SOUTHWALL TECHNOLOGIES INC /DE/
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Registration No. 333-85576

Prospectus

3,500,000 Shares

Common Stock

We are offering 3,500,000 shares of our common stock. Our common stock is listed on the Nasdaq National Market under the symbol "SWTX." On July 1, 2002, the last reported sale price of our common stock on the Nasdaq National Market was $4.76 per share.

Investing in our common stock involves certain risks. See "Risk Factors" beginning on page 7.

	Per Share	Total
Public Offering Price	$ 4.50	$ 15,750,000
Underwriting Discount	$ 0.27	$ 945,000
Proceeds, before expenses, to Southwall	$ 4.23	$ 14,805,000

We have granted the underwriters the right to purchase up to an additional 507,300 shares and the selling stockholders have granted the underwriters the right to purchase up to an additional 17,700 shares of our common stock to cover over-allotments.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities or determined if this prospectus is truthful or complete. It is illegal for any person to tell you otherwise.

Needham & Company, Inc.

Adams, Harkness & Hill, Inc.

Wells Fargo Securities, LLC

The date of this prospectus is July 1, 2002.

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We have not authorized anyone to provide you with information different than that contained in this document. This document may only be used where it is legal to sell these securities. The information in this document is given as of the date of this document regardless of the time of delivery of this prospectus or of any sale of our common stock.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. References in this prospectus to "Southwall Technologies," "Southwall," "we," "us," or "our" are to Southwall Technologies Inc. and its subsidiaries. You should read this entire prospectus carefully. Unless otherwise indicated, all information in this prospectus assumes that the underwriters have not exercised their option to purchase additional shares.

Southwall Technologies Inc.

We are a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. We have developed a variety of products that selectively absorb, reflect or transmit light and control the flow of energy. Our products consist of transparent insulation and solar-control films for automotive and architectural glass, and anti-reflective films for computer and television screens, including flat panel and plasma displays. They also include transparent conductive films for use in touch screen and liquid crystal displays. Based upon our production capacity, we believe we are one of the world's largest producers of rolls of clear plastic, or substrates, coated with thin films.

Recent advances in manufacturing processes and techniques are reducing our production costs. These reductions allow our thin film coated substrates to more cost-effectively address the following markets:

Automotive glass. The thin film coated substrates we sell in this market reflect infrared heat and reduce the transmission of ultra-violet light. These coatings allow carmakers to use more glass and to increase the energy efficiency and comfort of their vehicles. We sell thin film coated substrates in this market primarily to original equipment manufacturers that produce glass for sale to European manufacturers of new cars. Our products are used in cars manufactured by Mercedes Benz, Renault, Audi, BMW, Volvo, Volkswagen and the PSA Group, among other companies. According to the Freedonia Group, the worldwide demand for new and replacement glass sold for the motor vehicle market is expected to increase from approximately 7.2 billion square feet in 1999 to approximately 8.7 billion square feet in 2009.

Electronic displays. The thin film coated substrates we sell in this market primarily reduce glare caused by reflection from glass surfaces, improve contrast and image quality, and reduce energy emission from and the build up of static charge on computer display screens. Our thin film coated substrates are used in computer display tubes, or CDTs, liquid crystal and plasma displays, and in applications such as touch screens, wireless telephones and automated teller machines. The combined worldwide market for 17 inch and 19 inch flat screen computer display tubes and active matrix liquid crystal displays used for computer and handheld applications is anticipated to grow from approximately 75 million units in 2000 to approximately 155 million units in 2005, according to a 2001 Stanford Resources, Inc. research study.

Architectural. The thin film coated substrates we sell in this market are primarily used to control the transmission of heat through window glass and to limit ultra-violet light damage. Glass windows are significantly responsible for heat build-up and loss in buildings. According to the Freedonia Group, the worldwide market for new and replacement glass sold for use in residential buildings is expected to increase from approximately 5.2 billion square feet in 1999 to approximately 8.0 billion square feet in 2009. Also according to Freedonia, the market for new and replacement glass for use in commercial buildings is expected to increase from approximately 16.2 billion square feet in 1999 to approximately 25.4 billion square feet in 2009.

To address market demands, we have expanded our operations. We began manufacturing in a new facility in Dresden, Germany in January 2001. The facility presently contains two production machines. We expect that our third production machine in Dresden will begin commercial production by the first quarter of 2003. In 2000, we also increased our commercial production capacity in Tempe, Arizona by adding a second production machine.

Our Competitive Advantages

We believe we are well positioned for continued growth in sales of thin film coatings for the automotive glass, electronic display and architectural markets, and that our competitive advantages include:

- Proprietary thin film manufacturing process knowledge and control systems;
- Extensive thin film materials expertise and optical design capabilities;
- Over twenty years' experience providing large quantities of sophisticated coatings on flexible film for demanding applications and customers;
- The world's largest installed base of coating machinery for application of sputter coatings to flexible film; and
- Substantial expertise and technical support in the areas of product testing, reliability and applications.

Our Strategy

Our objective is to enhance our position as a global developer, manufacturer and marketer of thin film coatings on flexible substrates for the automotive glass, electronic display and architectural markets. The following are key elements of our strategy:

- Increase penetration and expand customer base in the automotive glass market;
- Increase production capacity in the automotive glass and architectural market;
- Use expanded production capacity and new products to increase sales in the architectural markets;

Capitalize on expanding flat panel display markets; and

Continue to advance thin film production technology.

We were incorporated in 1979 as a Delaware corporation. Our principal executive offices are located at 1029 Corporation Way, Palo Alto, California 94303, and our telephone number is (650) 962-9111. Our corporate web site is located at *www.southwall.com.* The information contained in our web site is not a part of this prospectus.

Recent Development

On June 24, 2002, we disclosed preliminary estimates of our financial results for the quarter ended June 30, 2002, indicating that we expected revenues for the quarter to be between $19.5 million and $20.5 million and net income for the quarter to be between $1.2 million and $1.4 million. We also disclosed preliminary estimates of our financial results for the fiscal year ended December 31, 2002, indicating that we expected revenues for 2002 to be between $78.0 million and $82.0 million and net income for 2002 to be between $4.8 million and $5.2 million before including any adjustments from the sale of common stock that we are offering by means of this propectus. These estimates are, however, subject to certain assumptions, risks and uncertainties that could cause actual revenues or net income for our second quarter or 2002 to be different than the estimates presented.

We expect the remainder of 2002 to continue to be affected by a slowdown in sales by European automobile manufacturers. We do not anticipate a significant improvement, if any, over our first quarter sales to the automotive market for any of the remaining quarters of 2002. However, we recently announced a new ten-year distribution agreement with Globamatrix Holdings Pte. Ltd., or Globamatrix, which includes commitments by Globamatrix to purchase an annually increasing amount, subject to volume and quality standards, of our solar control products for retrofit applications to the automotive and residential and commercial architectural glass markets. As a result, we believe that we will have somewhat greater revenues from Globamatrix in 2002 than in 2001, and that this growth will continue through 2003.

Our revenues from the CDT portion of our electronic display business have declined during 2002 as compared to 2001 primarily due to lower prices. During the same period, however, sales to the liquid crystal and plasma display portions of this market have increased. We recently started shipping production quantities and sizes of new films specifically designed for the liquid crystal display and plasma display panel markets that maintain optical clarity while reducing the reflection of ambient light to improve image quality. We expect the decline of the CDT portion of our electronic display business and the growth in sales of our new electronic display films to continue through 2003.

Due to production capacity constraints, in the past we have not allocated resources to expanding revenues from our architectural products. Additional production capacity for architectural products has recently been created, in part, by the addition of our new Dresden facility. Our revenues from our architectural business have increased during 2002 as compared to 2001, and we expect that the availability of production capacity in 2003 will allow for continued growth in this business. However, we can give no assurances that availability of production capacity will increase our revenues from architectural products.

The Offering

Common stock offered by us	3,500,000 shares
Common stock to be outstanding after this offering	12,086,278 shares
Over-allotment option:	
Common stock offered by us	507,300 shares
Common stock offered by selling stockholders	17,700 shares
Use of proceeds	To pay down existing indebtedness, capital expenditures including purchasing a new production machine, replacing our enterprise resource planning system and updating our Palo Alto and Tempe facilities, and for working capital and general corporate purposes, including possible acquisitions.

Nasdaq National Market symbol	SWTX

The number of shares of our common stock to be outstanding after this offering is based on our shares outstanding as of May 23, 2002 and excludes 2,096,204 shares which consist of:

- 1,401,859 shares subject to outstanding options under our 1997 stock incentive plan with a weighted average exercise price of $5.24 per share; and
- 694,345 shares subject to outstanding options under our 1998 stock option plan for employees and consultants with a weighted average exercise price of $6.61 per share.

Summary Consolidated Financial Data

The following tables summarize consolidated statements of operations and consolidated balance sheet data for our business. You should read this information together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes included elsewhere in this prospectus. The pro forma as adjusted consolidated balance sheet data reflects the sale of 3,500,000 shares of common stock offered by us at the public offering price of $4.50, after deducting estimated underwriting discounts and commissions and estimated offering expenses.

The consolidated statements of operations data for the five years ended December 31, 2001 are derived from our audited consolidated financial statements. The consolidated statements of operations data for the three months ended April 1, 2001 and March 31, 2002 and the consolidated balance sheet data as of March 31, 2002 have not been audited. In the opinion of management, such unaudited financial statements have been prepared on the same basis as the audited financial statements referred to above and include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of results of operations for the indicated periods when read in conjunction with our audited financial statements and notes. Results of operations for the three months ended March 31, 2002 are not necessarily indicative of the results that may be expected for the full year.

	Year Ended December 31,					Three Months Ended	
	1997	1998	1999	2000	2001	April 1, 2001	March 31, 2002
	(In thousands, except per share data)						
Consolidated Statements of Operations Data:							
Net revenues by product:							
Automotive glass	$ 6,629	$ 12,845	$ 19,477	$ 20,198	$ 37,385	$ 8,007	$ 7,003
Electronic display	21,957	16,954	16,014	47,734	29,691	6,724	7,925
Architectural	21,503	20,234	19,107	17,416	15,900	2,982	4,341
Net revenues	50,089	50,033	54,598	85,348	82,976	17,713	19,269
Gross profit	14,779	5,780	13,892	16,288	22,828	2,864	6,844
Income (loss) from operations	2,446	(7,130)	(527)	(3,594)	6,336	(1,217)	1,322
Net income (loss)	$ 2,281	$ (7,869)	$ (1,865)	$ (6,180)	$ 4,635	$ (1,131)	$ 1,181
Net income (loss) per share:							
Basic	$ 0.32	$ (1.03)	$ (0.25)	$ (0.81)	$ 0.58	$ (0.15)	$ 0.14
Diluted	$ 0.29	$ (1.03)	$ (0.25)	$ (0.81)	$ 0.57	$ (0.15)	$ 0.13
Weighted average number of common stock and dilutive common stock equivalents:							
Basic	7,107	7,608	7,421	7,642	8,032	7,743	8,417
Diluted	7,799	7,608	7,421	7,642	8,186	7,743	9,277

	March 31, 2002	
	Actual	Pro Forma As Adjusted
	(In thousands)	
Consolidated Balance Sheet Data:		
Cash and cash equivalents	$ 2,713	$ 3,001
Working capital (deficit)	(4,987)	(93)
Property, plant and equipment, net	47,326	53,326
Total assets	73,067	78,605
Term debt	13,800	9,800
Total liabilities	44,781	36,175
Total stockholders' equity	28,286	42,430

RISK FACTORS

An investment in our common stock involves a high degree of risk. You should consider carefully the following risks, together with all other information included in this prospectus, before you decide to buy our common stock. If any of the following risks actually occur, our business, prospects, financial condition or results of operations would likely suffer materially. As a result, the trading price of our common stock may decline, and you could lose all or part of the money you paid to buy our common stock.

Financial Risks

Our negative working capital position, leverage and historical performance may prevent us from obtaining additional loans.

We have a working capital deficit, significant debt and substantial ongoing debt service obligations. These and other factors related to our business during recent years, including the restatement in 2000 of our financial statements for prior periods, operating losses in 1998, 1999 and 2000, our failure to comply with covenants in our financing agreements and suspension of trading of our common stock on Nasdaq in 2000, may make it difficult for us to secure additional borrowings on favorable terms or at all. We intend to seek additional borrowings, and difficulties in borrowing money could have a material adverse effect on our operations, planned capital expenditures, ability to comply with the terms of government grants and future growth.

Covenants or defaults under our credit agreements may prevent us from borrowing or force us to curtail our operations.

As of March 31, 2002, we had total outstanding obligations under our credit agreements of $21.6 million. Following the application of the proceeds from this offering, approximately $23.1 million of our assets will remain as collateral to secure loans under our credit facilities. Our inability to make timely payments of interest or principal under these facilities could materially adversely affect our ability to borrow money under existing credit facilities, to secure additional borrowings or to function as a going concern. Our current credit facilities contain financial covenants that will require us to meet certain financial performance targets and operating covenants that limit our discretion with respect to business matters. Among other things, these covenants restrict our ability to borrow additional money, create liens or other encumbrances, and make certain payments including dividends and capital expenditures. Many of these loans contain provisions that permit the lender to declare the loans immediately due if there is a material adverse change in our business. These credit facilities also contain events of default that could require us to pay off indebtedness before its maturity. The restrictions imposed by these credit facilities or the failure of lenders to advance funds under these facilities could force us to curtail our operations or have a material adverse effect on our liquidity.

Our ability to borrow is limited by the nature of our equipment and some of our accounts receivable.

Our equipment is custom designed for a special purpose. In addition, a large portion of our accounts receivable are from foreign sales, which are often more difficult to collect than domestic accounts receivable. As a result of the nature of our equipment and accounts receivable, lenders will generally allow us to borrow less against these items as collateral than they would for other types of equipment or domestic accounts receivable.

If we default under our secured credit facilities and financing arrangements, the lenders could foreclose on the assets we have pledged to them requiring us to significantly curtail or even cease our operations.

In connection with our current borrowing facilities and financing arrangements, we have granted security interests in and liens on substantially all of our assets, including our production machines and our Dresden facility, to secure the loans. We are currently being sued under a master sale-leaseback agreement with respect to two of our production machines because we have withheld lease payments in

connection with a dispute with the leasing company. The leasing company holds a security interest in the production machines and may be able to repossess those machines. If the leasing company were to repossess one or more of those machines, our ability to produce product would be materially impaired. Our revenues, gross margins and operating efficiency would also be materially adversely affected. Our obligations under our secured credit facilities contain cross-default and cross-acceleration provisions and provisions that allow the lenders to declare the loans immediately due if there is a material adverse change in our business. If we default under the credit facilities or financing arrangements the lenders could declare all of the funds borrowed thereunder, together with all accrued interest, immediately due and payable. If we are unable to repay such indebtedness, the lenders could foreclose on the pledged assets. If the lenders foreclose on our assets, we would be forced to significantly curtail or even cease our operations.

Our first quarter revenues are generally lower than revenues in the following quarters due to seasonal demand for our products.

Our revenue from the electronic display and architectural markets are affected by seasonality patterns with the highest sales occurring during the second, third and fourth fiscal quarters. During the past three fiscal years, 21% of our sales have occurred during the first quarter with 25%, 29% and 25% occurring during the second, third and fourth quarters, respectively. Demand in the electronic display market is generally at its highest before the holiday season, in our second and third quarters, when production of electronic goods is at its highest. Demand for architectural glass generally increases when the weather is warmer in northern climates and construction activity increases. To a lesser extent, demand for our after-market automotive glass products generally increases when weather is warmer in northern climates and the replacement of glass windows in motor vehicles increases. Lower demand for our products during the first quarter generally results in lower sales, margins and operating results during that quarter. We believe this seasonality in the demand for our products will continue to affect our results in the future.

Our quarterly revenue and operating results are volatile and difficult to predict. If we fail to meet the expectations of public market analysts or investors, the market price of our common stock may decrease significantly.

Our quarterly revenue and operating results have varied significantly in the past and will likely vary significantly in the future. Our revenue and operating results may fall below the expectations of securities analysts or investors in future periods. Our failure to meet these expectations would likely adversely affect the market price of our common stock.

Our quarterly revenue and operating results may vary depending on a number of factors, including:

- fluctuating customer demand, which is influenced by a number of factors, including market acceptance of our products and the products of our customers and end-users, changes in product mix, and the timing, cancellation or delay of customer orders and shipments;
- the timing of shipments of our products by us and by independent subcontractors to our customers;
- manufacturing and operational difficulties that may arise due to, among other things, quality control, capacity utilization of our production machines, unscheduled equipment maintenance, and the hiring and training of additional staff;
- our ability to introduce new products on a timely basis; and
- competition, including the introduction or announcement of new products by competitors, the adoption of competitive technologies by our customers, the addition of new production capacity by competitors and competitive pressures on prices of our products and those of our customers.

We expect to be subject to increased foreign currency risk in our international operations.

