	403
Changes in assets and liabilities, net of effects of acquisitions:			
Accounts receivable	(6,893)	(7,639)	(372)
Inventories	(1,228)	(2,922)	437
Other current assets	(3,260)	199	(533)
Accounts payable and accrued liabilities	14,159	19,587	2,305
Net cash provided by operating activities	38,627	33,552	21,002
	-----	-----	-----
Cash flows from investing activities:			
Acquisitions of and investment in photomask operations	(12,397)	(10,536)	-
Deposits on and purchases of property, plant and equipment	(55,762)	(35,547)	(6,187)
Net change in short-term investments	8,303	(13,686)	961
Proceeds from sale of investments	-	5,750	615
Other	1,635	90	(269)
Net cash used in investing activities	(58,221)	(53,929)	(4,880)
	-----	-----	-----
Cash flows from financing activities:			
Repayment of long-term debt	(36)	(467)	(735)
Proceeds from issuance of common stock	2,752	31,396	1,479
Net cash provided by financing activities	2,716	30,929	744
	-----	-----	-----
Net increase (decrease) in cash and cash equivalents	(16,878)	10,552	16,866
Cash and cash equivalents at beginning of year	35,644	25,092	8,226
	-----	-----	-----
Cash and cash equivalents at end of year	\$18,766	\$35,644	\$25,092
	=====	=====	=====

See accompanying notes to consolidated financial statements.

# **PHOTRONICS, INC. AND SUBSIDIARIES**

## **Notes to Consolidated Financial Statements**

**Years Ended October 31, 1996, 1995 and 1994**

(dollars in thousands, except per share amounts)

### **NOTE 1 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

#### **Consolidation**

The accompanying consolidated financial statements include the accounts of Photronics, Inc. and its subsidiaries. All significant intercompany balances and transactions have been eliminated. Certain amounts in the consolidated financial statements for periods prior to October 31, 1996 have been reclassified to conform to the current presentation.

#### **Foreign Currency Translation**

The Company's subsidiaries in Europe and Singapore maintain their accounts in their respective local currencies. Assets and liabilities of such subsidiaries are translated to U.S. dollars at year-end exchange rates. Income and expenses are translated at average rates of exchange prevailing during the year. Foreign currency translation adjustments are accumulated in a separate component of shareholders' equity. The effects of changes in exchange rates on foreign currency transactions are included in income.

#### **Cash and Cash Equivalents**

Cash and cash equivalents include cash and highly liquid investments purchased with an original maturity of three months or less. The carrying values approximate fair value based on the short maturity of the instruments.

#### **Investments**

The Company's debt and equity investments available for sale are carried at fair value. Prior to 1994, such investments were carried at cost. Short-term investments include a diversified portfolio of high quality marketable securities which will be liquidated as needed to meet the Company's current cash requirements. All other investments are classified as non-current assets. Unrealized gains and losses, net of tax, are reported as a separate component of shareholders' equity. Gains and losses are included in income when realized, determined based on the disposition of specifically identified investments.

#### **Inventories**

Inventories, principally raw materials, are stated at the lower of cost, determined under the first-in, first-out method, or market.

## **Property, Plant and Equipment**

Property, plant and equipment are recorded at cost less accumulated depreciation. Repairs and maintenance as well as renewals and replacements of a routine nature are charged to operations as incurred, while those which improve or extend the lives of existing assets are capitalized. Upon sale or other disposition, the cost of the asset and accumulated depreciation are eliminated from the accounts, and any resulting gain or loss is reflected in income.

For financial reporting purposes, depreciation and amortization are computed on the straight-line method over the estimated useful lives of the related assets. Buildings and improvements are depreciated over 15 to 40 years, machinery and equipment over 3 to 10 years and furniture, fixtures and office equipment over 3 to 5 years. Leasehold improvements are amortized over the life of the lease or the estimated useful life of the improvement, whichever is less. For income tax purposes, depreciation is computed using various accelerated methods and, in some cases, different useful lives than those used for financial reporting.

## **Intangible Assets**

Intangible assets include goodwill which represents the excess of cost over fair value of assets acquired and is being amortized on a straight-line basis over fifteen to twenty years. Costs allocated to sales, non- compete and technology agreements arising from business acquisitions and other intangible assets are being amortized on a straight-line basis over the respective agreement periods ranging from three to ten years. The future economic benefit of the carrying value of intangible assets is reviewed periodically and any diminution in useful life or impairment in value based on future anticipated cash flows would be recorded in the period so determined.