In 2002, we expect that 10% to 15% of our revenues will be denominated in euros, primarily related to sales from our Dresden operation, including sales to one of our largest customers, a European automotive glass manufacturer. As a result, our operating results and cash flows may

vary due to fluctuations of the euro against the dollar. In addition, other customers may also make payments in foreign currencies. Also, certain transactions with foreign suppliers are denominated in foreign currencies, primarily yen.

The majority of our international sales are currently invoiced and collected in U.S. dollars. A strengthening in the dollar relative to the currencies of those countries in which we do business would increase the prices of our products as stated in those currencies and could hurt our sales in those countries. Significant fluctuations in the exchange rates between the U.S. dollar and foreign currencies could cause us to lower our prices and thus reduce our profitability. These fluctuations could also cause prospective customers to cancel or delay orders because of the increased relative cost of our products.

Operational Risks

We depend on a small number of customers for nearly all of our sales, and the loss of a large customer could materially adversely affect our revenues or operating results.

Our ten largest customers accounted for approximately 69%, 85%, 85% and 85% of net sales in 1999, 2000, 2001 and the first quarter of 2002, respectively. We have contracts extending past 2002 with only two of these customers. We expect to continue to derive a significant portion of our net sales from this relatively small number of customers. Accordingly, the loss of a large customer could materially hurt our business, and the deferral or loss of anticipated orders from a large customer or a small number of customers could materially reduce our revenue and operating results in any period.

We must continue to develop new products or enhance existing products on a timely basis to compete successfully in a rapidly changing marketplace.

Our future success depends upon our ability to introduce new products, improve existing products and processes to keep pace with technological and market developments, and to address the increasingly sophisticated and demanding needs of our customers, especially in the electronic display and automotive markets. Technological changes, process improvements, or operating improvements that could adversely affect us include:

- the development of competing technologies to our anti-reflective and silver reflector films for liquid crystal displays in the flat panel display industry;
- changes in the way coatings are applied to alternative substrates such as tetra acetate cellulose, or TAC;
- the development of new technologies that improve the manufacturing efficiency of our competitors;
- the development of new materials that improve the performance of products that could compete with our products; and
- improvements in the alternatives to the sputtering technology we use to produce our products, such as plasma enhanced chemical vapor deposition, or PECVD.

Our research and development efforts may not be successful in developing products in the time, or with the characteristics, necessary to meet customer needs. If we do not adapt to technological changes, or process or operating improvements, our competitive position, operations and prospects would be materially adversely affected.

Our ability to successfully identify suitable target companies and integrate acquired companies or technologies may affect our future growth.

A potential part of our continuing business strategy is to consider acquiring companies, products, and technologies that complement our current products, enhance our market coverage, technical capabilities or production capacity, or offer other growth opportunities. Our ability to successfully complete acquisitions requires that we identify suitable target companies, agree on acceptable terms, and obtain acquisition financing on acceptable terms. In connection with these acquisitions, we could incur debt, amortization expenses relating to identified intangibles, impairment charges relating to goodwill, or merger related charges, or could issue stock that would dilute our current shareholders' percentage of ownership. The success of any acquisitions will depend upon our ability to integrate acquired operations, retain and motivate acquired personnel, and increase the customer base of the combined businesses. We cannot assure you that we will be able to accomplish all of these goals. Any future acquisitions would involve certain additional risks, including:

difficulty integrating the purchased operations, technologies, or products;

unanticipated costs, which would reduce our profitability;

diversion of management's attention from our core business;

potential entrance into markets in which we have limited or no prior experience; and

potential loss of key employees, particularly those of the acquired business.

Failure to meet the volume requirements of our customers may result in a loss of business or contractual penalties.

Our long-term competitive position will depend to a significant extent on our manufacturing capacity. The failure to have sufficient capacity, to fully utilize capacity when needed or to successfully integrate and manage additional capacity in the future could adversely affect our relationships with customers and cause customers to buy similar products from our competitors if we are unable to meet their needs. For example, we believe that we lost substantial potential architectural products sales in 2001 because we did not have the capacity to manufacture the required amounts of products. Also, our failure to produce required amounts of products under some of our contracts will result in price reductions on future sales under such contracts or penalties under which we would be required to reimburse the customer for the full cost of any product not delivered in a timely manner, either of which would reduce our gross margins.

We depend on our OEM customers for the sale of our products.

We sell a substantial portion of our products to a relatively small number of original equipment manufacturers, or OEMs. The timing and amount of sales to these customers ultimately depend on sales levels and shipping schedules for the OEM products into which our products are incorporated. We have no control over the volume of products shipped by our OEM customers or shipping dates, and we cannot be certain that our OEM customers will continue to ship products that incorporate our products at current levels or at all. We currently have a long-term contract with only one of our OEM customers. Failure of our OEM customers to achieve significant sales of products incorporating our products and fluctuations in the timing and volume of such sales could be harmful to our business. Failure of these customers to inform us of changes in their production needs in a timely manner could also hinder our ability to effectively manage our business.

We rely upon our OEM customers for information relating to the development of new products so that we are able to meet end-user demands.

We rely on our OEM customers to inform us of opportunities to develop new products that serve end-user demands. If our OEM customers do not present us with market opportunities early enough

for us to develop products to meet end-user needs in a timely fashion, or if the OEMs fail to anticipate end-user needs at all, we may fail to develop new products or modify our existing products for the end-user markets for our products. In addition, if our OEM customers fail to accurately anticipate end-user demands, we may spend resources on products that are not commercially successful.

We depend on a distributor for the sale of our after-market products.

We primarily use one independent distributor to sell our after-market products. We have a distribution agreement with Globamatrix Holdings Pte. Ltd., or Globamatrix, under which we granted an exclusive worldwide license to distribute our after-market applied film in the automotive and architectural glass markets. Failure of Globamatrix to achieve significant sales of products incorporating our products and fluctuations in the timing and volume of such sales could be harmful to our business. We believe that the success of our after-market products will continue to depend upon this distributor.

We face intense competition, which could affect our ability to increase our revenue, maintain our margins and increase our market share.

The market for each of our products is intensely competitive and we expect competition to increase in the future. Competitors vary in size and in the scope and breadth of the products they offer. We compete both with companies using technology similar to ours and companies using other technologies or developing improved technologies. Many of our current and potential competitors have significantly greater financial, technical, marketing and other resources than we have. In addition, many of our competitors have well-established relationships with our current

and potential customers and have extensive knowledge of our industry. In fact, some of our current and potential customers currently produce, or are capable of creating, products that compete with our products.

We may not be able to expand our manufacturing capacity efficiently which could lead to lower gross margins.

We have ordered for our Dresden manufacturing facility a new machine (PM 10), which we anticipate will begin commercial production in the first quarter of 2003. In addition, we anticipate that PM 7 in our Tempe facility will begin commercial production during the third quarter of 2002. During the processes of bringing PM 7 and PM 10 up to commercial production levels, we expect to have decreased manufacturing yields and higher costs, which will lower our gross margins.

We are dependent on key suppliers of materials which may prevent us from delivering product in a timely manner.

We manufacture all of our products using materials procured from third-party suppliers. We do not have long-term contracts with our third-party suppliers, except for an agreement with a third-party supplier to purchase Indium metal through the second quarter of 2003. Certain of the materials we require are obtained from a limited number of sources. Delays or reductions in product shipments could damage our relationships with customers. Further, a significant increase in the price of one or more of the materials used in our products could have a material adverse effect on our cost of goods sold and operating results.

We are dependent on a few qualified subcontractors to add properties to some of our products.

We rely on third-party subcontractors to add properties, such as adhesives, to some of our products. There are only a limited number of qualified subcontractors that can provide some of the services we require and we do not have long-term contracts with any of those subcontractors. Qualifying alternative subcontractors could take a great deal of time or cause us to change product designs. The loss of a subcontractor could adversely affect our ability to meet our scheduled product deliveries to customers, which could damage our relationships with customers. If our subcontractors do not produce a quality product, our yield will decrease and our margins will be lower. Further, a

significant increase in the price charged by one or more of our subcontractors could force us to raise prices on our products or lower our margins, which could have a material adverse effect on our operating results.

We are dependent on key suppliers of production machines which may prevent us from delivering an acceptable product on a timely basis and limit our capacity for revenue growth.

Our production machines are large, complex and difficult to manufacture. It can take up to a year from the time we order a machine until it is delivered. Following delivery, it can take us, with the assistance of the manufacturer, up to six additional months to test and prepare the machine for commercial production. There are a very limited number of companies that are capable of manufacturing these machines. Our inability in the future to have new production machines manufactured and prepared for commercial production in a timely manner would prevent us from delivering product on a timely basis and limit our capacity for revenue growth.

Fluctuations or slowdowns in the overall electronic display industry have and may continue to adversely affect our revenues.

Our business depends in part on sales by manufacturers of products that include electronic displays. The markets for electronic display products are highly cyclical and have experienced periods of oversupply resulting in significantly reduced demand for our products. For example, due to the deteriorating economic environment, sales by flat panel cathode ray tube manufacturers decreased in 2001, contributing to our electronic display product revenues declining by 38% from 2000. If the flat panel display and other electronic display markets in which we sell our products do not recover or experience further slowdowns in the future, it could cause revenues from our electronic display products to decrease.

Performance, reliability or quality problems with our products may cause our customers to reduce or cancel their orders.

We manufacture our products based on specific, technical requirements of each of our customers. We believe that future orders of our products will depend in part on our ability to maintain the performance, reliability and quality standards required by our customers. If our products have performance, reliability or quality problems, then we may experience:

- delays in collecting accounts receivable;

higher manufacturing costs;

additional warranty and service expenses; and

reduced or cancelled orders.

For example, in 1998, our operating results were materially adversely affected by quality problems associated with the electronic display film produced by us for one of our largest customers.

If we fail to recruit and retain a significant number of qualified technical personnel, we may not be able to develop, enhance and introduce our products on a timely basis, and our business will be harmed.

We require the services of a substantial number of qualified technical personnel. The market for skilled technical personnel is characterized by intense competition and aggressive recruiting, as well as a high-level of employee mobility. These characteristics make it particularly difficult for us to attract and retain the qualified technical personnel we require. We have experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate technical qualifications. It is especially difficult for us to recruit qualified personnel to move to the location of our Palo Alto, California offices because of the high-cost of living. If we are unable to recruit and retain a sufficient number of qualified technical employees, we may not be able to complete the

development of, or enhance, our products in a timely manner. As a result, our business may be harmed and our operating results may suffer.

We may be unable to attract or retain the other highly skilled employees that are necessary for the success of our business.

In addition to our dependence on our technical personnel, our success also depends on our continuing ability to attract and retain other highly skilled employees. We depend on the continued services of our senior management, particularly Thomas G. Hood, our President and Chief Executive Officer, Robert R. Freeman our Chief Financial Officer, Dr. Sicco W. T. Westra, our Senior Vice President, Sales and Marketing, and Wolfgang Heinze, our plant manager in Dresden, and other personnel. We do not have employment contracts with any of our officers or key person life insurance covering any officer or employee. Our officers have technical and industry knowledge that cannot easily be replaced. Competition for similar personnel in our industry where we operate is intense. We have experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled employees with appropriate qualifications. If we do not succeed in attracting or retaining the necessary personnel, our business could be adversely affected.

If we are unable to adequately protect our intellectual property, third parties may be able to duplicate our products or develop functionally equivalent or superior technology.

Our success depends in large part upon our proprietary technology. We rely on our know-how, as well as a combination of patent, trademark and trade secret protection, to establish and protect our intellectual property rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Policing unauthorized use of our products is difficult. Our means of protecting our proprietary rights may not be adequate. In addition, the laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States. During 2001, one of our U.S. patents relating to our architectural products expired. In the next three years, two more U.S. patents will expire. Expiration of these patents or our failure to adequately protect our proprietary rights may allow third parties to duplicate our products or develop functionally equivalent or superior technology. In addition, our competitors may independently develop similar technology or design around our proprietary intellectual property.

Our business is susceptible to numerous risks associated with international operations.

We have expanded our operations and hired additional personnel to address international markets for the thin film coatings industry. International revenues amounted to approximately 78%, 85%, 87% and 86% of our net revenues during 1999, 2000, 2001 and the first quarter of 2002, respectively. The distance between Palo Alto and Dresden creates logistical and communications challenges. In addition, to achieve acceptance in international markets, our products must be modified to handle a variety of factors specific to each international market as well as local regulations. We may also be subject to a number of other risks associated with international business activities. These risks include:

unexpected changes in and the burdens and costs of compliance with a variety of foreign laws and regulatory requirements;

potentially adverse tax consequences; and

global economic turbulence and political instability.

Labor strikes in Germany could disrupt the production schedule of automotive products that incorporate our films, which could have a material adverse effect on our revenues.

On May 6, 2002, German metal workers represented by IG Metal began rolling strikes against a number of companies in Germany, including DaimlerChrysler, in connection with negotiations over a

new labor contract. Our customers in the automotive glass market sell glass incorporating our products to German automobile manufacturers including DaimlerChrysler. A prolonged strike by IG Metal or other workers or a significant delay in DaimlerChrysler's production schedule or the production schedules of others as a result of labor activity could disrupt the demand for our products, which would adversely affect our revenues.

If we fail to comply with environmental regulations, our operations could be suspended.

We use hazardous chemicals in producing our products and have air and water emissions that require controls. As a result, we are subject to a variety of local, state and federal governmental regulations relating to the storage, discharge, handling, emission, generation, manufacture and disposal of toxic or other hazardous substances used to manufacture our products, compliance with which is expensive. Our failure to comply with current or future regulations could result in the imposition of substantial fines on us, suspension of production, alteration of our manufacturing processes, increased costs or cessation of operations.

We rely on our domestic sales representatives, without whom our architectural product sales may suffer.

We use independent sales representatives to promote our Heat Mirror products to architects in the United States. If some or all of our sales representatives experience financial difficulties, or otherwise become unable or unwilling to promote our products, our business could be harmed. These sales representatives could reduce or discontinue promotion of our products. They may not devote the resources necessary to provide effective marketing support to us. In addition, we depend upon the continued viability and financial resources of these representatives, many of which are small organizations with limited working capital. These representatives, in turn, depend substantially on general economic conditions and other factors affecting the markets for the products they promote. We believe that our success in this market will continue to depend upon these sales representatives.

We may experience unanticipated warranty or other claims with respect to our products which may lead to extensive litigation costs and expenses.

In the ordinary course of business, we have periodically become engaged in litigation principally as a result of disputes with customers of our architectural products. We have settled some of these suits and others are pending. We may become engaged in similar or other lawsuits in the future. For example, we have recently received a letter that threatens litigation based upon the allegation that a sealant provided by a third party and used with our film was defective, and as a result the plaintiff has suffered elevated warranty replacement claims and costs. Some of our products that have been the basis for lawsuits against us could be the basis for future lawsuits. An adverse outcome in the defense of a warranty or other claim could subject us to significant liabilities to third parties. Any litigation, regardless of the outcome, could be costly and require significant time and attention of key members of our management and technical personnel.

We may face extensive damages or litigation costs if our insurance carriers seek to have us indemnify them for settlements of past and outstanding litigation.

Several of our insurance carriers have reserved their rights to seek indemnification from us for substantial amounts paid to plaintiffs by the insurance carriers as part of settlements of litigation relating to our architectural products. Our insurance carriers in a case in which the plaintiff alleged we were responsible for defects in window products manufactured by others have advised us that they intend to seek reimbursement for settlement and defense costs. Any claims, with or without merit, could require significant time and attention of key members of our management

and result in costly litigation. Some of the proceeds of this offering could be used to defend or satisfy obligations arising from this potential litigation.

Offering Risks

Our stock price could fluctuate widely in response to various factors, many of which are beyond our control.

The market price of our common stock has been, and we expect will continue to be, subject to significant fluctuations. For example, over the past year the closing market price of our common stock has fluctuated between $2.60 on May 22, 2001 and $4.76 on July 1, 2002 while reaching a high of $15.45 on April 17, 2002. Factors affecting our market price include:

- the limited number of shares of common stock available for purchase or sale in the public markets;
- sales or purchases of large blocks of our shares;
- quarterly variations in our results of operations;
- failure to meet earnings estimates;
- changes in earnings estimates or buy/sell recommendations by analysts;
- the operating and stock price performance of comparable companies;
- developments in the financial markets;
- the announcement of new products or product enhancements or business results by us or our competitors; and
- general market conditions or market conditions specific to the industries in which we operate.

Recent events have caused stock prices for many companies, including our company, to fluctuate in ways unrelated or disproportionate to their operating performance. General economic and political events may affect market conditions generally, and, in particular, the market price of our common stock. These events and market trends are beyond our control. The market price of our common stock at any particular time may not remain the market price in the future.

Certain provisions of our charter, by-laws and Delaware law make a takeover difficult.