## **Income Taxes**

The provision for income taxes is computed on the basis of consolidated financial statement income. Deferred income taxes reflect the tax effects of differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes. The Company adopted Statement of Financial Accounting Standards No. 109 "SFAS 109", "Accounting for Income Taxes," effective November 1, 1993. The cumulative effect of adopting SFAS 109 was an increase in income of \$237, or \$0.02 per share, for fiscal year 1994.

## **Net Income Per Common Share**

Net income per common and common equivalent share is calculated using the weighted average number of common and common equivalent shares outstanding during each year. When dilutive, stock options and stock purchase warrants are included as common equivalent shares using the treasury stock method.

## Stock Options

The Company records stock option awards in accordance with the provisions of Accounting Principles Board Opinion 25, "Accounting for Stock Issued to Employees". In October 1995, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No.

123 ( SFAS 123), "Accounting for Stock-Based Compensation," which the Company will be required to adopt in fiscal 1997. Under SFAS 123, companies can elect, but are not required, to recognize compensation expense for all stock-based awards, using a fair value methodology. The Company does not believe that adoption of SFAS 123 will have a material effect on its financial statements.

## NOTE 2 - INVESTMENTS

Short-term investments consist principally of municipal bonds, commercial paper, and money market and bond funds. The estimated fair value of short-term investments, based upon current yields of like securities, approximates cost, resulting in no significant unrealized gains or losses. Short-term investments at October 31, 1996, mature by their terms, as follows:

Due within one year	\$4,113
Due after one year, but within three years	3,276
Due after three years	529
	-----
	\$7,918
	=====

Other investments consist of available-for-sale equity securities of publicly traded technology companies and a minority interest in a photomask manufacturer in Korea. The fair values of available-for-sale investments are based upon quoted market prices. The Company is a supplier to one of the investee companies. The estimated fair value of the non-available-for-sale investment is based upon the financial condition and the operating results and projections of the investee and is considered to approximate cost. Unrealized gains on investments were determined as follows:

	October 31,	
	1996	1995
Fair value	\$13,239	\$12,329
Cost	5,104	1,075
	-----	-----
Less deferred income taxes	8,135	11,254
	3,457	4,783
	-----	-----
Net unrealized gains	\$ 4,678	\$ 6,471
	=====	=====

### NOTE 3 - PROPERTY, PLANT AND EQUIPMENT

Property, plant and equipment consists of the following:

	October 31,	
	1996	1995
Land	\$ 2,735	\$ 2,200
Buildings and improvements	21,798	13,305
Machinery and equipment	140,297	89,269
Leasehold improvements	9,703	7,213
Furniture, fixtures and office equipment	1,873	993
	-----	-----
	176,406	112,980
Less accumulated depreciation and amortization	52,740	40,917
	-----	-----
Property, plant and equipment	\$123,666	\$72,063
	=====	=====

### NOTE 4 - LONG-TERM DEBT

Long-term debt consists of the following:

	October 31,	
	1996	1995
Acquisition indebtedness payable December 1, 1998, net of interest of \$234 at October 31, 1996 and \$450 at October 31, 1995, imputed at 7.45%	\$1,566	\$1,350
Industrial development mortgage note, secured by building, with interest at 6.58%, payable through November 2005	459	495
	-----	-----
	2,025	1,845
Less current portion	38	36
	-----	-----
Long-term debt	\$1,987	\$1,809
	=====	=====

Long-term debt matures as follows: 1998-\$41; 1999-\$1,610; 2000-\$46; 2001-\$50; years after 2001-\$240. The fair value of long-term debt not yet substantively extinguished is estimated based on the current rates offered to the Company and is not significantly different from carrying value.

In March 1995, the Company entered into an unsecured revolving credit facility that provides for borrowings of up to \$10 million per year in each of the following three years, subject to a carryover in the second and third year of up to the lesser of \$3 million and the amount of borrowing capacity not used in the prior years. The Company is charged a commitment fee on the average unused amount of the available credit and is subject to compliance with and maintenance of certain financial covenants and ratios. At October 31, 1996, the Company had not borrowed any amounts under this agreement.

Cash paid for interest was \$48, \$38 and \$75 in 1996, 1995 and 1994, respectively.