Certain provisions of our corporate charter and by-laws and Delaware law, might discourage, delay or prevent a change of control or a change in our management, even if such changes would be beneficial to our stockholders. These provisions include the ability of our board of directors, without stockholder approval, to issue any class or series of preferred stock with dividend rights, dividend rates, conversion rights, redemption rights, preferences on liquidation or dissolution, voting rights and any other preferences, which could adversely affect the voting and other rights of the holders of common stock. These provisions could discourage proxy contests and make it more difficult for you and other stockholders to elect directors and take other corporate actions. We also have a severance policy that covers all of our officers and some of our key employees under which they may become entitled to special benefits in connection with certain changes in control of Southwall. The existence of all of these provisions and policies could limit the price that investors might be willing to pay for shares of our common stock and could deprive you of an opportunity to receive a premium for your common stock as part of a sale of Southwall. See "Description of Capital Stock."

The market price of our common stock may drop significantly when the restrictions on resale by our existing securityholders lapse.

Following this offering, we will have approximately 12.1 million shares of common stock outstanding. Holders of approximately 1,612,129 shares have agreed not to sell these shares for at least 180 days following the date of this prospectus. As these restrictions on resale end, the market price of our common stock could drop significantly if holders of these shares sell them or if the market perceives they intend to sell them. We also currently have 1,401,859 shares subject to outstanding options under our 1997 stock incentive plan with a weighted average exercise price of $5.24 per share

and 694,345 shares subject to outstanding options under our 1998 stock option plan with a weighted average purchase price of $6.61 per share, all of which may be exercised and sold by option holders in the future. These potential future exercises and sales also may make it difficult for us to sell equity securities in the future at a time and price that we deem appropriate.

FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements, as that term is defined in the Private Securities Litigation Reform Act of 1995, that are subject to a number of risks and uncertainties. All statements other than statements of historical facts are forward-looking statements. These statements are identified by terminology such as "may," "will," "could," "should," "expects," "plans," "intends," "seeks," "anticipates," "believes," "estimates," "potential," or "continue," or the negative of such terms or other comparable terminology, although not all forward-looking statements contain these identifying words. Forward-looking statements are only predictions and include statements relating to:

- our strategy, future operations and financial plans, including, without limitation, our plans to install and commercially produce products on new machines;
- future applications of thin film coating technologies and our development of new products;
- our projected need for additional borrowings and our future liquidity;
- our competition;
- our expectations with respect to future grants, investment allowances and bank guarantees from the Saxony government;
- statements about the future size of markets;
- pending and threatened litigation and its outcome;
- our use of the proceeds of this offering; and
- our projected capital expenditures.

You should not place undue reliance on our forward-looking statements. Actual events or results may differ materially. In evaluating these statements, you should specifically consider various factors, including the risks outlined under "Risk Factors." These factors may cause our actual results to differ materially from any forward-looking statement. Although we believe the expectations reflected in our forward-looking statements are reasonable as of the date they are being made, we cannot guarantee our future results, levels of activity, performance, or achievements. Moreover, neither we nor any other person assumes responsibility for the future accuracy and completeness of these forward-looking statements.

USE OF PROCEEDS

We estimate our net proceeds from the sale of 3,500,000 shares of common stock that we are offering by means of this prospectus will be approximately $14.1 million, at the public offering price of $4.50 per share, after deducting estimated underwriting discounts and commissions, and offering expenses. If the underwriters' over-allotment option is exercised in full, we estimate our net proceeds will be approximately $16.3 million. We will not receive any proceeds from the sale of shares in the over- allotment option by the selling stockholders.

We intend to use a portion of our net proceeds from this offering as follows:

to pay off the outstanding balance of our accounts receivable financing line of credit, which as of June 30, 2002 was approximately $3.4 million; this indebtedness bears interest at 0.88% per month of the average daily balance of accounts receivable against which we have borrowed and expires in June 2003;

approximately $2.5 million to pay down a note payable to a Japanese bank and guaranteed by Teijin Limited; this indebtedness bears interest per annum at a percentage rate of LIBOR plus 1.0% and we are required to make equal semi-annual principal repayments of $1.25 million each May and November until the note is fully repaid in November 2004; the $2.5 million we intend to repay in 2002 would be applied towards the last two required payments;

approximately $2.0 million to replace our enterprise resource planning system;

approximately $2.5 million towards the purchase of a new production machine (PM 10);

approximately $1.5 million to maintain and update our production facilities in Palo Alto and Tempe; and

approximately $0.75 million to partially repay a loan from a German bank; this loan bears interest at 5.8% per annum on the total committed amount under the loan of $1.5 million and is due in June 2009.

The remaining net proceeds from this offering may be used as follows:

to make future acquisitions of product lines or technologies or other companies, although we currently have no acquisition agreements or understandings in place;

the potential resolution of disputes with insurers or settlement of litigation, including litigation with Matrix Funding Corporation arising out of sale-leaseback agreements for two of our production machines; and

the balance for funding of working capital and general corporate purposes.

With respect to the balance of the net proceeds after the repayment of debt, replacement of our enterprise resource planning system, the purchase of PM 10 and the maintenance and updating of our production facilities in Palo Alto and Tempe, we have not determined the amount of net proceeds to be used for the other purposes indicated. Accordingly, our management will have flexibility in applying net proceeds of the offering. Pending any use, we intend to invest our net proceeds from this offering in short-term, interest-bearing, investment-grade securities, certificates of deposit or direct or guaranteed obligations of the United States.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock, and we do not anticipate paying cash dividends in the foreseeable future. We currently intend to retain future earnings, if any, to fund the expansion and growth of our business. Payment of future cash dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion.

CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2002 on an actual basis and on a pro forma as adjusted basis to reflect the sale by us of 3,500,000 shares of common stock offered hereby at the public offering price of $4.50 per share, after deducting the estimated underwriting discount and estimated offering expenses payable by us, and to reflect the net proceeds of the offering as applied.

This information should be read in conjunction with our consolidated financial statements and notes thereto, appearing elsewhere in this prospectus.

	March 31, 2002	
	Actual	Pro Forma as Adjusted
	(in thousands)	
Line of credit	$ 4,606	$
Current portion of long-term debt	$ 7,579	$ 7,579
Term debt, less current portion	13,800	9,800
Total long-term debt	$ 21,379	$ 17,379
Stockholders' equity:		
Common Stock, $0.001 par value: 20,000 shares authorized; 8,562 shares issued and outstanding (actual); 12,062 shares issued and outstanding (pro forma as adjusted)	9	12
Capital in excess of par value	53,467	67,608
Notes receivable	(103)	(103)
Translation loss on subsidiary	(356)	(356)
Accumulated deficit	(24,731)	(24,731)
Total stockholders' equity	28,286	42,430
Total capitalization	$ 49,665	$ 59,809

This information excludes 1,979,494 shares, which consist of:

1,450,653 shares subject to outstanding options as of March 31, 2002 under our 1997 stock incentive plan, with a weighted average exercise price of $5.24 per share; and

528,841 shares subject to outstanding options as of March 31, 2002 under our 1998 stock option plan for employees and consultants, with a weighted average exercise price of $5.20 per share.

PRICE RANGE OF COMMON STOCK

Our common stock has been traded on the Nasdaq National Market System under the symbol "SWTX" since the completion of our initial public offering in June 1987. From August 2, 2000 through November 28, 2000, the trading of our common stock was suspended by Nasdaq in connection with the restatement of our financial statements. Prices in the following table represent the high and low closing sales prices per share for our common stock as reported by Nasdaq during the periods indicated.

	High	Low
2000		

	High	Low
First quarter	$ 11.87	$ 4.68
Second quarter	11.25	7.37
Third quarter	14.00	6.12
Fourth quarter	4.17	2.62
2001		
First quarter	3.63	2.00
Second quarter	3.47	2.03
Third quarter	5.41	2.97
Fourth quarter	7.26	4.55
2002		
First quarter	12.99	7.19
Second quarter	15.45	4.68

On July 1, 2002 the last reported sale price for our common stock as reported on Nasdaq was $4.76 per share. On such date, there were approximately 350 holders of record of our common stock, and we believe there were approximately 3,000 beneficial owners of our common stock.

SELECTED CONSOLIDATED FINANCIAL DATA

(in thousands, except per share data)

The following selected consolidated financial data as of and for the five years ended December 31, 2001 are derived from our audited consolidated financial statements. The following selected consolidated financial data as of and for the three months ended April 1, 2001 and March 31, 2002 have been derived from our unaudited consolidated financial statements for the three months ended March 31, 2002. In the opinion of management, such unaudited financial statements have been prepared on the same basis as the audited financial statements referred to above and include all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of results of operations for the indicated period when read in conjunction with our audited financial statements and related notes. Results of operations for the three months ended March 31, 2002 are not necessarily indicative of the results that may be expected for the full year. This information should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this prospectus.

	Year Ended December 31,					Quarter Ended	
	1997	1998	1999	2000	2001	April 1, 2001	March 31, 2002
Consolidated Statements of Operations Data:							
Net revenues by product:							
Automotive glass	$ 6,629	$ 12,845	$ 19,477	$ 20,198	$ 37,385	$ 8,007	$ 7,003
Electronic display	21,957	16,954	16,014	47,734	29,691	6,724	7,925
Architectural	21,503	20,234	19,107	17,416	15,900	2,982	4,341
Total net revenues	50,089	50,033	54,598	85,348	82,976	17,713	19,269
Cost of sales	35,310	44,253	40,706	69,060	60,148	14,849	12,425
Gross profit	14,779	5,780	13,892	16,288	22,828	2,864	6,844
Operating expenses:							
Research and development	3,117	3,864	5,249	6,732	5,456	1,425	1,777
Selling, general and administrative	9,216	9,046	8,670	12,614	11,036	2,656	3,745

						Quarter Ended	
Legal settlement			500	536			
Total operating expenses	12,333	12,910	14,419	19,882	16,492	4,081	5,522
Income (loss) from operations	2,446	(7,130)	(527)	(3,594)	6,336	(1,217)	1,322
Interest expense, net	(428)	(1,150)	(1,350)	(2,808)	(2,872)	(757)	(466)
Other income, net	408	469	62	350	1,385	864	378
Income (loss) before provision for income taxes	2,426	(7,811)	(1,815)	(6,052)	4,849	(1,110)	1,234
Provision for income taxes	(145)	(58)	(50)	(128)	(214)	21	53
Net income (loss)	$ 2,281	$ (7,869)	$ (1,865)	$ (6,180)	$ 4,635	$ (1,131)	$ 1,181
Net income (loss) per share:							
Basic	$ 0.32	$ (1.03)	$ (0.25)	$ (0.81)	$ 0.58	$ (0.15)	$ 0.14
Diluted	$ 0.29	$ (1.03)	$ (0.25)	$ (0.81)	$ 0.57	$ (0.15)	$ 0.13
Weighted average number of common stock and dilutive common stock equivalents:							
Basic	7,107	7,608	7,421	7,642	8,032	7,743	8,417
Diluted	7,799	7,608	7,421	7,642	8,186	7,743	9,277

	As of December 31,					As of	
	1997	1998	1999	2000	2001	April 1, 2001	March 31, 2002
Consolidated Balance Sheet Data:							
Cash and cash equivalents	$ 10,524	$ 4,136	$ 1,772	$ 61	$ 3,362	$ 218	$ 2,713
Working capital (deficit)	23,999	(4,256)	(11,699)	(32,148)	(6,471)	(32,593)	(4,987)
Property, plant and equipment, net	26,272	29,068	43,533	49,884	47,841	48,876	47,326
Total assets	61,469	54,019	70,142	80,462	73,158	74,049	73,067
Term debt	15,539	141	10,000		14,513		13,800
Total liabilities	25,729	28,202	45,562	60,324	46,706	55,347	44,781
Total stockholders' equity	35,740	25,817	24,580	20,138	26,452	18,702	28,286

	Year Ended December 31,					Quarter Ended	
	1997	1998	1999	2000	2001	April 1, 2001	March 31, 2002
Selected Cash Flow Data:							
Cash provided by (used in) operating activities	$ 84	$ 4,347	$ 4,523	$ 1,188	$ 13,791	$ 2,222	$ (947)
Net cash provided by (used in) investing activities	(11,727)	(7,190)	(25,942)	(12,855)	(5,698)	940	(367)
Net cash provided by (used in) financing activities	14,748	(3,545)	19,055	9,558	(4,793)	(3,005)	665
Net increase (decrease) in cash and cash equivalents	3,105	(6,388)	(2,364)	(1,711)	3,301	157	(649)

Quarterly Results of Operations:

The following table sets forth statements of operations data for the nine fiscal quarters ended March 31, 2002. This information has been derived from our unaudited consolidated financial statements and has been prepared on the same basis as our audited consolidated financial statements contained in this prospectus. It includes all adjustments, consisting of normal recurring adjustments only, that we consider necessary for a fair presentation of such information when read in conjunction with our audited financial statements and related notes. Operating results for any quarter are not necessarily indicative of results for any future period. This information should be read together with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included elsewhere in this prospectus.

Selected Quarterly Financial Information
(Unaudited)

	Quarters Ended								
	April 2, 2000	July 2, 2000	Oct. 1, 2000	Dec. 31, 2000	April 1, 2001	July 1, 2001	Sep. 30, 2001	Dec. 31, 2001	March 31, 2002
Net revenues	$ 17,109	$ 20,928	$ 26,361	$ 20,950	$ 17,713	$ 21,946	$ 22,777	$ 20,540	$ 19,269
Cost of sales	14,783	16,922	19,399	17,956	14,849	16,320	15,629	13,350	12,425
Gross profit	2,326	4,006	6,962	2,994	2,864	5,626	7,148	7,190	6,844
Income (loss) before provision for income taxes	(1,647)	(1,606)	(1,530)	(1,269)	(1,110)	1,104	2,420	2,435	1,234
Net income (loss)	(1,683)	(1,647)	(1,548)	(1,302)	(1,131)	1,184	2,409	2,172	1,181
Net income (loss) per share									
Basic	$ (0.22)	$ (0.22)	$ (0.20)	$ (0.17)	$ (0.15)	$ 0.15	$ 0.29	$ 0.26	$ 0.14
Diluted	$ (0.22)	$ (0.22)	$ (0.20)	$ (0.17)	$ (0.15)	$ 0.15	$ 0.28	$ 0.25	$ 0.13

Our results of operations can vary significantly from quarter to quarter. As a result of our high fixed costs, if revenues fall significantly below our expectations, we will not be able to reduce our spending sufficiently to prevent a loss from operations. We anticipate that we will continue to have long sales cycles. Therefore, the timing of future customer contracts could be difficult to predict, making it very difficult to predict revenues in future quarters, and our operating results may vary significantly.

Our revenue from the electronic display and architectural markets is affected by seasonality patterns with the highest sales occurring during the second, third and fourth fiscal quarters. During the past three fiscal years, 21% of our sales have occurred during the first quarter with 25%, 29% and 25% occurring during the second, third and fourth quarters, respectively. Demand in the electronic display market is generally at its highest before the holiday season, in our second and third quarters, when production of electronic goods is at its highest. Demand for architectural glass generally increases when the weather is warmer in northern climates and construction activity increases. Lower demand for our products during the first quarter generally result in lower sales and operating results during that quarter. In addition, our sales of electronic display products were adversely affected in 2001 by a worldwide decline in the personal computer industry.

During 2001, our Dresden facility, at which PM 8 and PM 9 are located, commenced production of commercial product for the automotive market. This expansion in our overall manufacturing capacity allowed us to increase significantly our sales to the automotive market in 2001, compared with 2000.

Other factors that could affect our quarterly operating results include those described elsewhere in this prospectus and the following:

- fluctuating customer demand, which is influenced by a number of factors, including market acceptance of our products and the products of our customers and end-users, changes in product mix, and the timing, cancellation or delay of customer orders and shipments;

- the timing of shipments of our products by us and by independent subcontractors to our customers;

manufacturing and operational difficulties that may arise due to, among other things, quality control, capacity utilization of our production machines, unscheduled equipment maintenance, and the hiring and training of additional staff;

The progress and outcome of litigation with which we are involved;

The announcement, consummation or integration by us of any acquired businesses, technologies or products;

our ability to introduce new products on a timely basis; and

competition, including the introduction or announcement of new products by competitors, the adoption of competitive technologies by our customers, the addition of new production capacity by competitors and competitive pressures on prices of our products and those of our customers.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with "Selected Consolidated Financial Data" and our consolidated financial statements and notes thereto appearing elsewhere in this prospectus. This discussion and analysis contains forward-looking statements that involve risks and uncertainties. You should not place undue reliance on these forward-looking statements. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of certain important factors, including, but not limited to, those set forth under "Risk Factors" beginning on page 7 of this prospectus.

Overview

We are a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. We have developed a variety of products that control sunlight in automotive glass, reduce light reflection and improve image quality in electronic display products and conserve energy in architectural products. Our products consist of transparent solar-control films for automotive glass; anti-reflective films for computer screens, including flat panel displays, plasma displays, and transparent conductive films for use in touch screen and liquid crystal displays; energy control films for architectural glass; and various other coatings.

From our founding in 1979 through the early 1990s, we developed and produced thin film coated substances primarily for residential and commercial building applications, and for military applications. In the early 1990s, we began to develop products for the automotive and electronic display markets. In 1996, we realized our first material revenue from the automotive and electronic display markets. In 2001, automotive glass products accounted for approximately 45% of our revenues, electronic display products accounted for approximately 36% of our revenues, and architectural products accounted for approximately 19% of our revenues. Revenues from international customers accounted for 78%, 85%, 87% and 86% of our net revenues in 1999, 2000, 2001 and the first quarter of 2002, respectively.

In the second half of 2000, we restated our previously issued financial statements for the first quarter of 2000 and for the year 1999. The restatement was primarily related to an overstatement of licensing revenues and inventory and under-recognition of expenses. Following the restatement, we implemented additional processes and procedures as well as increased staffing to strengthen our internal accounting controls. In connection with the restatement, Nasdaq suspended trading in our common stock for over three months. In addition, following the announcement of the need to restate our financial statements, we and some of our officers were named as defendants in seven lawsuits, all alleging violations of the federal securities laws. We settled these lawsuits in 2001. The settlement required us and the other defendants to pay the plaintiff class $4.2 million, which was paid by our insurer.

Recent Development

On June 24, 2002, we disclosed preliminary estimates of our financial results for the quarter ended June 30, 2002, indicating that we expected revenues for the quarter to be between $19.5 million and $20.5 million and net income for the quarter to be between $1.2 million and

$1.4 million. We also disclosed preliminary estimates of our financial results for the fiscal year ended December 31, 2002, indicating that we expected revenues for 2002 to be between $78.0 million and $82.0 million and net income for 2002 to be between $4.8 million and $5.2 million before including any adjustments from the sale of common stock that we are offering by means of this prospectus. These estimates are, however, subject to certain assumptions, risks and uncertainties that could cause actual revenues or net income for our second quarter or 2002 to be different than the estimates presented.

We expect the remainder of 2002 to continue to be affected by a slowdown in sales by European automobile manufacturers. We do not anticipate a significant improvement, if any, over our first

quarter sales to the automotive market for any of the remaining quarters of 2002. However, we recently announced a new ten-year distribution agreement with Globamatrix Holdings Pte. Ltd., or Globamatrix, which includes commitments by Globamatrix to purchase an annually increasing amount, subject to volume and quality standards, of our solar control products for retrofit applications to the automotive and residential and commercial architectural glass markets. As a result, we believe that we will have somewhat greater revenues from Globamatrix in 2002 than in 2001, and that this growth will continue through 2003.

Our revenues from the CDT portion of our electronic display business have declined during 2002 as compared to 2001 primarily due to lower prices. During the same period, however, sales to the liquid crystal and plasma display portions of this market have increased. We recently started shipping production quantities and sizes of new films specifically designed for the liquid crystal display and plasma display panel markets that maintain optical clarity while reducing the reflection of ambient light to improve image quality. We expect the decline of the CDT portion of our electronic display business and the growth in sales of our new electronic display films to continue through 2003.

Due to production capacity constraints, in the past we have not allocated resources to expanding revenues from our architectural products. Additional production capacity for architectural products has recently been created, in part, by the addition of our new Dresden facility. Our revenues from our architectural business have increased during 2002 as compared to 2001, and we expect that the availability of production capacity in 2003 will allow for continued growth in this business. However, we can give no assurances that availability of production capacity will increase our revenues from architectural products.

Historical Factors Affecting Our Financial Condition and Results of Operations

As described in more detail below, our financial condition and results of operations are affected by a number of factors, including our financing arrangements, expansion of our manufacturing capacity, demand for our customers' products, our relationships with customers and suppliers, product warranty claims, fluctuations in our selling, general and administrative expenses, and the mix of products that we sell. Over the past several years, these factors have contributed to volatility in our results of operations and cash flows and have significantly affected our financial position.

Our financing arrangements. We incurred net losses from operating activities in 1998, 1999 and 2000. As a result of these net losses, together with the restatement in 2000 of our financial statements for prior periods and the suspension of trading of our common stock on Nasdaq in 2000, we were in default, as of December 31, 2000, under our German bank loans, our sale-leaseback agreement and our Japanese bank loan and the guarantee by Teijin of that loan. As a result, we reclassified all of the debt under those arrangements as current liabilities as of December 31, 2000. Accordingly, there was substantial doubt about our ability to continue as a going concern at December 31, 2000.

At December 31, 2001 and March 31, 2002, we had made all payments required to be made through those dates under our German bank loans and our Japanese bank loan guaranteed by Teijin. We were in compliance with all of the covenants of the German bank loans. We have received waivers from Teijin and the Japanese bank of our defaults under the financial covenants of the Teijin guarantee. As a result, we have classified $9.2 million outstanding under the German bank loans and $5.0 million outstanding under the Japanese bank loan guaranteed by Teijin as long-term liabilities as of December 31, 2001 and March 31, 2002.

During 1999, we entered into a sale-leaseback agreement for two of our production machines with an equipment leasing company. The leasing company has filed bankruptcy proceedings. Because we have an option to purchase the machines at the end of the lease periods, we treat these sale-leaseback arrangements as financings. During 2001, a dispute arose between us and an agent purporting to act on behalf of the leasing company. The agent has recently filed suit against us to recover the unpaid lease payments and alleged residual value of the machines. As a result, we have classified $3.3 million as

short-term liabilities ($4.3 million outstanding under the sale-leaseback agreement, less $1.0 million of the amounts due from the leasing company that was not funded).

Expansion of our manufacturing capacity. The expansion of our manufacturing capacity has affected our results of operations, cash flows and financial position. We have invested $55.0 million in new production capacity in Tempe and Dresden since 1997. The expansion has been financed by a combination of term loans, investment incentive grants from the government of the State of Saxony, in Germany, short-term borrowings, and cash flows from operating activities. Our results of operations, profitability, cash flows, stockholders' equity and financial position were adversely affected by initial start up costs and the lower production yields we generally experience before our new production machines reach commercial production levels. As a result, our financial position has been weakened by reduced liquidity and higher leverage.

Demand for our customers' products. Volatility in our customers' markets affects our results of operations. Demand for our customers' products has changed rapidly from time to time in the past and may do so in the future. For example, partly as a result of changing demand in the personal computer industry from 1999 through 2001, our electronic display revenues rose from $16.0 million in 1999 to $47.7 million in 2000 then declined to $29.6 million in 2001. We can also be affected when the markets for the products in which our films are used evolve to new technologies, such as the evolution from cathode ray tubes, or CRTs, to flat panel displays. Additionally, our results of operations and cash flows can vary significantly from quarter to quarter as we experience seasonal fluctuations in revenue from our customers in the electronic display and architectural markets.

Our customer and supplier relationships. We derive significant benefits from our relationships with a few large customers and suppliers. Our revenues and gross profit can increase or decrease rapidly reflecting underlying demand for the products of one or a small number of our customers. In addition, a customer relationship may become unprofitable. For example, in the fourth quarter of 1998, we discovered quality issues with product that had been shipped to Sony, a significant customer at that time, and with other film that was still in our inventory. We recorded a $4.0 million provision in the fourth quarter of 1998 to account for product returned from Sony and the related write-off of inventory. We discontinued the manufacture and sale of film to Sony in 1999. Sony accounted for 33%, 7% and 0% of our total revenues in 1998, 1999 and 2000. We may also be unable to replace a customer when a relationship ends or demand for our product declines as a result of evolution of our customer's products. In 1999, we began our relationship with Mitsubishi Electric Company, or Mitsubishi, which accounted for 38% and 21% of our total revenues in 2000 and 2001, respectively. In 1999, we expanded our relationship with customers in the automotive glass market, including Pilkington PLC, Saint Gobain and Globamatrix Holdings Pte. Ltd., or Globamatrix, which collectively accounted for approximately 46% of our total revenues in 2001.

In addition, Teijin, one of our suppliers, has guaranteed our loan from a Japanese bank in the original principal amount of $10.0 million, the proceeds of which we used to fund capital expenditures. Teijin and Globamatrix are investors in us, over time having purchased a total of 1.1 million shares of our common stock and, as of May 20, 2002, continue to hold 1.1 million shares, or approximately 13% of the outstanding stock. In addition, to assist us with our short-term liquidity needs, some of our key vendors, such as Teijin and Lintec Inc., have extended the amount of time in which we are required to repay amounts we owe to them.

Product warranty claims. Our gross margins and profitability have been adversely affected from time to time by product quality claims. From 1999 to 2001, our warranty provision has averaged 4.0% of net revenues. In 1998, our gross profit was reduced by $4.0 million related to product we produced for Sony.

Fluctuations in our selling, general and administrative expenses. Our selling, general and administrative expenses increased significantly in 2000 due to facility costs and expansion, and

nonrecurring professional fees. Our Palo Alto facility rents increased by $1.7 million in 2000 pursuant to lease extensions entered into for all of our Palo Alto properties. Our nonrecurring legal and accounting expenses totaled $1.6 million in 2000 and were primarily related to the restatement of our previously issued first quarter 2000 and fiscal 1999 financial statements.

Product mix. Product mix affects our gross margins on the products we sell. Our product mix is determined by new products and applications that we have developed, end-customer market demand for products which use our applications, the availability of our production capacity and the allocation of our resources to meet demand for our products in markets we target. Generally, our gross margins on sales of electronic display film are lower than automotive and architectural products due to the additional costs for higher levels of outside processing required for electronic display film.

Application of Critical Accounting Policies and Estimates

The preparation of our financial statements requires us to make estimates and assumptions that affect the amounts of assets and liabilities we report, our disclosure of contingencies, and the amounts of revenue and expenses we report in our financial statements. If we used different judgments or different estimates, there might be material differences in amount and timing of revenues and expenses we report. See Note 1 of our notes to consolidated financial statements for details of our accounting policies. The critical accounting policies, judgment and estimates, which we believe have the most significant effect on our financial statements, are set forth below:

Revenue recognition;

Allowances for doubtful accounts and warranties;

Valuation of inventories;

Assessment of the probability of the outcome of current litigation; and

Accounting for income taxes.

Revenue recognition. We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred or services have been provided, the sale price is fixed or determinable, and collectibility is reasonably assured. Accordingly, we generally recognize revenue from product sales when the terms of sale transfer title and risk of loss, which occurs either upon shipment or upon receipt by customers. In connection with product sales, we make allowances for estimated returns and warranties. We adjust these allowances periodically to reflect our actual and anticipated experience. Revenue recognition in each period is dependent on our application of this accounting policy. If all conditions to recognize revenue are not met, we defer revenue recognition.

Allowances for doubtful accounts and warranties. We establish allowances for doubtful accounts and warranties for specifically identified, as well as anticipated, doubtful accounts and warranty claims based on credit profiles of our customers, current economic trends, contractual terms and conditions, and historical payment and warranty experience. As of December 31, 2001, our balance sheet included allowances for doubtful accounts of $0.4 million and $2.6 million for warranties. As of March 31, 2002, our balance sheet included allowances for doubtful accounts of $0.4 million and $3.0 million for warranties. During 1999, 2000, 2001 and the first quarter of 2002, we charged $1.9 million, $3.0 million, $3.9 million and $0.7 million, respectively, against revenue for warranty expense. Bad debt expenses were $0.3 million, $(0.1) million, $0.4 million and $0.1 million during 1999, 2000, 2001 and the first quarter of 2002, respectively. If we experience actual bad debt and warranty expense different from estimates or we adjust our estimates in future periods, our operating results, cash flows and financial position could be materially adversely affected.

Valuation of inventories. We state inventories at the lower of cost or market. We establish provisions for excess and obsolete inventories after periodic evaluation of historical sales, current economic trends, forecasted sales, predicted lifecycle and current inventory levels. During 1999, 2000,

2001 and the first quarter of 2002, we charged $0.6 million, $0.5 million, $1.1 million and $0.1 million against cost of sales for excess and obsolete inventories. If we adjust our estimates, such forecasted sales and expected product lifecycle, our operating results, cash flows and financial position could be materially adversely affected.

Assessment of the probability of the outcome of current litigation. In the ordinary course of business, we have periodically become engaged in litigation principally as a result of disputes with customers of our architectural products. In addition, in 2000 seven lawsuits were filed against us, alleging violations of the federal securities laws, which were settled collectively in 2001. We have relied upon insurance coverage to fund the defense of these actions and significant portions of the settlements that were reached. Based on our review of pending litigation, we record accruals for loss contingencies when we believe it is probable that a liability has been incurred and we can reasonably estimate the amount of our share of the loss. In connection with recent settlements related to sales of architectural products, we have been advised by some of our insurers that they have reserved the right, and have expressed their intent, to proceed against us to recoup a portion or all of the settlements paid to plaintiffs.

Accounting for income taxes. In preparing our financial statements, we estimate our income taxes for each of the jurisdictions in which we operate, including Germany. We include differences between our deferred tax assets, such as net operating loss carry forwards, and tax liabilities in our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income, and to the extent we believe that recovery is not likely, we must establish a valuation allowance. To the extent we establish a valuation allowance or increase this allowance in any period, we must include an expense within the tax provision in our statement of operations. To date,

we have recorded a full allowance against our deferred tax assets. The valuation allowance was $11.0 million as of December 31, 2001, which fully reserved our net deferred tax assets related to temporary differences, net operating loss carry forwards and other tax credit carry forwards. Future income tax liabilities will be reduced to the extent permitted under federal and applicable state income tax laws, when the future tax benefit can be utilized by applying it against future income.

Significant management judgment is required in determining our provisions for income taxes, our deferred tax assets and liabilities and our future taxable income for purposes of assessing our ability to utilize any future tax benefit from our deferred tax assets. If actual results differ from these estimates or we adjust these estimates in future periods, our financial position, cash flows and results of operations could be materially affected.

Results of Operations

The following table sets forth our results of operations expressed as a percentage of total revenues:

	Year Ended December 31,					Quarter Ended	
	1997	1998	1999	2000	2001	April 1, 2001	March 31, 2002
Net Revenues							
Automotive glass	13.2%	25.7%	35.7%	23.7%	45.0%	45.2%	36.2%
Electronic display	43.9	33.9	29.3	55.9	35.8	38.0	41.4
Architectural	42.9	40.4	35.0	20.4	19.2	16.8	22.4
Total net revenues	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cost of sales	70.5	88.4	74.6	80.9	72.5	83.8	64.2
Gross profit	29.5	11.6	25.4	19.1	27.5	16.2	35.8
Research and development	6.2	7.7	9.6	7.9	6.6	8.1	9.2
Selling, general and administrative	18.4	18.1	15.9	14.8	13.3	15.0	19.4
Legal settlement			0.9	0.6			
Total operating expenses	24.6	25.8	26.4	23.3	19.9	23.1	28.6
Income (loss) from operations	4.9	(14.2)	(1.0)	(4.2)	7.6	(6.9)	7.2
Interest expense, net	(0.9)	(2.3)	(2.5)	(3.3)	(3.5)	(4.3)	(2.3)
Other income, net	0.8	0.9	0.1	0.4	1.7	4.9	1.9
Income (loss) before provision for income taxes	4.8	(15.6)	(3.3)	(7.1)	5.8	(6.3)	6.8
Provision for income taxes	(0.3)	(0.1)	(0.1)	(0.1)	(0.3)	(0.1)	(0.3)
Net income (loss)	4.6%	(15.7)%	(3.4)%	(7.2)%	5.6%	(6.4)%	6.5%

First Quarter 2001 Compared to First Quarter 2002

Net revenues. Our net revenues increased $1.6 million, or 9.0%, from $17.7 million for the first quarter of 2001 to $19.3 million for the first quarter of 2002. Our sales to the automotive market decreased by $1.0 million, or 12.5%, from $8.0 million in the first quarter of 2001 to $7.0 million in the first quarter of 2002. The decline was due to lower sales volume as a result of a slowdown in sales by several European automobile manufacturers. We believe this slowdown in the European automobile market will continue throughout 2002. Therefore, we do not anticipate a significant improvement, if any, over our first quarter sales to the automotive market for any of the remaining quarters of 2002. Our sales to the electronic display market increased by $1.2 million, or 17.9%, from $6.7 million in the first quarter of 2001 to $7.9 million in the first quarter of 2002. The increase in sales was primarily the result of revenues from sales of our new plasma display film product. Our sales to

the architectural market increased $1.4 million, or 46.7%, from $3.0 million in the first quarter of 2001 to $4.4 million in the first quarter of 2002. The increase was primarily attributable to additional available manufacturing capacity.

Cost of sales. Cost of sales consists primarily of materials and subcontractor services, labor and manufacturing overhead. Cost of sales decreased $2.4 million, or 16.2%, from $14.8 million in the first quarter of 2001 to $12.4 million in the first quarter of 2002. Cost of sales decreased from 83.8% of net revenues in the first quarter of 2001 to 64.2% of net revenues for the same period in 2002. The higher costs in 2001 in dollars and as a percentage of revenues were primarily due to greater start-up costs in our Dresden operation. We also realized improved manufacturing yields in our Palo Alto, Tempe and Dresden facilities during the first quarter of 2002, compared to the first quarter of 2001. In addition, we also benefited in the first quarter of 2002, compared with the same period in 2001, from producing a greater portion of our products at our Dresden plant. The Dresden plant, which began production of

significant volumes of commercial product during the first quarter of 2001, has lower manufacturing costs as a result of lower payroll and operating expenses, as well as lower depreciation charges due to the grants provided for plant and equipment by the Saxony government.