## **NOTE 5 - SHAREHOLDERS' EQUITY**

In January 1995, the Company's Board of Directors authorized a three- for-two stock split effected in the form of a stock dividend payable to shareholders of record as of March 20, 1995. The stock split resulted in the issuance of 3.3 million additional shares of common stock. All applicable share and per share amounts included in the financial statements reflect the stock split. On March 16, 1995, the shareholders approved an amendment to the Company's Certificate of Incorporation increasing the number of common shares, \$0.01 par value, which the Company is authorized to issue from 10 million to 20 million shares.

In connection with a public offering, in April and May 1995, the Company issued 1,500,000 new shares of common stock at a price of \$21.00 per share (\$19.85 per share after underwriting discounts), 40,000 shares of common stock due to the exercise of stock options at prices ranging from \$1.83 to \$3.17 per share and 7,500 additional shares of common stock resulting from the exercise of a warrant at \$5.24 per share. The proceeds, net of costs of the issue, amounted to \$29.6 million.

In June 1995, the Company issued 98,559 shares of common stock in connection with the acquisition of Microphase Laboratories, Inc. (see Note 6).

## **NOTE 6 - ACQUISITIONS**

### **European Photomask Operations**

In January 1996, the Company acquired the photomask manufacturing operations and assets of Plessey Semiconductors Limited ("Plessey") located in Oldham, United Kingdom, for \$4.9 million in cash. In connection with the transaction, the Company leased the facilities from Plessey previously utilized by them for the manufacture of photomasks. The acquisition was accounted for as a purchase and, accordingly, the acquisition price was allocated to property and equipment based on relative fair value.

In April 1996, the Company, through its majority-owned subsidiary, acquired the photomask manufacturing operations and assets of the Litomask Division ("Litomask") of Centre Suisse d'Electronique et de Microtechnique S.A. ("CSEM") located in Neuchatel, Switzerland for \$3.4 million in cash. CSEM holds the remaining interest in this subsidiary and the Company has an option to acquire CSEM's interest within a two- year period. In connection with the transaction, the Company leased the facilities and retained certain services from CSEM previously utilized by Litomask. The acquisition was accounted for as a purchase and, accordingly, the acquisition price was allocated to property and equipment based on relative fair value.

The consolidated statement of earnings includes the results of European photomask operations beginning on the effective date of the respective acquisition. Such results were not material to the Company.

**Hoya Micro Mask, Inc.**

In December 1994, the Company acquired certain assets held by Hoya Micro Mask, Inc. ("Micro Mask"), an independent photomask manufacturer with manufacturing operations located in Sunnyvale, California. The transaction included the purchase of the land, buildings, inventory and certain assets other than cash and receivables. In addition, significant manufacturing systems owned by Micro Mask were leased by the Company from Micro Mask. The acquisition was financed through the payment of approximately \$10.2 million in cash and the obligation to pay \$1.8 million, without interest, four years after the closing. The operating lease of the significant manufacturing systems has a term ranging from 44 to 62 months and includes the right to purchase the systems at fair market value at the end of the lease. The acquisition was accounted for as a purchase and, accordingly, the acquisition price was allocated to property, plant and equipment as well as certain intangible assets based on relative fair value. The excess of purchase price over the fair value of assets acquired is being amortized over 20 years. The consolidated statement of earnings includes the results of Micro Mask's operations from December 1, 1994, the effective date of the acquisition. The consolidated results of the Company's operations on a proforma basis (unaudited) for the year ended October 31, 1994, as though the purchase had been made as of the beginning of the year, would have reflected sales of approximately \$106 million and net income of approximately \$11 million, or \$1.10 per common share. The proforma results of operations are not necessarily indicative of the actual operating results that would have occurred had the transactions been consummated at the beginning of the year, or of the future combined operating results.

**Microphase Laboratories, Inc.**

In June 1995, the Company acquired the manufacturing operations and assets, exclusive of cash and accounts receivable, of Microphase Laboratories, Inc. ("Microphase"), an independent photomask manufacturer located in Colorado Springs, Colorado, in exchange for 98,559 shares of common stock of the Company valued at \$2.4 million. The acquisition was accounted for as a purchase. Of the total purchase price, \$1.5 million was allocated to Microphase's research and development projects and, accordingly, was charged to research and development expenses. The consolidated statement of earnings includes the results of the Microphase operations beginning June 20, 1995, the effective date of the acquisition. Such results were not material to the Company.

## NOTE 7 - INCOME TAXES

The provision for income taxes consists of the following:

	1996	1995	1994
Current:	-----	-----	-----
Federal	\$ 9,905	\$10,234	\$3,722
State	1,908	1,818	633
Foreign	87	-	-
	-----	-----	-----
	11,900	12,052	4,355
Deferred:	-----	-----	-----
Federal	918	(617)	832
State	82	(225)	15
	-----	-----	-----
	1,000	(842)	847
	-----	-----	-----
	\$12,900	\$11,210	\$5,202
	=====	=====	=====

The provision for income taxes differs from the amount computed by applying the statutory U.S. Federal income tax rate to income before taxes as a result of the following:

	1996	1995	1994
	-----	-----	-----
U.S. Federal income tax at statutory rate	\$11,866	\$10,445	\$5,255
State income taxes, net of Federal benefit	1,294	1,035	428
Tax benefits of tax exempt income	(302)	(389)	(168)
Foreign tax rate differential	(291)	-	-
Other, net	333	119	(313)
	-----	-----	-----
	\$12,900	\$11,210	\$5,202
	=====	=====	=====

The Company's net deferred tax liability consists of the following:

	October 31,	
	1996	1995
	-----	-----
Deferred income tax liabilities:		
Property, plant and equipment	\$3,876	\$3,761
Investments	3,457	4,783
Other	454	31
	-----	-----
Total deferred tax liability	7,787	8,575
	-----	-----
Deferred income tax assets:		
Reserves not currently deductible	1,226	1,528
Other	483	643
	-----	-----
Total deferred tax asset	1,709	2,171
	-----	-----
Net deferred tax liability	\$6,078	\$6,404
	=====	=====

Cash paid for income taxes was \$13.0 million, \$11.6 million and \$3.7 million in 1996, 1995 and 1994, respectively.

## NOTE 8 - EMPLOYEE STOCK OPTION AND PURCHASE PLANS

In March 1996, the shareholders approved the adoption of the 1996 Stock Option Plan which includes provisions allowing for the award of qualified and non-qualified stock options and the granting of restricted stock awards. A total of 600,000 shares of common stock may be issued pursuant to options or restricted stock awards granted under the Plan. Restricted stock awards do not require the payment of any cash consideration by the recipient, but shares subject to an award may be forfeited unless conditions specified in the grant are satisfied.

The Company has adopted a series of other stock option plans under which incentive and non-qualified stock options and restricted stock awards for a total of 1,800,000 shares of the Company's common stock may be granted to employees and directors. All plans provide that the exercise price may not be less than the fair market value of the common stock at the date the options are granted and limit the maximum term of options granted to a range of from five to ten years.

The following table summarizes stock option activity under the plans:

	Stock Options -----	Exercise Prices -----
Balance at November 1, 1993	964,242	\$ 1.83-8.67
Granted	249,150	10.17-14.83
Exercised	(166,017)	1.83-8.67
Canceled	(124,613)	6.17-13.42
	-----	
Balance at October 31, 1994	922,762	1.83-14.83
Granted	241,640	18.67-27.38
Exercised	(145,273)	1.83-13.42
Canceled	(39,189)	6.17-24.00
	-----	
Balance at October 31, 1995	979,940	1.83-27.38
Granted	482,050	21.50-25.00
Exercised	(184,431)	1.83-27.38
Canceled	(85,796)	6.17-27.38
	-----	
Balance at October 31, 1996	1,191,763	\$ 3.17-27.38
	=====	

At October 31, 1996, 270,657 shares were available for grant and 471,296 shares were exercisable.

In 1994, restricted stock awards representing a total of 78,750 shares were awarded to certain key employees. The market value of the grant amounted to \$1.1 million at the date of grant and was charged to "Deferred Compensation on Restricted Stock", a component of shareholders' equity. Such amount was amortized as compensation expense over the three-year period during which the shares under these awards were subject to forfeiture.

In 1992, the shareholders approved the Company's adoption of an Employee Stock Purchase Plan (Purchase Plan), under which 300,000 shares of common stock are reserved for issuance. The Purchase Plan enables eligible employees to subscribe, through payroll deductions, to purchase shares of the Company's common stock at a purchase price equal to 85% of the lower of the fair market value on the commencement date of the offering and the last day of the payroll payment period. At October 31, 1996, 92,801 shares had been issued and 32,968 shares were subject to outstanding subscriptions under the Purchase Plan.