Gross profit and gross margin. Our gross profit increased $4.0 million, or 137.9%, from $2.9 million in the first quarter of 2001 to $6.9 million in the first quarter of 2002. Our gross margin improved from 16.4% in the first quarter of 2001 to 35.8% in the first quarter of 2002. The increase in gross profit and gross margin in 2002 was due to increased revenues from the Dresden plant with its lower cost base and cost savings and yield improvements in our Palo Alto, Tempe and Dresden facilities.

Operating expenses

Research and development. Research and development spending increased $0.4 million, or 28.6%, from $1.4 million in the first quarter of 2001 to $1.8 million in the first quarter of 2002. Research and development expenses increased from 8.1% of net revenues in the first quarter of 2001 to 9.2% of net revenues in the first quarter of 2002. The increase in our research and development spending during the first quarter of 2002 was primarily attributable to the costs associated with the use of a production machine (PM1) that has been dedicated primarily to on-going research and development activities.

Selling, general and administrative. Selling, general and administrative expenses consist primarily of corporate and administrative overhead, selling commissions, advertising costs and occupancy costs. These expenses increased $1.0 million, or 37.0%, from $2.7 million in the first quarter of 2001 to $3.7 million in the first quarter of 2002. Selling, general and administrative expenses, as a percentage of revenue, increased from 15.3% in the first quarter of 2001 to 19.4% in the first quarter of 2002. The higher expenses in the first quarter of 2002 were mainly the result of increased outside professional fees and accrued costs associated with performance-based compensation as a result of our improved profitability.

Income (loss) from operations. Income (loss) from operations increased from an operating loss of $1.2 million in the first quarter of 2001 to an operating profit of $1.3 million for the same period in 2002. The improvement was due to higher revenues, reduced start-up costs from our Dresden operations and improved manufacturing yields, partially offset by increased outside professional fees and accrued costs associated with performance-based compensation as a result of our improved profitability.

Interest expense, net. Net interest expense decreased $0.3 million, or 37.5%, from $0.8 million in the first quarter of 2001 to $0.5 million in the first quarter of 2002. The reduction in interest expense was primarily attributable to lower interest rates and the reduction of our overall debt and line of credit by $6.5 million from $32.5 million at April 1, 2001 to $26.0 million at March 31, 2002.

Other income, net. Other income, net includes interest income, rental income and foreign exchange transaction gains and losses. We recorded other income of $0.9 million in the first quarter of 2001 compared with $0.4 million in the first quarter of 2002. The reduction was primarily attributable to foreign currency fluctuations. Some of our transactions with foreign suppliers are denominated in foreign currencies, principally Japanese yen. As exchange rates fluctuate relative to the U.S. dollar, exchange gains and losses occur.

Income (loss) before provision for income taxes. We recorded a pre-tax loss of $1.1 million in the first quarter of 2001 compared to a pre-tax profit of $1.2 million in the first quarter of 2002. Our improvement from a loss in 2001 to profitability in 2002 was due to higher revenue, reduced start-up costs from our Dresden operations and improved manufacturing yields in our Palo Alto, Tempe and Dresden facilities, partially offset by costs attributable to an increase in performance based compensation as a result of our improved profitability, outside professional fees and a reduction in income derived from foreign currency fluctuations.

2000 Compared to 2001

Net revenues. Our net revenues decreased $2.3 million, or 2.7%, from $85.3 million in 2000 to $83.0 million in 2001. Our sales to the automotive market increased by $17.2 million, or 85.2%, from $20.2 million in 2000 to $37.4 million in 2001. In 2001, our Dresden operations began commercial production of film products for the automotive market. The additional production capacity from the Dresden plant was the primary factor in the increase of our sales to the automotive market during 2001. Our sales to the electronic display market decreased by $18.0 million, or 37.7%, from $47.7 million in 2000 to $29.7 million in 2001. The decline in sales was primarily the result of the worldwide slowdown in the sale and manufacture of personal computers and the adoption of lower cost manufacturing alternatives by one of our major customers. Our sales to the architectural market decreased $1.5 million, or 8.6%, from $17.4 million in 2000, to $15.9 million in 2001. The decrease was primarily the result of our using production machines previously used to produce products for the architectural market to manufacture products for the automotive market.

Cost of sales. Cost of sales decreased $9.0 million, or 13.0%, from $69.1 million in 2000 to $60.1 million in 2001. Cost of sales decreased from 80.9% of net revenues in 2000 to 72.5% of net revenues for 2001. The higher costs in 2000, as a percentage of revenues, were due to greater start-up costs in our Tempe and Dresden operations and higher electronic display revenues during 2000, which generally yield lower gross margins as a result of outside processing costs. Additionally, the reduction in the number of employees at our Tempe and Palo Alto facilities effected during the first quarter of 2001 resulted in cost savings. We also realized improved manufacturing yield in our Palo Alto and Tempe facilities during 2001, which further contributed to the improvement in margin from 2000 to 2001. We benefited in 2001 from producing a greater portion of our products at our Dresden plant, which has lower costs as a result of lower payroll and operating expenses, as well as lower depreciation charges due to the grants provided for plant and equipment by the Saxony government.

Gross profit and gross margin. Our gross profit increased $6.5 million, or 39.9%, from $16.3 million in 2000 to $22.8 million in 2001. Our gross margin improved from 19.1% in 2000 to 27.5% in 2001. The increase in gross profit and gross margin in 2001 was due to increased revenues from the Dresden plant with its lower cost base and cost savings and yield improvements in our Palo Alto and Tempe facilities.

Operating expenses

Research and development. Research and development spending decreased $1.2 million, or 17.9%, from $6.7 million in 2000 to $5.5 million in 2001. Research and development expenses decreased from 7.9% of net revenues for 2000 to 6.6% of net revenues for 2001. The decrease in our research and development spending during 2001 was primarily attributable to reduced headcount and cost control measures.

Selling, general and administrative. These expenses decreased $1.6 million, or 12.7%, from $12.6 million in 2000 to $11.0 million in 2001. Selling, general and administrative expenses, as a percentage of revenue, decreased from 14.8% in 2000 to 13.3% for 2001. The higher expenses in 2000 were mainly the result of accounting, legal and consulting costs incurred relating to our restatement in 2000 of financial statements for prior periods. In 2001, we incurred higher expenses in Dresden as the production machines located there were brought up to commercial production levels. Performance based compensation also increased in 2001 as a result of our improved profitability.

Legal settlement. In 2000, we settled employee practices litigation relating to one individual for $0.5 million. Legal fees and expenses we incur are included in selling, general and administrative expenses, while actual settlements are reported as legal settlements. We incurred no settlement costs in 2001.

Income (loss) from operations. Income (loss) from operations increased from an operating loss of $3.6 million in 2000 to an operating profit of $6.3 million for 2001. The improvement was due to reduced start-up costs and increased revenue from our Dresden operations, improved manufacturing yields, cost reduction programs put in place in the Palo Alto and Tempe facilities, and a reduction in professional fees during 2001 compared to 2000.

Interest expense, net. We incurred net interest expense of $2.8 million in 2000 and $2.9 million in 2001, and capitalized interest incurred in connection with construction in process of $1.8 million in 2000 and $0.1 million in 2001. The increase in net interest expense resulted

principally from the completion of construction in process related to the Dresden and Tempe facilities in late 2000.

Other income, net. We recorded other income of $0.4 million in 2000, compared with $1.4 million for 2001. Some of our transactions with foreign suppliers are denominated in foreign currencies, principally Japanese yen. As exchange rates fluctuate relative to the U.S. dollar, exchange gains and losses occur. We incurred a foreign currency loss in 2000 of $0.1 million and a foreign currency gain in 2001 of $0.7 million. We offset higher rent expense in Palo Alto by subleasing space in this facility to three different parties, resulting in rental income of $0.4 million in 2000 and $0.5 million in 2001. One of the subleases expired on February 28, 2001 while the underlying lease is scheduled to expire on December 31, 2002. This sublease generated $0.2 million and $0.03 million of rental income during 2000 and 2001, respectively, as compared to $0.6 million and $0.6 million in rental payments we owed in 2000 and 2001, respectively, pursuant to the underlying lease. We also sublet a portion of our Palo Alto facilities to two companies on a month-to-month basis during 2000 and 2001. Collectively, these arrangements generated $0.1 million and $0.4 million in rental income in 2000 and 2001, respectively, as compared to $0.8 million and $0.8 million in rental payments we owed in 2000 and 2001, respectively, pursuant to the underlying lease. The underlying lease covering these month-to-month arrangements is scheduled to expire on December 31, 2004.

Income (loss) before provision for income taxes. We recorded a pre-tax loss of $6.1 million in 2000, compared to a pre-tax profit of $4.8 million in 2001. Our improvement from a loss in 2000 to profitability in 2001 was due to higher revenues from the automotive market due to our Dresden operations, improved manufacturing yields and cost reduction programs put into place in our Palo Alto and Tempe facilities, a reduction in professional fees and an increase in other income, partially offset by a decrease in revenue from the electronic display market.

1999 Compared to 2000

Net revenues. Our net revenues increased $30.7 million, or 56.2%, from $54.6 million in 1999 to $85.3 million in 2000. In 2000, sales of our automotive glass film increased $2.5 million, or 14.1%, primarily due to a two-year supply agreement signed with Saint Gobain. Our sales of electronic display film increased $29.6 million, or 163.5%, principally as a result of revenue from Mitsubishi and other customers, partially offset by a loss of sales to a customer who adopted an alternative manufacturing solution. Our sales of architectural product decreased $1.4 million, or 7.3%, primarily due to the use of our production machines to produce product for automotive glass customers.

Costs of sales. Cost of sales increased $28.4 million, or 69.8%, from $40.7 million in 1999 to $69.1 million in 2000. Cost of sales for 1999 was 74.5% of net revenues compared to 81.0% of net revenues for 2000. The increase in the percentage of cost of sales to net revenues resulted from additional processing costs attributable to electronic display film production in 2000. It was also affected by the lower production yields on a new production machine in Tempe. Non-recurring start-up expenses in our Dresden facility for new plant and equipment and staffing also added $2.1 million to cost of sales in 2000.

Gross profit and gross margin. Gross profit increased $2.4 million, or 17.3%, from $13.9 million in 1999 to $16.3 million in 2000. Gross margin declined from 25.5% in 1999 to 19.1% in 2000. The

increase in the percentage of cost of sales to net revenues resulted from additional processing costs attributable to electronic display film production in 2000. It was also affected by the lower production yields on a new production machine in Tempe. Non-recurring start-up expenses in our Dresden facility for new plant and equipment and staffing added $2.1 million to cost of sales.

Operating expenses

Research and development. Total research and development expenses increased $1.5 million, or 28.8%, from $5.2 million in 1999 to $6.7 million in 2000. Research and development expenses, as a percentage of net revenues, decreased from 9.5% for 1999 to 7.9% for 2000. The percentage decrease in these expenses was the result of the increase in net revenues from 1999. The increase in research and development expense was primarily attributable to costs associated with an increase in research and development staff, and costs incurred in testing and preparing for commercial production a production machine (PM 6) located in our Tempe facility and another production machine (PM 8) located in our Dresden facility.

Selling, general and administrative. Selling, general and administrative expenses increased $3.9 million, or 44.8%, from $8.7 million in 1999 to $12.6 million in 2000. Selling, general and administrative expenses, as a percentage of net revenues, decreased from 15.9% in 1999 to 14.8% in 2000. The primary reason for the decline in these costs as a percentage of sales was due to the increase in 2000 revenue of 56%. The increase in costs was the result of non-recurring legal, accounting and temporary labor costs incurred in the preparation of restated financial statements and other filings. We also incurred increased rents in Palo Alto and increased administrative expenses in Dresden. Travel and communication expenses also increased as additional sales personnel devoted

increased time to international sales.

Legal settlement. We incurred costs of $0.5 million in legal settlements related to a product liability claim in 1999 and $0.5 million in an employee practices claim in 2000.

Income (loss) from operations. Loss from operations increased $3.1 million from a loss of $0.5 million for 1999 to a loss of $3.6 million for 2000. Our larger loss in 2000 was primarily due to non-recurring costs to restate our financial statements, start-up costs for our Tempe and Dresden facilities, higher cost of sales, and increased rent expense.

Interest expense, net. We incurred net interest expense of $1.3 million in 1999 and $2.8 million in 2000, and capitalized interest of $1.2 million in 1999 and $1.8 million in 2000 incurred in connection with construction in process. This increase was primarily due to borrowings to finance construction of new production machines and facilities and working capital requirements.

Other income, net. We recorded other income of $0.1 million in 1999, compared with $0.3 million for 2000. We did not incur a foreign currency loss in 1999 and incurred a foreign currency loss of $0.1 million in 2000.

Income (loss) before provision for income taxes. We reported a pre-tax loss of $1.8 million for 1999 compared to a pre-tax loss of $6.1 million for 2000. Our higher loss in 2000 was primarily due to start-up costs in Tempe and Dresden, lower gross margins due to increased production costs, non-recurring expenses to restate our financial statements, increased rent at our Palo Alto facility, and higher interest expense due to increased debt.

Liquidity and Capital Resources

Liquidity

Our cash and cash equivalents increased by $3.3 million from $0.1 million at December 31, 2000 to $3.4 million at December 31, 2001. At March 31, 2002, our cash and cash equivalents were $2.7 million. We increased cash from operating activities by $12.6 million from $1.2 million in 2000 to $13.8 million in 2001. We reduced cash used in investing activities by $7.2 million from $12.9 million in 2000 to

$5.7 million in 2001. During the first quarter of 2002, we used $0.4 million of cash in investing activities as compared to $0.9 million of cash provided by investing activities during the first quarter of 2001, a difference of $1.3 million. We increased cash from financing activities by $10.0 million in 2000 and used cash to reduce debt by $5.6 million in 2001. During the first quarter of 2002, $1.0 million of cash was provided by financing activities as compared to $2.6 million of cash used in financing activities during the first quarter of 2001, an increase of $3.6 million. As a result of our compliance with various loan covenants and obtaining waivers from Teijin and the Japanese bank for the Japanese bank loan, $13.8 million and $14.5 million of long term debt was classified as noncurrent at March 31, 2002 and December 31, 2001, respectively. Accordingly, we reduced our working capital deficit from $32.1 million at December 31, 2000 to $6.5 million at December 31, 2001 and to $5.0 million at March 31, 2002. We reduced our total liabilities from $60.3 million at December 31, 2000 to $46.7 million at December 31, 2001 and to $44.8 million at March 31, 2002. Stockholders' equity increased from $20.1 million at December 31, 2000 to $26.5 million at December 31, 2001 and to $28.3 million at March 31, 2002.

In 2001, we had net cash of $13.8 million provided by operating activities, which consisted primarily of depreciation of $6.0 million, net income of $4.6 million, a reduction of $4.3 million in accounts receivable and a reduction of $4.0 million in inventory, partially offset by a reduction of $4.6 million in accounts payable. Cash provided by our operating activities was also increased as a result of average accounts receivable outstanding decreasing from 61 days in 2000 to 43 days in 2001, and inventory turns increasing from 6.6 in 2000 to 8.7 in 2001. While we generated significant cash in 2001 from a reduction in receivables and inventory, receivables and inventory increased during the first quarter of 2002. We do not expect to generate significant cash from a reduction in receivables or inventory in 2002 or in future years, especially if our sales volume increases. During the first quarter of 2002, we used $0.9 million of cash in operating activities as compared to $2.2 million of cash generated from operating activities during the first quarter of 2001, a decrease of $3.1 million. The decline in cash from operating activities during the first quarter of 2002 was primarily the result of an increase in accounts receivable and inventory and a reduction in accounts payable, partially offset by net income, compared to a loss in the first quarter of 2001.

We entered into an agreement with the Saxony government in May 1999 under which we receive investment grants. As of March 31, 2002, we had received $4.7 million of the grants and accounted for these grants by applying the proceeds received to reduce the cost of our fixed assets of our Dresden manufacturing facility. During 2000, we also received $1.0 million in investment allowances, which are reimbursements for capital expenditures, from the Saxony government and those proceeds were also applied to reduce the cost of our fixed assets of our Dresden

manufacturing facility. We received an additional $2.1 million in investment allowances from the Saxony government in 2001, and we expect to receive approximately $1.0 million in investment allowances in 2002, although we cannot assure you that we will receive these amounts. Those funds have been or will also be applied to reduce the cost of our fixed assets of our Dresden manufacturing facility. Additionally, we have received $0.9 million of Saxony government grants that have been recorded as an advance until we earn the grant through future expenditures. The total annual amount of investment grants and investment allowances that we are entitled to seek varies from year to year based upon the amount of our capital expenditures that meet certain requirements of the Saxony government. Generally, we are not eligible to seek total investment grants and allowances for any year in excess of 33% of our eligible capital expenditures for that year. We expect to continue to finance a portion of our capital expenditures in Dresden with additional grants from the Saxony government and additional loans from German banks, some of which may be guaranteed by the Saxony government. However, we cannot guarantee that we will be eligible for or will receive additional grants in the future from the Saxony government.