#### **NOTE 9 - EMPLOYEE BENEFIT PLANS**

The Company maintains a 401(k) Savings and Profit-Sharing Plan (the "Plan") which covers all domestic employees who have completed six months of service and are eighteen years of age or older. Under the terms of the Plan, an employee may contribute up to 15% of their compensation which will be matched by the Company at 50% of the employee's contributions which are not in excess of 4% of the employee's compensation. Employee and employer contributions vest fully upon contribution. Employer contributions amounted to \$0.5 million in 1996 and 1995 and \$0.3 million in 1994.

The Company maintains a cafeteria plan to provide eligible domestic employees with the option to receive non-taxable medical, dental, disability and life insurance benefits. The cafeteria plan is offered to all active full-time employees and their qualifying dependents. The Company's contribution amounted to \$1.8 million in 1996, \$1.4 million in 1995, and \$1.2 million in 1994.

The Company's foreign subsidiaries maintain benefit plans for their employees which vary by country. The obligations and cost of these plans are not significant to the Company.

## NOTE 10 - LEASES

The Company leases various real estate and equipment under non-cancelable operating leases. Rental expense under such leases amounted to \$5.6 million in 1996, \$4.9 million in 1995 and \$2.0 million in 1994. Included in such amounts were \$0.1 million in each year to affiliated entities, which are owned, in part, by a significant shareholder of the Company.

Future minimum lease payments under non-cancelable operating leases with initial or remaining terms in excess of one year amounted to \$11.4 million at October 31, 1996, as follows:

1997.....	\$3,979	2000.....	\$980
1998.....	3,611	2001.....	350
1999.....	2,167	Thereafter.....	312

Included in such future lease payments are amounts to affiliated entities of \$0.1 million in each year from 1997 to 2000, and \$0.3 million in years thereafter.

## NOTE 11 - COMMITMENTS AND CONTINGENCIES

The Company and a significant shareholder have jointly guaranteed a loan totaling approximately \$0.5 million as of October 31, 1996, on certain real estate which is being leased by the Company. The Company is subject to certain financial covenants in connection with the guarantee.

As of October 31, 1996, the Company had capital expenditure purchase commitments outstanding of approximately \$54 million.

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make certain estimates and assumptions, including collectibility of accounts receivable, and depreciable lives and recoverability of property, plant, equipment and intangible assets. Actual results may differ from such estimates.

Financial instruments that potentially subject the Company to credit risk consist principally of trade receivables and temporary cash investments. The Company sells its products primarily to manufacturers in the semiconductor and computer industries in North America, Europe and Asia. The Company believes that the concentration of credit risk in its trade receivables is substantially mitigated by the Company's ongoing credit evaluation process and relatively short collection terms. The Company does not generally require collateral from customers. The Company establishes an allowance for doubtful accounts based upon factors surrounding the credit risk of specific customers, historical trends and other information. Historically, the Company has not incurred any significant credit related losses.

**NOTE 12 - QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)**

The following table sets forth certain unaudited quarterly financial data:

	First	Second	Third	Fourth	Year
	-----	-----	-----	-----	-----
1996:					
Net sales	\$34,668	\$40,514	\$42,677	\$42,212	\$160,071
Gross profit	13,416	15,703	16,428	16,257	61,804
Net income	\$ 4,651	\$ 5,267	\$ 5,513	\$ 5,572	\$ 21,003
Net income per share(a)	\$ 0.39	\$ 0.44	\$ 0.46	\$ 0.46	\$ 1.74
1995:					
Net sales	\$26,176	\$30,037	\$32,854	\$36,232	\$125,299
Gross profit	9,759	11,615	12,839	14,403	48,616
Net income	\$ 3,267	\$ 3,820	\$ 6,460 (b)	\$ 5,085	\$ 18,632
Net income per share(a)	\$ 0.32	\$ 0.36	\$ 0.54 (b)	\$ 0.42	\$ 1.66

(a) Quarterly per share data may not equal the annual amounts due to changes in weighted average shares and share equivalents outstanding.

(b) Includes a non-recurring net gain from the sale of equity investments of \$2.9 million, or \$0.24 per share, after tax, and a non-recurring charge related to the acquisition of Microphase Laboratories, Inc. of \$0.9 million, or \$0.08 per share, after tax.