Borrowing arrangements

The following table (with dollars in thousands) sets forth the material terms of our indebtedness at March 31, 2002:

Description	Rate	Balance at March 31, 2002	Remaining Due in 2002
Line of credit	(1)	$ 4,606	(1)
Term debt:			
Japanese bank loan, guaranteed by Teijin	LIBOR+1.0%(2)	7,500	$ 2,500
German bank loan dated May 12, 1999	6.13%(3)	2,321	225
German bank loan dated May 28, 1999	7.10%(4)	2,196	
German bank loan dated May 28, 1999	3.75%	1,129	188
German bank loan dated July 25, 2000	7.15%	1,761	155
German bank loan due June 30, 2009	5.75%	1,482	
German bank loan dated June 29, 2000	5.75%	299	113
German bank loan dated July 10, 2000	7.10%	299	112
German bank loan dated December 19, 2000	7.50%	190	52
German bank loan dated December 18, 2000	7.50%	208	57
Note payable dated September 21, 2001	8.00%	520	450
Other equipment financings		207	68
Total term debt		18,112	3,920
Capital leases:			
Sale-leaseback dated July 19, 1999	13.00%	2,321	2,321
Sale-leaseback dated October 19, 1999	13.00%	946	946
Total capital leases		3,267	3,267
Total term debt and capital leases		21,379	$ 7,187
Less current portion		7,579	
Term debt, non-current		$ 13,800	

(1) This line of credit expires in June 2003. Under the line, we can borrow an amount equal to 80% of eligible accounts receivable. We pay a finance fee equal to 0.88% per month of the average daily balance of the amount of accounts receivable against which we have borrowed. We are required to repay the lender amounts borrowed when we receive payments of these accounts receivable.

(2) As of March 31, 2001, the interest rate on this loan was 3.16%.

(3) Interest rate will be reset to the then prevailing market rate in 2004.

(4) Interest rate will be reset to the then prevailing market rate in 2009.

At December 31, 2000, we were in default under our German bank loans, our sale-leaseback agreement and the guarantee by Teijin of the Japanese bank loan. Accordingly, all borrowings outstanding under the Japanese bank loan, the German bank loans, sale-leaseback agreement were classified as current liabilities on our balance sheet at December 31, 2000.

At December 31, 2001 and March 31, 2002, we were not in compliance with certain of the covenants of the guarantee by Teijin of the Japanese bank loan. We have received waivers from Teijin and the Japanese bank of any defaults that may exist for any measurement period through and including September 30, 2003 arising out of our failure to comply with the minimum quick ratio, tangible net worth and maximum debt/tangible net worth covenants. The waivers are conditioned on our agreement to prepay $2.5 million of the debt with the proceeds of this offering. Accordingly, the non-current portion of the amount outstanding under the loan of $5.0 million has been classified as a long-term liability on our balance sheet at December 31, 2001 and March 31, 2002.

As of March 31, 2002, we were in compliance with the covenants under our German bank loans. As a result, of the total $9.9 million outstanding under those loans as of March 31, 2002, we classified $8.7 million, which is the amount due after March 31, 2002, as a long-term liability.

We are in default under a master sale-leaseback agreement with respect to two of our production machines. We have withheld lease payments in connection with a dispute with the leasing company. An agent purporting to act on behalf of the leasing company has recently filed suit against us to recover the unpaid lease payments and alleged residual value of the machines. The leasing company holds a security interest in the production machines and may be able to repossess those machines. As a result, we have classified all $3.3 million outstanding under those agreements net of $1.0 million of the amounts due from the leasing company that was not funded, as current portion of long-term debt as of March 31, 2002.

Under the original terms of our grant agreement with the Saxony government, we were required to meet investment and hiring targets by March 31, 2002. If we failed to meet those targets, the Saxony government was permitted to require us to repay all grants and government allowances previously received by us. In February 2002, the Saxony government extended the date by which we must comply with these targets to June 2006.

Equity transactions

In April 2001, we raised $1.0 million from the sale of 422,119 shares of common stock to Globamatrix. In addition, the exercise of stock options and employee purchases under our employee stock purchase plan generated cash proceeds to us of $0.7 million during 2001.

Capital expenditures

We spent $12.9 million for capital expenditures in 2000, of which $9.8 million was invested in our Dresden facility and $3.1 million was invested in our Tempe and Palo Alto facilities for leasehold improvements, computer equipment and improvements to our production machines. Of the $9.8 million invested in our Dresden facility, $7.0 million represented progress payments on our two new production machines (PM 8 and PM 9). We financed our capital expenditures in Dresden primarily through $4.0 million of German bank loans, the release of $2.6 million of cash restricted by the Saxony government, and $1.0 million of subsidies from the Saxony government.

During 2001, we spent $5.9 million for capital expenditures, primarily for production equipment and computer resources. In the fourth quarter of 2001, we placed an order to purchase PM 10 for our Dresden facility, to be paid for by progress payments beginning in 2001 through 2003, when the machine is expected to become operational. We do not currently have financing in place to purchase a new production machine and expect to fund this purchase through a combination of investment allowances from the Saxony government, cash from operating activities,

borrowings from German banks, and a portion of the proceeds from this offering.

We anticipate spending approximately $7.0 million in capital expenditures in 2002, approximately $4.0 million of which will consist of progress payments for PM 10 in Dresden, approximately $1.5 million to replace our current enterprise resource planning system, and approximately $1.5 million to maintain and upgrade our production facilities in Palo Alto and Tempe. We spent approximately $0.8 million in capital expenditures during the first quarter of 2002.

Our future payment obligations on our borrowings pursuant to our term debt, capital lease obligations, line of credit and noncancellable operating leases at December 31, 2001 were as follows (in thousands):

	Payments Due by Period				
Contractual obligations	**Total**	**Less than 1 year**	**1-3 years**	**4-5 years**	**After 5 years**
Term debt	$ 19,061	$ 4,548	$ 7,446	$ 1,558	$ 5,509
Financing lease obligations	3,767	3,767			
Line of credit	2,974	2,974			
Operating leases	10,229	3,601	5,678	950	
Other long-term obligations					
Total contractual cash obligations	$ 36,031	$ 14,890	$ 13,124	$ 2,508	$ 5,509

We believe that our existing liquidity sources, including our expected cash flows from operations, our existing cash reserves and existing credit facilities, will satisfy our cash requirements for the next twelve months. The net proceeds from this offering should be sufficient to repay the debt, replace our enterprise resource planning system, purchase a new production machine (PM 10) and update our production facilities in Palo Alto and Tempe as set forth in the "Use of Proceeds" section of this prospectus. After using the proceeds of the offering for such purposes, however, we expect that there may be only approximately $1 million of proceeds of the offering remaining. In the event our estimates prove inaccurate and the planned uses of proceeds consume more proceeds than we anticipate, there may not be any proceeds of the offering remaining for working capital or general corporate purposes. We may need to raise additional funds in order for us to respond to unforseen technological, marketing or other problems, or to take advantage of unanticipated opportunities. To fully implement our business plan, we will need to raise additional capital from external sources.

Alternative financing sources

We are in discussions with potential lenders regarding the establishment of new credit facilities to meet our projected working capital and capital expenditure needs in 2002. Additionally, we continue to explore a number of alternative equity transaction proposals to meet or supplement our working capital and capital expenditure needs. We cannot provide any assurance that alternative sources of financing will be available at all or on terms acceptable to us. Our ability to raise additional funds may be adversely affected by a number of factors relating to us, as well as factors beyond our control.

Qualitative and Quantitative Disclosure about Market Risk

Financing risk

Our exposure to market rate risk for changes in interest rates relates primarily to our term loan, specifically our loan from Sanwa Bank, which is tied to the London Interbank Offered Rate, and our line of credit which bears a finance fee equal to 0.88% per month of the average daily balance of the accounts receivable against which we have borrowed. In addition, the interest rate on one of our German loans will be reset to the prevailing market rate in 2004 and on another of our German loans will be reset to the prevailing market rate in 2009. Fluctuations or changes in interest rates may adversely affect our expected interest expense. The effect of a 10% fluctuation in the interest rate on our loan from Sanwa Bank would have an effect of less than $25,000 and $10,000 on our interest expense for the year ended December 31, 2001 and the quarter ended March 31, 2002, respectively. The effect of interest rate fluctuations during 2001 and the first quarter of 2002 was not material.

Investment risk

We invest our excess cash in money market accounts and, by practice, limit the amount of exposure to any one institution. Investments in both fixed rate and floating rate interest earning instruments carry a degree of interest rate risk. Fixed rate securities may have their fair market value adversely affected due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. The effect of a 10% fluctuation in the interest rate of any floating rate securities would have had an adverse effect of less than $25,000 for the quarter ended March 31, 2002.

Foreign currency risk

International revenues (defined as sales to customers located outside of the United States) accounted for approximately 86% of our total sales in the first quarter of 2002. Of this amount, approximately 15% was denominated in euros relating to sales from our Dresden operation. The other 85% of our international sales were denominated in US dollars. We expect that approximately 10% to 15% of our total sales in 2002 will be denominated in euros. In addition, certain transactions with foreign suppliers are denominated in foreign currencies (principally Japanese Yen). The effect of a 10% fluctuation in the euro exchange rate would have had an effect of $0.3 million on net revenues for the three months ended March 31, 2002 and the effect of a 10% fluctuation in the Yen exchange rate would have had an effect of approximately $0.1 million.

Recent Accounting Pronouncements

In July 2001, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 141, "Business Combinations." SFAS No. 141 addresses financial accounting and reporting for business combinations and supersedes Accounting Principles Board ("APB") Opinion No. 16, "Business Combinations," and SFAS No. 38, "Accounting for Preacquisition Contingencies of Purchased Enterprises." SFAS No. 141 requires applicable business combinations to be accounted for using one method, the purchase method. The provisions of SFAS No. 141 apply to all business combinations initiated after June 30, 2001. We do not expect that the adoption of SFAS 141 will have a significant effect on our financial position or results of operations.

In July 2001, the FASB issued SFAS No. 142, "Goodwill and Other Intangible Assets," which is effective for fiscal years beginning after March 15, 2001. SFAS No. 142 requires, among other things, the discontinuance of goodwill amortization. In addition, the standard includes provisions upon adoption for the reclassification of certain existing recognized intangibles as goodwill, reassessment of the useful lives of existing recognized intangibles, reclassification of certain intangibles out of previously reported goodwill and the testing for impairment of existing goodwill and other intangibles. We do not expect the adoption of SFAS 142 will have a significant effect on our financial position and results of operations.

In June 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations," which addresses financial accounting and reporting for obligations related to the retirement of tangible long-lived assets and associated asset retirement costs. SFAS No. 143 is effective for fiscal years beginning after June 15, 2002. We do not expect that the adoption of SFAS 143 will have a significant effect on our financial position or results of operations.

In October 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," which addresses financial accounting and reporting for the impairment or disposal of long-lived assets. This Statement supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," and the accounting and reporting provisions of APB Opinion No. 30, "Reporting the Results of Operations-Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events

and Transactions" for the disposal of a segment of a business. The provisions of SFAS No. 144 are required to be adopted during our fiscal year beginning January 1, 2002. We do not expect that the adoption of SFAS 144 will have a significant effect on our financial position or results of operations.

In May 2002, the FASB issued SFAS 145, "Rescission of FAS Nos. 4, 44, and 64, Amendment of FAS 13, and Technical Corrections." Among other things, SFAS 145 rescinds various pronouncements regarding early extinguishment of debt and allows extraordinary accounting treatment for early extinguishment only when the provisions of Accounting principles Board Opinion No. 30, "Reporting the Results of

Operations Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions" are met. SFAS 145 provisions regarding early extinguishment of debt are generally effective for fiscal years beginning after May 15, 2002. We do not believe that the adoption of this statement will have a material effect on our consolidated financial statements.

BUSINESS

We are a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. We have developed a variety of products that control sunlight in automotive glass, reduce light reflection and improve image quality in electronic display products, and conserve energy in architectural products. Our products consist of transparent solar-control films for automotive glass; anti-reflective films for computer screens, including flat panel and plasma displays; transparent conductive films for use in touch screen and liquid crystal displays; energy control films for architectural glass; and various other coatings. Based upon our production capacity, we believe we are one of the world's largest producers of sputter-coated, flexible thin film products.

Industry Background

Large area, single layer, thin film coatings were developed in the early 1960s using vacuum evaporation, a less precise precursor to sputter coating. As a result of technological developments in the early 1970s, multi-layer coatings for large substrates became possible. Sputtering based on these developments is used today in a large number of applications in which high quality, uniform coatings need to be deposited on large surfaces or on many smaller surfaces simultaneously. Examples of sputter coating include the deposition of various metal and metal oxide layers on wafers in the semiconductor and hard disk industries, and optical coatings on transparent surfaces in the automotive glass, electronic display, and architectural markets.

Thin film coatings are used in a wide variety of surface applications to control the transmission and reflection of light and the flow of energy. Thin film coatings can modify the transmission and reflection of both visible and non-visible light, such as infrared and ultra-violet light, to enhance the performance and characteristics of the surface.

Thin film process technologies

The three most common methods for commercially producing thin film coatings on glass and flexible substrates are:

Wet coating. The wet coating process generally involves depositing a thin layer of material onto glass by a spin coating technique or onto a flexible substrate, or film, by a number of different methods. In the case of spin coating, which is sometimes used for computer display tubes, or CDTs, a small amount of liquid is placed at the center of a spinning CDT, forcing the liquid from the center towards the outside edge. Once a uniform thin layer of liquid is thus applied, the layer is bake-dried at a moderate temperature. In the case of film coating, a thin layer of liquid material is applied to the surface of plastic film and then dried by means of thermal or direct radiation. This process is generally less expensive than sputter-coating, but generally yields coatings with lower quality, optical and mechanical characteristics.

Direct coating onto glass substrates. Direct coating onto glass can be accomplished by sputtering and by pyrolytic means. Direct-to-glass sputtering is a mature, well-known process for applying thin film coatings to glass. This technology is commonly used to manufacture products that conserve energy in buildings. Pyrolytic coatings are formed directly on the glass as it is produced on a float line. The process uses the heat of the molten glass to make a single layer, metal oxide coating from a solution sprayed onto the glass. Because this technique produces only single layer coatings, the solar performance is limited.

Sputter coating onto flexible film substrates. The sputter coating process, which is the process we primarily employ, deposits a thin layer of materials, generally metals and metal oxides, onto the surface of a flexible substrate, usually polyester. The substrate can then be either laminated in or applied to glass or suspended between panes of glass. The substrate can be applied to both flat glass and curved glass, such as is used in automotive applications.

The thin film coating process begins with a clear base substrate that is typically glass or a flexible polyester film. When using a flexible film, a hard coat is sometimes applied to prevent undesired interactions between the materials to be deposited and the base substrate, as well as improve the mechanical properties of the coating. Various materials are then deposited in very thin layers on the substrate. The process of building up the various layers results in a "stack." The stack consists of layers of materials that produce the desired optical and performance effects. In some applications, primarily with flexible films, adhesive or protective layers may be applied to the substrate to improve the subsequent application of the product onto a rigid substrate, such as glass.

Our Markets

Primary markets for the thin film coated substrates that we manufacture are the automotive glass, electronic display and the architectural markets. Advances in manufacturing processes coupled with improved thin film deposition technologies in the automotive glass and electronic display markets are reducing production costs, allowing thin film coated substrates to more cost-effectively address these markets.

Automotive glass products

Thin film coated substrates we sell in this market reflect infrared heat. These coatings allow carmakers to use more glass and increase energy efficiency by reducing the demand on a vehicle's air conditioning system, as well as improving thermal comfort in the vehicle. Thin film coated substrates in this market are sold primarily to original equipment manufacturers, or OEMs, that produce glass for sale to European manufacturers of new cars and trucks for worldwide distribution. These substrates are also sold to independent glass manufacturers as part of a large aftermarket for replacement automobile glass. In addition, thin film coated substrates for retrofit application to the inside surface of a vehicle window are sold through resellers who install the film.

Nearly all automotive glass in the world uses some degree of tint or coloration to absorb light and solar energy, thus reducing solar transmission into the vehicle. This tint is usually created through the mixing of inorganic metals and metal oxides into the glass as the glass is produced. The cost of adding these materials is very low, but the solar control benefit is limited by the fact that solar energy is absorbed in the glass, causing the glass to heat up which eventually increases the temperature of the inside of the automobile.

Based on the most recent report with respect to the worldwide production of flat glass by the Freedonia Group, an independent market research company, we believe approximately 7.2 billion square feet of glass were installed in motor vehicles in 1999. This amount consists of approximately 5.5 billion square feet of glass in new motor vehicles and 1.7 billion square feet of replacement glass.