**NOTE 13 - SEGMENT INFORMATION**

The Company operates in a single industry segment as a manufacturer of photomasks, which are high precision quartz plates containing microscopic images of electronic circuits for use in the fabrication of semiconductors. In addition to its manufacturing facilities in the United States, the Company has operations in the United Kingdom, Switzerland and Singapore. Prior to 1996, the Company had no operations outside of the United States. The Company's net sales and operating profit for the year ended October 31, 1996 and identifiable assets at October 31, 1996, by geographic area were as follows:

	Net Sales	Operating Income (Loss)	Identifiable Assets
	-----	-----	-----
United States	\$153,227	\$32,660	\$181,255
Europe and Asia	6,844	(395)	30,648
	-----	-----	-----
	\$160,071	\$32,265	\$211,903
	=====	=====	=====

Approximately 14% of net domestic sales in 1996 were for delivery outside of the United States (11% in 1995 and 13% in 1994).

The Company's largest single customer represented approximately 26% of total net sales in 1996, 32% in 1995 and 36% in 1994

## **ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

There were no disagreements on any accounting and financial disclosure matters between the Company and its independent certified public accountants for which a Form 8-K was required to be filed during the 24 months ended October 31, 1996 or for the period from October 31, 1996 to the date hereof.

### **PART III**

## **ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT**

The information as to Directors required by Item 401 and 405 of Regulation S-K is incorporated by reference to the Company's definitive proxy statement (the "Definitive Proxy Statement") which will be filed with the Securities and Exchange Commission pursuant to Regulation 14A within 120 days after the end of the fiscal year covered by this Form 10-K. The information as to Executive Officers is included in Part I, Item 1a of this report, "Executive Officers of Registrant".

## **ITEM 11. EXECUTIVE COMPENSATION**

The information required by Item 402 of Regulation S-K is incorporated by reference to the Definitive Proxy Statement.

## **ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The information required by Item 403 of Regulation S-K is incorporated by reference to the Definitive Proxy Statement.

## **ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

The information required by Item 404 of Regulation S-K is incorporated by reference to the Definitive Proxy Statement.

**PART IV**

**ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K**

(A) The following documents are filed as part of this report:

1) Financial Statements

**Independent Auditors' Report**

**Consolidated Balance Sheet at October 31, 1996 and 1995**

Consolidated Statement of Earnings for the years ended October 31, 1996, 1995 and 1994

Consolidated Statement of Shareholders' Equity for the years ended October 31, 1996, 1995 and 1994

Consolidated Statement of Cash Flows for the years ended October 31, 1996, 1995 and 1994

**Notes to Consolidated Financial Statements**

2) Financial Statement Schedules

Schedules for which provision is made in Regulation S-X of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and, therefore, have been omitted.

3) Exhibits: See Table of Exhibits, page 41.

(B) Reports on Form 8-K

No report on Form 8-K was filed by the Company during the fourth quarter of the Company's fiscal year ended October 31, 1996.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

### PHOTRONICS, INC.

(Registrant)

By CONSTANTINE S. MACRICOSTAS  
Constantine S. Macricostas  
Chairman of the Board,  
Chief Executive Officer  
and Director  
January 24, 1997

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

By CONSTANTINE S. MACRICOSTAS  
Constantine S. Macricostas  
Chairman of the Board,  
Chief Executive Officer  
and Director  
January 24, 1997

By MICHAEL J. YOMAZZO  
Michael J. Yomazzo  
President and Director  
January 24, 1997

By ROBERT J. BOLLO  
Robert J. Bollo  
Vice President/Finance  
Chief Financial Officer  
January 24, 1997