The use of thin films in the automotive glass market is being driven primarily by:

Incorporation of new features into conventional automotive glass based on newly-developed thin film products;

Growing demand for glass that rejects higher levels of solar heat, thereby improving occupant comfort and performance and extending lifetimes of leathers, fabrics and plastics used for automotive interiors;

Desire for smaller air conditioning systems that improve fuel efficiencies and reduce tailpipe emissions; and

Increasing adoption of laminated door glass for automobiles which offers security, safety, acoustic and ultra-violet protection benefits.

We began volume production for this market in 1996, and we estimate that in 2001 our coated substrates were used in less than 1% of the total worldwide automotive OEM glass produced.

Electronic display products

Thin film coated substrates we sell in this market primarily reduce glare caused by reflection from glass surfaces, improve contrast and image quality, and reduce energy emission from and build up of static charge on the computer display screen. Our thin film coated substrates are used in cathode ray tubes, or CRTs, liquid crystal and plasma displays, and in applications such as touch screens, wireless telephones and automated teller machines. We recently started shipping production quantities and sizes of a new anti-reflective film specifically designed for the

liquid crystal display and plasma display panel markets. The combined worldwide market for 17 inch and 19 inch flat screen computer display tubes and active matrix liquid crystal displays used for computer and handheld applications is anticipated to grow from approximately 75 million units in 2000 to 155 million units in 2005, according to a 2001 study by Stanford Resources, Inc., an independent market research firm. Considering the two categories separately, the market for 17 inch and 19 inch flat screen computer display tubes is expected to shrink from approximately 45 million units in 2000 to 37 million units in 2005, and the market for active matrix liquid crystal displays used for computer and handheld applications is expected to grow from approximately 30 million units in 2000 to 118 million units in 2005.

The use of thin films in the electronic display market is increasing primarily due to:

- Growing consumer demand for displayed information, driven largely by the availability of information and entertainment on the internet, as well as strong growth in the sales of wireless and portable communication devices; and
- The introduction of new products incorporating thin film technology, including active matrix liquid crystal and plasma display screens used in industrial and consumer products.

We began commercial production for the electronic display market in 1996. We estimate that in 2001, our coated substrates were applied to approximately 4% of the products in the 17 inch and 19 inch worldwide, flat screen CRT market, based on information from Stanford Resources, Inc.

Architectural products

Thin film coated substrates we sell in this market are primarily used to control the transmission of heat through window glass, as well as to limit ultra-violet light damage. Window glass is a poor thermal barrier. The primary source of heat build-up and loss in buildings is through the glass windows.

According to the Freedonia Group, the worldwide market for new and replacement glass sold for use in residential buildings is expected to increase from approximately 5.2 billion square feet in 1999 to approximately 8.0 billion square feet in 2009. Also, according to Freedonia, the market for new and replacement glass sold for use in commercial buildings is expected to increase from approximately 16.2 billion square feet in 1999 to approximately 25.4 billion square feet in 2009.

The use of thin films in the architectural market is driven by:

- Increasing energy conservation concerns;
- Increasing amounts of new and replacement glass sold for use in residential buildings; and
- Increasing amounts of new and replacement glass sold for use in commercial buildings.

Our original business, in which we began volume production in 1979, focused on this market. In 2001, we estimate that our products were used in less than 1% of the glass used worldwide in residential and commercial buildings.

Market trends

The needs of our customers and end-users are driving the evolution of the thin film coating industry. Our coated products enhance the performance of their finished products.

Trends in the automotive glass market include:

- *Advanced automotive designs.* New automotive glass designs, such as larger and more steeply sloped windows, have resulted in increased heat build-up and ultraviolet damage in automobiles, which can be reduced by thin film coatings.

Expanded applications. Automobile manufacturers are looking for ways in which thin film coatings can support new windshield features such as electrical defrost and antenna functions, including receipt of radio, GPS satellite signals and wireless communications. The use of thin film coatings to electrically heat the glass is dependent on the development and adoption of new, more powerful, 42 volt electrical systems as compared to current 14 volt systems. According to a 2001 report by DRI-WEFA, an independent market research company, it is anticipated that 35% of the cars and light trucks produced in North America, Europe and Japan will have a 42 volt electrical system by 2010.

Door glass and rear glass. Most automobile manufacturers today use two separate pieces of glass laminated together to form "safety glass" only in the windshield. The door glass and the rear glass are typically made of a single piece of tempered, or heat treated, glass. Automobile manufacturers are presently adopting laminated door glass and rear glass because of the security, safety, acoustic, and ultra-violet protection benefits. We believe that this trend in the automotive glass business offers opportunities to introduce solar heat control as an additional option to these pieces of glass. We believe that the demand for laminated door glass in Europe is expected to grow from less than 2 million parts in 2001 to more than 5 million parts by 2006, of which approximately 50% is expected to contain a solar control coating.

Trends in the electronic display market include:

Commercialization of flat panel technologies. The adoption of advanced display technologies such as liquid crystal and plasma displays, which require thin film coated substrates.

Preference for higher resolution displays. An increasing portion of the electronic products industry is moving to higher resolution displays, which are enhanced by advanced thin film technologies.

Reduction of harmful or undesirable emissions. Electronic product manufacturers are seeking ways to mitigate electromagnetic and infrared interference, driving the need for coatings that can reduce undesirable or potentially harmful radiation emissions by reflecting them back into the display without affecting functionality of the display.

Trends in the architectural market include:

Enhanced efficiency. Demand for heating and cooling efficiency have driven the need for thin film coatings that provide energy savings. These concerns include controlling solar radiation, improving the efficiency of air conditioning, and offering insulating properties that reduce heat loss in cold climates and heat gain in hot climates while reducing ultra-violet damage.

Growth of remodeling market. Remodeling of existing structures has increased the use of more modern materials, including the use of glass that increases thermal and ultra-violet protection and provides insulation from noise.

Our Solution

Our coated films solve our customers' need to improve the performance and competitiveness of their finished products. Our coated products offer a number of benefits to the end-use customers:

Improved thermal comfort in automobiles, homes, and office buildings;

Reduced eye-strain from prolonged use of electronic displays;

Blockage of potentially damaging solar and electromagnetic radiation from natural and electronic environments; and

Improved energy efficiency for transportation vehicles and buildings, which reduces costs and consumption of fossil fuels.

Our products are sold as large rolls, measuring up to approximately 7 feet wide by 20,000 feet long. The weight and extended shelf-life of these rolls allow for easy and inexpensive shipping and storage of product with our customers.

We believe our competitive advantages include:

- Proprietary thin film sputtering process knowledge and control systems;
- Extensive thin film materials expertise and optical design capabilities;
- Over twenty years' experience providing large quantities of sophisticated coatings on flexible film for demanding applications and customers;
- The world's largest installed base of coating machinery for application of sputter coatings to flexible film;
- Our new, state-of-the-art coating facility in a low-cost labor environment, with significant financial support from local and federal governments in Germany;
- Substantial expertise and technical support in the areas of product testing, reliability, and applications;
- Rapid product development capabilities on small, proprietary research systems prior to commercial production;
- Key strategic relationship with a large Japanese chemical company for electronic materials supply in Asia;
- Close working relationship with our key substrate supplier; and
- International patent portfolio covering a broad range of products.

Our Strategy

Our strategy is to enhance our position as a global developer, manufacturer and marketer of thin film coatings on flexible substrates for the automotive glass, electronic display, and architectural markets. The following are key elements of our strategy:

Increase penetration and expand customer base in the automotive glass market

During 2000 and 2001, we expanded our production capacity primarily through the opening of our manufacturing facility in Dresden. As a result, we are working to expand the sale of our products to automotive glass suppliers for new cars. We are also introducing new products into the automotive glass markets. These products have better thermal performance characteristics than and have a different look from our existing products. We expect these products will position us to expand our business in Europe and attract new customers in the U.S. We also expect these products will be included in some vehicles beginning in 2003. Vehicles using our sputtered thin film coated products include models by European automakers Audi, BMW, Mercedes, Volvo, Peugeot-Citroen and Renault. Our thin film coated products are sold to these car makers through the two largest automotive glass suppliers operating in Europe, Saint Gobain and Pilkington PLC. We are also working with other glass manufacturers in Europe to expand our customer base. In addition, we intend to target other major OEMs in the automotive glass industry in Japan, North America and South America to similarly integrate our products into their glass components. We will also seek to develop relationships with companies that specialize in the replacement of automobile glass.

Increase production capacity in the automotive glass and architectural markets

Currently, two production machines (PM 8 and PM 9) in Dresden are commercially producing films and a third production machine (PM 10) is scheduled to be installed there and begin commercial production by the first quarter of 2003. These production machines will primarily produce films for the European automotive glass market but will be capable of manufacturing film for the architectural markets as well. In addition, this increase in our production capacity for automotive films in Europe has created additional capacity on our other production machines located in Palo Alto and Tempe.

Use expanded production capacity and new products to increase sales in the architectural market

To take advantage of our expanded production capacity, we plan to increase our marketing and sales activities in 2002 to seek additional customers in the architectural market. We are also focused on the introduction of several new products to the architectural marketplace. New products for both suspended Heat Mirror films as well as laminated XIR® films are envisioned for release this year. These new products will

increase the thermal insulation value of insulating glass made with our films and will improve the solar protection offered by laminated glass incorporating our films. As a result of enhanced sales activities and new products, we anticipate interest from a number of potential customers in North America and Europe. Significant orders, however, are not expected from these potential customers in 2002.

Capitalize on expanding flat panel display market

We will endeavor to create and maintain a competitive position in the production of thin film coated substrates for the flat panel display market, which we expect will grow substantially over the next five years. We intend to increase our share of this market by:

Working closely with dominant manufacturers in the sector to successfully integrate our solutions into their products;

Continuing to invest to develop anti-reflective coatings on substrates used by liquid crystal display, or LCD, manufacturers; and

Pursuing the processing of our films to add certain properties internally, rather than through third party subcontractors.

We seek to acquire a larger share of the growing LCD market by establishing relationships with LCD manufacturers and materials suppliers to provide thin film coatings for more of their products. Further, we will devote resources towards the development of additional coatings and processes to address the broader anti-reflective film market. For example, we recently started shipping production quantities and sizes of a new anti-reflective film specifically designed for the LCD and plasma display panel markets that maintains optical clarity while reducing the reflection of ambient light to improve image quality.

Continue to advance thin film production technology

We are focusing on developing new technologies to enhance the capabilities of thin film products and enhance the efficiency of the production of thin film products. For example, we are commercializing a deposition technique for our optical coatings called plasma enhanced chemical vapor deposition, or PECVD. This is commonly used in the semiconductor and disk drive industries for deposition of active, interconnected elements or magnetic materials. The attractiveness of this technique is its high deposition rate and the potentially lower material cost for the coatings, as compared to sputtering. A production machine (PM 7) based on this technology is currently installed at our Tempe facility and is expected to begin commercial production in the second half of 2002. Coatings for the automotive and architectural product lines, may be produced by PECVD in the future.

Technology

In a sputtering process, a solid target and a substrate are placed in a vacuum chamber. By adding a small amount of process gas, typically argon, to the chamber and negatively charging the target, the process gas is ionized and a plasma discharge is formed. The positively charged gas ions strike the solid target with enough force to eject atoms from its surface. The ejected target atoms condense on the substrate and a thin film coating is constructed atom by atom. By placing a magnet behind the target, the electrons in the ionized plasma are confined to a specific region on the target enhancing the creation of ionized gas atoms and increasing the efficiency of the target atom ejection process. By using different targets as the substrate moves through the vacuum chamber, we can create a multi-layered coating, or stack.

If the process gas is inert, such as argon, the coating will have the same composition as the target material. As an example, many of our coatings have a layer of silver in the stack. However, by adding a reactive gas such as oxygen or nitrogen to the process, it is possible to create metal oxide or metal nitride coatings from a metal target.

The advantages of our sputtering process include the high density of the formed coatings and the high degree of uniformity control that we can achieve.

While predominantly relying on sputter coating technology, we are actively developing new technologies and processes such as PECVD. The PECVD technique uses a gas rather than a solid target as the base material for the coating. The gas in the deposition chamber is excited into a very reactive plasma, using the energy from a microwave source mounted onto the chamber. A chemical reaction involving the excitement of gas molecules at the surface of the substrate then creates the thin film coating. In the past, this technique lacked the uniformity control necessary to make it useful for optical coatings, where uniformities of a few percent are required. New developments in this area have improved PECVD uniformity levels to the point that PECVD can now be explored for optical coatings. We plan to employ our new PECVD technology in one of our production machines (PM 7) in Tempe. However, since this system embodies a completely new technology, we expect and have budgeted

for a much slower start-up of this system compared to our standard sputter coating systems. This system is also limited by its ability to process only rolls which are two feet wide or less.

In addition to the vacuum-based deposition techniques described above, we have developed the ability to deposit wet chemistry based coatings under atmospheric conditions. In this technique, the active component of the thin film is in a solution and is applied to the substrate by rotating cylinder. After applying the wet film, the substrate is heated, evaporating the solvent and leaving a thin film of the active component behind. In Tempe, this technology is used to apply an anti-smudge coating on top of our sputtered anti-reflective films. The function of the anti-smudge coating is to make the final product more resistant to fingerprints and to make it easier to clean. Other coatings can be applied through this technique as well, and programs are in place to develop adhesive coatings and other coatings that enhance the mechanical durability of our products.

We rely extensively upon trade secrets and know-how to develop and maintain our competitive position. We have 29 patents and seven patent applications pending in the United States and 39 patents and more than 50 patent applications pending outside the United States that cover materials, processes, products and production equipment. Of our existing patents, two U.S. patents and three international patents will expire in the next three years. We also seek to avoid disclosure of our know-how and trade secrets through a number of means, including requiring those persons with access to our proprietary information to execute nondisclosure agreements with us. We consider our proprietary technology, as well as its patent protection, to be an important factor in our business.

Products

The following table describes the markets into which we sell our products, the applications of our products, our product families, key features of our various products and representative customers.

MARKET	APPLICATION	FILM PRODUCTS	KEY FEATURES	REPRESENTATIVE CUSTOMERS
Automotive glass	Windscreens, side windows, and back windows	Infrared reflective (XIR 70 and XIR 75)	Transmits 70% or 75% visible light Reflects 85% of infrared heat energy	Saint Gobain Pilkington PLC
	After-market installation	Solis/V-KOOL	Transmits 70% or 75% visible light Reflects 85% of infrared heat energy	Globamatrix
Electronic display	Flat screen monitors and TVs	Anti-reflective absorbing (ARA)	Pigmented film 8X reduction in light reflection High picture quality	Mitsubishi Polar Vision
	Liquid crystal display (LCD) screens	Anti-reflective clear (ARC)	Clear anti-reflective product	Sumitomo Chemicals Polar Vision
	LCD reflector for lighting sources	Silver reflecting	95% Reflecting Light-weight mirror	Mitsui Chemicals Marubeni
	Plasma display panels (PDP)	Infrared reflective (XIR 70) Anti-reflective clear (ARC)	Clear and Conductive Clear infrared blocking	Mitsui Chemicals
Architectural	New and retrofit residential and commercial windows and doors	Suspended Heat Mirror	Cool in summer Warm in winter UV blocking Noise reducing	Kensington Hankuk Hurd Edge Seal
	Commercial buildings	Laminated	Infrared reflecting	Gulf Glass Industries

MARKET	APPLICATION	FILM PRODUCTS	KEY FEATURES	REPRESENTATIVE CUSTOMERS
		(XIR70 HT)	UV blocking Cool in summer Noise reducing	Cristales Curvados
	After-market installation	Solis/V-KOOL	Infrared reflecting UV blocking Cool in summer Noise reducing	Globamatrix

Automotive glass products

Direct-to-glass sputtering for automotive windshields is not well developed because of the need to bend the glass before it can be coated and then applied to an automobile. Coating flat glass and then bending it to match complex automobile designs is also difficult due, in part, to the stress on the coating during the bending, heating and cooling process. However, coating flat glass and then bending it is the method currently used by most glass producers. Sputter coated flexible substrates that we produce can be applied to windshields with different curvatures and incorporated into most in-line

windshield production process used by glass companies today. Our net revenues from sales of automotive glass products were $19.5 million in 1999, $20.2 million in 2000, $37.4 million in 2001 and $7.0 million in the first quarter of 2002.

Infrared reflective films. Our XIR coated solar-control films are a transparent, sputter-coated, polyester films used in laminated glass for automobiles. The films have a patented, transparent solar-control coating on one side and a proprietary adhesion-promotion layer on the other.

Applied solar-control films. Our Solis/V-KOOL solar-control films for aftermarket installation for automotive glass utilizes our XIR technology. The product is applied to existing windows and has a protective hard coat over the patented, transparent solar-control coating on one side and the adhesion layer on the other. Solis/V-KOOL is sold through a worldwide distribution network of companies owned by or affiliated with Globamatrix.