By WALTER M. FIEDEROWICZ  
Walter M. Fiederowicz  
Director

January 24, 1997

By JOSEPH A. FIORITA, JR.  
Joseph A. Fiorita, Jr.  
Director

January 24, 1997

By \_\_\_\_\_  
Yukio Tagawa  
Director

January 24, 1997

96\10-K/p

## TABLE OF EXHIBITS

- 3.1 Certificate of Incorporation. (1)
- 3.2 By-Laws, as amended. (1)
- 3.3 Amendment to Certificate of Incorporation, dated March 16, 1990. (4)
- 3.4 Amendment to Certificate of Incorporation, dated March 16, 1995. (13)
- 4.1 Form of Stock Certificate. (1)
- 10.1 Loan Agreement, dated August 10, 1984, among the Company, Fairfield Associates, and the Connecticut Development Authority. (1)
- 10.2 Indenture of Trust, dated August 10, 1984, between the Connecticut Development Authority and Citytrust. (1)
- 10.3 Security Agreement, dated August 10, 1984, between the Company and the Connecticut Development Authority, with assignment to Citytrust, as Trustee. (1)
- 10.4 Lease Agreement, dated August 10, 1984, between the Company and Fairfield Associates. (1)
- 10.5 Guaranty Agreement, dated August 10, 1984, by the Company and Constantine Macricostas to Citytrust, as Trustee. (1)
- 10.6 Assumption Agreement between the Company, MC2 and the Connecticut Development Authority, dated October 15, 1992, and related Note, Mortgage and Collateral Assignment of Leases and amendments thereto. (7)
- 10.7 Assumption Agreement, Third Amendment to Loan Agreement and Amendment to Guaranty Photronic Labs Incorporated Project - 1984 Series, dated August 28, 1992, by and among Photronics California, Inc., Photronics Financial Services, Inc., Photronics Investment Services, Inc., Photronics Texas, Inc., the Company, Constantine Macricostas, the Connecticut Development Authority, The Chase Manhattan Bank of Connecticut, N.A. and Fairfield Associates. (7)
- 10.8 The Company's 1986 Amended and Restated Incentive Stock Option Plan. (2) +
- 10.9 Amendment #1 to the Company's 1986 Amended and Restated Incentive Stock Option Plan. (4) +
- 10.10 The Company's 1986 Non-Qualified Stock Option Plan, as amended. (3) +
- 10.11 The Company's 1988 Non-Qualified Stock Option Plan. (11) +

- 10.12 Amendment #1 to the Company's 1988 Non-Qualified Stock Option Plan. (4) +
- 10.13 Amendment to Security Agreements, dated October 31, 1988, by and among the Company, Citytrust, Constantine S. Macricostas and Mayo Associates. (11)
- 10.14 Amendment to Loan Agreements between the Company and the Connecticut Development Authority, dated as of June 8, 1990. (4)
- 10.15 Second Amendment to Loan Agreement dated as of December 20, 1991 by and among the Company, the Connecticut Development Authority and The Chase Manhattan Bank of Connecticut, N.A. (5).
- 10.16 Form of severance agreement between the Company and each of Messrs. Macricostas, Yomazzo and Moonan. (11) +
- 10.17 Lease dated as of November 1, 1989 between the Company, MC3, Inc. and Alpha-Omega Associates. (11)
- 10.18 Consulting Agreement, dated June 1, 1992, between Joseph Fiorita and the Company. (7) +
- 10.19 The Company's 1992 Stock Option Plan. (6) +
- 10.20 The Company's 1992 Employee Stock Purchase Plan. (6)
- 10.21 The Company's 1994 Employee Stock Option Plan. (9) +
- 10.22 Overall Agreement for Strategic Alliance, dated September 13, 1993, by an among Toppan Printing Co., Ltd. ("Toppan"), Toppan Printronics (USA), Inc. ("TPI") and Toppan Electronics (USA), Inc.  
("TEI") and the Company. (8)
- 10.23 Asset Purchase Agreement, dated September 13, 1993, by and among the Company, Toppan and TPI. (8)
- 10.24 Stock Purchase Agreement, dated September 13, 1993, by and between the Company and Toppan. (8)
- 10.25 Technology Transfer Agreement, dated October 1, 1993, by and among the Company, Toppan and TPI. (8)
- 10.26 Purchase Agreement by and among Toppan, TPI and Texas Instruments Incorporated ("TI"), dated March 31, 1990, amendments thereto and related assignment to the Company dated October 1, 1993. (8)
- 10.27 Asset Purchase Agreement, dated October 26, 1994, by and among the Company, Hoya Micro Mask, Inc. ("Micro Mask") and Hoya Corporation USA ("Hoya"). (10)
- 10.28 Equipment Lease Agreement, dated December 1, 1994, by and between the Company and Micro Mask. (10)
- 10.29 Agreement of Sale and Purchase, dated October 26, 1994, by and between Photronics California, Inc. and Micro Mask. (10)

10.30 Continuing Guaranty of the Company, dated December 1, 1994. (10)

10.31 Continuing Guaranty of Hoya, dated December 1, 1994. (10)

10.32 Form of Agreement regarding Life Insurance between the Company and each of Messrs Macricostas, Yomazzo and Moonan. (12) +

10.33 Revolving Credit and Term Loan Agreement between the Company and Chemical Bank, dated as of March 1, 1995. (13)

10.34 The Company's 1996 Stock Option Plan. (14) +

21 List of Subsidiaries. \*

23 Consent of Deloitte & Touche LLP. \*

27 Financial Data Schedule. \*

\* Filed herewith.

+ Represents a management contract or compensatory plan or arrangement required to be filed as an exhibit to this form pursuant to item 14(c) of this report.

(1) Filed as an exhibit to the Company's Registration Statement on Form S-1, File Number 33-11694, which was declared effective by the Commission on March 10, 1987, and incorporated herein by reference.

(2) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-17405, which was declared effective on October 13, 1987, and incorporated herein by reference.

(3) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-17530, which was declared effective on October 19, 1987, and incorporated herein by reference.

(4) Filed as an exhibit to the Company's Registration Statement on Form S-2, File Number 33-34772 which was declared effective by the Commission on June 22, 1990, and incorporated herein by reference.

(5) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1991 and incorporated herein by reference.

(6) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-47446, which was filed on April 24, 1992, and incorporated herein by reference.

(7) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1992, and incorporated herein by reference.

(8) Filed as an exhibit to the Company's Current Report on Form 8-K, dated October 8, 1993, and incorporated herein by reference.

- (9) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 33-78102, which was filed on April 22, 1994, and incorporated herein by reference.
- (10) Filed as an exhibit to the Company's Current Report on Form 8-K, dated December 6, 1994, and incorporated herein by reference.
- (11) Filed as an exhibit to the Company's Annual Report on Form 10-K for the fiscal year ended October 31, 1993, and incorporated herein by reference.
- (12) Filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ended July 31, 1995, and incorporated herein by reference.
- (13) Filed as an exhibit to the Company's Current Report on Form 8-K, dated March 24, 1995, and incorporated herein by reference.
- (14) Filed as an exhibit to the Company's Registration Statement on Form S-8, File Number 333-02245, which was filed on April 4, 1996, and incorporated herein by reference.

## Exhibit 21

### LIST OF SUBSIDIARIES

Name -----	State or Jurisdiction of Incorporation -----
Photronics International Engineering, Inc.	Virgin Islands
Photronics California, Inc.	California
Photronics Texas, Inc.	Texas
Photronics Financial Services, Inc.	Florida
Photronics Investment Services, Inc.	Nevada
Photronics-Toppan Texas, Inc.	Texas
Beta Squared, Inc.	Connecticut
PLI Management Corp.	Florida
Photronics Singapore Pte., Ltd.	Singapore
Photronics (UK) Limited	England
Photronics Connecticut, Inc.	Connecticut
Photronics Colorado, Inc.	Colorado
Photronics, S.A. (60% owned)	Switzerland
Chip Canal Associates, Ltd.	England

**Exhibit 23**

**INDEPENDENT AUDITORS' CONSENT**

We consent to the incorporation by reference in Registration Statements Nos. 333-02245, 33-17405, 33-17530, 33-28118, 33-47446 and 33-78102 of Photronics, Inc. on Form S-8 and in Registration Statement No. 33-60945 of Photronics, Inc. on Form S-3 of our report dated December 9, 1996 appearing in this Annual Report on Form 10-K of Photronics, Inc. for the year ended October 31, 1996.

**DELOITTE & TOUCHE LLP**

Hartford, Connecticut

January 24, 1997

## ARTICLE 5

This schedule contains summary financial information extracted from the Condensed Consolidated Statement of Earnings and the Condensed Consolidated Balance Sheet and is qualified in its entirety by reference to such financial statements.

MULTIPLIER: 1000

PERIOD TYPE	12 MOS
FISCAL YEAR END	OCT 31 1996
PERIOD END	OCT 31 1996
CASH	18,766
SECURITIES	7,918
RECEIVABLES	24,750
ALLOWANCES	235
INVENTORY	7,992
CURRENT ASSETS	65,580
PP&E	176,406
DEPRECIATION	52,740
TOTAL ASSETS	211,903
CURRENT LIABILITIES	43,967
BONDS	1,987
PREFERRED MANDATORY	0
PREFERRED	0
COMMON	120
OTHER SE	156,297
TOTAL LIABILITY AND EQUITY	211,903
SALES	160,071
TOTAL REVENUES	160,071
CGS	98,267
TOTAL COSTS	98,267
OTHER EXPENSES	0
LOSS PROVISION	40
INTEREST EXPENSE	160
INCOME PRETAX	33,903
INCOME TAX	12,900
INCOME CONTINUING	21,003
DISCONTINUED	0
EXTRAORDINARY	0
CHANGES	0
NET INCOME	21,003
EPS PRIMARY	1.74
EPS DILUTED	0

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