Electronic display products

Our sputter coated substrates offer the high optical quality necessary for higher resolution electronic displays. Our substrates can be easily cut into different shapes and sizes, providing increased flexibility for our customers. In addition, our products can effectively reduce undesirable or potentially harmful emissions without affecting the resolution of the display. Our net revenues from sales of electronic display products were $16.0 million in 1999, $47.7 million in 2000, $29.7 million in 2001 and $7.9 million in the first quarter of 2002.

Anti-reflective films. Our anti-reflective films minimize reflection of visible light and electromagnetic radiation while allowing high picture quality. Our anti-reflective absorbing, or ARA, films are pigmented and used in flat screen monitors. Our anti-reflective clear, or ARC, films are clear and used in LCD screens.

Silver reflecting films. Our light-weight silver reflecting film is a mirror-like product used as a reflector in LCD backlit screens.

Transparent conductors. XIR films are used in the plasma display panel markets to block near-infrared and electromagnetic radiation from the display. Our ALTAIR-M films are used in products such as touch panels, liquid crystal displays and electroluminescent displays where the circuit or conductive material must not obscure the screen. ALTAIR films are also used in electromagnetic interference shielding, infrared rejection and electrostatic discharge packaging applications.

Architectural products

Windows containing our Heat Mirror product have approximately two to five times the insulating capacity of conventional double-pane windows. They also provide high levels of solar shading while transmitting a high percentage of visible light. In addition, our products also offer ultra-violet protection and reduce noise and condensation build-up. Architectural glass manufacturers are looking for ways to improve insulation without adding numerous panes of glass that are impractical to lift and cannot be supported by a structure's frame. This drives the need for thin film inside the glass that is a high performance insulator at a fraction of the weight of the glass. Our net revenues from sales of architectural products were $19.1 million in 1999, $17.4 million in 2000, $15.9 million in 2001 and $4.3 million in the first quarter of 2002.

Suspended Heat Mirror films. Our Heat Mirror films provide a variety of shading and insulating properties as well as ultra-violet damage protection. Windows are the primary areas of heat loss in winter and a major source of heat gain in summer. Heat Mirror films, which are sold in rolls to window manufacturers, are suspended in the airspace between sealed double-pane residential and commercial windows. We have developed proprietary film-mounting technology, which we license to window fabricators. There are a total of 66 Heat Mirror licenses in approximately 20 countries. We currently offer 12 different Heat Mirror films for architectural applications.

Laminated films. Our thin film coated flexible substrates are laminated between panes of glass and perform similarly to our XIR solar control films for automobiles. This film is currently sold primarily to fabricators of laminated window glass for large commercial building applications such as airports, office buildings, and museums. We have sold a total of 20 licenses for this architectural film product in approximately 15 countries.

Applied solar-control films. Our XIR coating for architectural applications is Solis/V-KOOL solar-control films for the architectural glass aftermarket. This product is applied to existing windows and has a protective hard coat over the patented, transparent solar-control coating on one side and an adhesion layer on the other. Solis/V-KOOL is sold through a worldwide distribution network of companies owned by or affiliated with Globamatrix.

Sales and Marketing

Distribution channels

We sell our automobile and electronic display products primarily to OEMs in North America, Europe, the Middle East and Asia, principally through our own direct sales force and sales representatives. Mitsui Chemicals is our licensee and distributor for certain of our electronic products in Japan and Taiwan. Mitsui also has exclusive manufacturing rights for certain of our electronic products in Japan using our proprietary sputtering technology.

We supply our Heat Mirror architectural products to approximately 66 insulated glass and window fabricators and distributors worldwide. Our proprietary mounting technology is licensed to our customers, who use special equipment for the manufacture of Heat Mirror-equipped windows. Our field services organization assists customers in the manufacture of Heat Mirror-equipped windows. In North America, we also promote our Heat Mirror product line through approximately 30 regionally based architectural glass sales representatives.

We sell our Solis/V-KOOL aftermarket products for the automotive glass and architectural markets through a worldwide distribution network of companies owned by or affiliated with Globamatrix.

International revenues amounted to approximately 78%, 85%, 87% and 86% of our net revenues during 1999, 2000, 2001 and the first quarter of 2002, respectively. The principal foreign markets for our products in 2001 were Japan ($26.8 million), France ($19.8 million), Germany ($8.6 million) and Singapore ($6.4 million).

Warranties

We offer warranties on our products which we believe are competitive for the markets in which those products are sold. The nature and extent of these warranties depend on the product, the market, and in some cases the customer being served. We carry liability insurance. However, our insurance does not cover warranty claims and there can be no assurance that our insurance will be sufficient to cover all product liability claims in the future or that the costs of this insurance or the related deductibles will not increase materially.

Customers

Our customers include many of the world's leading OEMs in the automotive glass and electronic display markets. Our customers in the OEM automotive glass market include Saint Gobain and Pilkington PLC, which sell glass to automobile manufacturers including DaimlerChrysler, Renault, Audi, BMW, Volvo, Volkswagen and the PSA Group (which includes Peugot and Citroen). We currently have a supply agreement with Saint Gobain that runs throughs 2003 and may be renewed by mutual consent of the parties. Under the Agreement, Saint Gobain committed to purchase set amounts of product. Our failure to produce the required amounts of products under the agreement will result in price penalties on future sales under the agreement.

Our customers in the electronic display market include Mitsubishi Electric Corporation and Mitsui Chemicals. Our customers in 2001 in the architectural market included approximately 83 fabricators of insulated glass units and laminated glass for architectural applications.

Our aftermarket applied film in the automotive and architectural glass markets is sold pursuant to an exclusive worldwide license in our distribution agreement with Globamatrix. Under the Agreement, which is scheduled to expire in 2011, Globamatrix agreed to purchase an aggregate of approximately $200.0 million of our products during the term of the agreement subject to volume and quality standards. Our failure to produce required amounts of product under the agreement will result in penalties under which we would be required to reimburse Globamatrix for the full cost of any product not timely delivered.

A small number of customers have accounted for a substantial portion of our revenues. Our ten largest customers accounted for approximately 69%, 85%, 85% and 85% of our net sales in 1999, 2000, 2001 and the first quarter of 2002, respectively. During the first quarter of 2002, Pilkington, Mitsubishi, Mitsui and Saint Gobain accounted for 10.8%, 20.9%, 14.6% and 20.9%, respectively, of our net sales. During 2001, Pilkington, Mitsubishi and Saint Gobain accounted for 15.8%, 21.2% and 23.9%, respectively, of our net sales. During 2000, Saint Gobain, Mitsubishi and Samsung accounted for 14.1%, 37.3% and 12.2%, respectively, of our net sales; and during 1999, Saint Gobain and Pilkington accounted for 18.0% and 11.7%, respectively, of our net sales. Because of our fixed costs, the loss of, or substantial reduction in orders from, one or more of these customers would have a material adverse affect on our profitability and cash flow. The timing and amount of sales to these customers depends on sales levels and shipping schedules for the OEM products into which our products are incorporated. We have no control over the shipping dates or volume of products shipped by our OEM customers, and we cannot be certain that they will continue to ship products that incorporate our products at current levels or at all. In addition, we rely on our OEM customers to timely inform us of opportunities to develop new products that serve end-user demands.

Research and Development

Our research and development activities are focused upon the development of new proprietary products, thin film materials science, and deposition process optimization and automation. Our research and development expenditures totaled $5.2 million, $6.7 million, $5.5 million and $1.8 million, or approximately 9.6%, 7.9%, 6.6% and 9.3% of total net revenues, during 1999, 2000, 2001 and the first quarter of 2002, respectively.

Historically, our research and development efforts have been driven by customer requests for the development of new applications for thin film coated substrates. To meet the future needs of our customers, we continually seek to improve the quality and functionality of our current products and enhance our core technology. For example, we recently started shipping production quantities and sizes of a new anti-reflective film specifically designed for the liquid crystal display and plasma display panel markets that maintains optical clarity while reducing the reflection of ambient light to improve image quality. We are also working to develop a heatable automobile windshield using our XIR film capable of de-icing, defrosting and demisting the windshield, thus improving cold start visibility and reducing the need to scrape ice from the windshield. In addition, we are working with MegaWave Corporation to build a prototype antenna for integration into an automobile windshield which would be capable of receiving and transmitting radio, GPS and wireless telephone signals. However, we cannot guarantee that we will be successful in developing or marketing these applications.

Although our production systems are built by outside vendors, we work closely with our vendors on the detailed implementation of the production machine designs. Our experience with designing production systems is critical for the proper construction of these machines. Once a new machine is installed and accepted by us, our engineers are responsible for transitioning the system into commercial production to help ensure stable manufacturing yields.

Manufacturing

The table below provides information about our current and proposed production machines and the class of products that each is currently tooled to produce.

Status	Machine Number	Location	Primary Markets For Current Production	Year Commercial Production Initiated/ Expected	Estimated Annual Capacity (Millions of Sq. Ft.)[1]

Status	Machine Number	Location	Primary Markets For Current Production	Year Commercial Production Initiated/ Expected	Estimated Annual Capacity (Millions of Sq. Ft.)[1]
Existing	PM 1[2]	Palo Alto	Research and development	1980	
	PM 2	Palo Alto	Architectural and electronic display	1982	6.0
	PM 3[3]				
	PM 4A	Palo Alto	Automotive and architectural	1991	12.0
	PM 4B	Palo Alto	Automotive and architectural	1991	12.0
	PM 5	Tempe	Electronic display	1997	6.5
	PM 6	Tempe	Automotive and electronic display	2000	13.0
	PM 7[4]	Tempe	Electronic display	2002	3.0
	PM 8	Dresden	Automotive	2000	16.0
	PM 9	Dresden	Automotive	2001	16.0
Future	PM 10[5]	Dresden	Automotive	2003	16.0

(1) Estimated annual capacity represents our estimated yields based on our historical experience and anticipated product mix. The amount of product for which we receive orders and which we actually produce in any year may be materially less than these estimates.

(2) Beginning in 2002, we intend to use PM 1 primarily for research and development rather than commercial production.

(3) We sold PM 3 to an unrelated third party in 1995.

(4) We expect this production machine, which uses PECVD-based technology, to be in commercial production by the third quarter of 2002. This machine will be used primarily to apply the final coating on electronic display products produced on our other machines.

(5) We have ordered PM 10 and expect it to be installed and begin commercial production by the first quarter of 2003.

We also have two small-scale sputtering machines in Palo Alto which are used for pre-production qualification and limited production, when they are not used for their primary research and development function. In Tempe, we also employ a wet coating and laminating machine, which is used to apply various topcoats and adhesives, and for lamination of liner films.

We recently received ISO 9001/1994 certification of all of our U.S. production facilities. In addition, our Dresden facility has received ISO 9001/2000 certification.

Environmental Matters

We use hazardous materials in our research and manufacturing operations and have air and water emissions that require controls. As a result, we are subject to stringent federal, state and local regulations governing the storage, use and disposal of wastes. We contract with outside vendors to collect and dispose of waste at all of our production facilities in compliance with applicable environmental laws. In addition, we have in place procedures that we believe enable us to deal properly with the gasses emitted in our production process, and we have implemented a program to monitor our past and present compliance with environmental laws and regulations. Although we believe we are currently in material compliance with such laws and regulations, current or future laws and regulations may require us to make substantial expenditures for compliance with chemical exposure, waste treatment or disposal regulations.

Suppliers and Subcontractors

We manufacture our products using materials procured from third-party suppliers. We obtain certain of these materials from limited sources. For example, we believe the substrates we use in the manufacture of the Heat Mirror product is currently available from one qualified source, Teijin Limited, holder of approximately 7.8% of our common stock as of May 23, 2002. The substrates used in the manufacture of our anti-reflective film are currently available from only two qualified sources, Teijin and Dai Nippon Printing. The loss of these current sources could adversely affect our ability to meet our scheduled product deliveries to customers. In each case, alternative sources of supply are being pursued; however, it takes approximately 18 to 24 months for us to qualify a new supplier and we may not be able to successfully develop

alternative sources of supply.

We rely on third-party subcontractors to add properties, such as adhesives, to some of our products. There are only a limited number of qualified subcontractors that can provide some of the services we require. A significant increase in the price charged by one or more of our subcontractors could force us to raise prices on our products or lower our margins, which could have a material adverse effect on our operating results.

Furthermore, our production machines are large, complex and difficult to design and assemble. It can take up to a year from the time we order a machine until it is delivered. Following delivery, it can take us, with the assistance of the manufacturer, up to six additional months to test and prepare the machine for commercial production. There are a limited number of companies that are capable of manufacturing these machines to our specifications. Our inability in the future to have new production machines manufactured and prepared for commercial production in a timely manner would have a material adverse effect on our business.

Backlog

Our backlog primarily consists of purchase orders for products to be delivered within 90 days. As of April 1, 2001 and March 31, 2002, we had a backlog of orders able to be shipped over the next 12 months of approximately $24.4 million and $15.8 million, respectively. None of these orders are firm orders and all are subject to cancellation. For these reasons, these orders may not be indicative of our future revenues.

Competition

The thin film coatings industry and the markets in which our customers compete experience rapid technological change, especially the electronic display market. Adoption by our competitors of new equipment or process technologies could adversely affect us. We have a number of present and potential competitors, including our customers, many of which have greater financial resources and greater selling, marketing and technical resources than we possess.

Automotive glass market. Solar control products in the automotive OEM market are provided by large, worldwide glass laminators who typically have divisions also selling products to the commercial flat glass industry. Several of these companies, such as PPG, Pilkington PLC, Saint Gobain, Asahi, Guardian, and Glaverbel, have direct-to-glass sputtering capability. In the applied film segment of the automotive market, companies such as 3M, Bekeart, CP Films (a subdivision of Solutia), and Lintec Inc. produce competitive solar control products that are widely accepted in the market. In addition, during 2001, 3M entered the automotive solar control market with an all-polymer film. Although this non-metalic film has the advantage of being completely corrosion resistant, its many layers may delaminate. We may also be subject to future competition from companies that are able to infuse glass with solar control properties. We estimate that in 2001 our coated substrates were used in less than 1% of the total worldwide automotive OEM glass produced.

Electronic display market. Competitors in the electronic display market include companies developing new coatings, such as wet coatings, for flat panel displays, as well as competitors who supply sputter coated films similar to those produced by us. Customers' selection of anti-reflective products is driven by quality, price and capacity. In addition, some of our current and potential customers are capable of creating products that compete with our products. We estimate that in 2001 our coated substrates were applied to approximately 4% of the products in the 17 inch and 19 inch worldwide, flat screen CRT market.

Architectural market. Products that provide solar control and energy conservation have been available to this market for almost 20 years. Since our introduction of our Heat Mirror suspended film product in 1979, large glass producers such as Guardian, PPG, Appogee, Glaverbel, and Asahi, have produced their own direct-to-glass sputtered products that provide solar control and energy conservation similar to our Heat Mirror product. We estimate that in 2001 our coated substrates were used in less than 1% of the glass used worldwide in residential and commercial buildings.

Basis of competition

We believe we compete principally on the basis of:

- Proprietary thin film sputtering process knowledge and control systems;
- Our extensive thin film materials expertise and optical design capabilities;

The world's largest installed base of coating machinery for application of sputter coatings to flexible film;

Our new, state-of-the-art coating facility in a low-cost labor environment, with significant financial support from local and federal governments in Germany; and

Our ability to easily alter the format of our products, providing our customers with inventory versatility and higher production yields.

Employees

As of May 15, 2002, we had 288 full-time employees, of whom 40 were engaged in engineering, 191 in manufacturing, and 57 in selling, general management, finance and administration. We are highly dependent upon the continuing services of certain technical and management personnel. None of our employees is represented by a labor union. We consider our employee relations to be good.

Properties

Our administrative, marketing, engineering and manufacturing facilities are located in five buildings totaling approximately 119,000 square feet in Palo Alto, California, and one building of approximately 55,000 square feet in Tempe, Arizona. The buildings in Palo Alto are occupied under leases that expire from 2002 to 2005, with options to extend some of these leases for terms expiring through 2009. The lease for the building in Tempe expires in 2007, with options to extend through 2017. We own our new 60,000 square foot building in Dresden, which we took possession of in May 2000.

Legal Proceedings

We are a defendant in an action entitled "Portfolio Financial Servicing Company v. Southwall Technologies Inc.," which was filed in state court in Utah on May 22, 2002. This action arises out of sale-leaseback agreements which we entered into with an entity formerly known as Matrix Funding Corporation, or Matrix, in 1999 in connection with the acquisition of two of our production machines. Matrix thereafter filed bankruptcy proceedings. In the action, the plaintiff claims to be an agent of the successor to Matrix. The plaintiff demands payment of $6,468,534, which it alleges constitutes unpaid

lease payments, plus the alleged residual value of the equipment, less monies that Matrix owes to us. We intend to defend the action vigorously.

We are a defendant in an action filed on April 5, 1996 entitled "Four Seasons Solar Products Corp. vs. Black & Decker Corp., Bostik, Inc. and Southwall Technologies Inc.," No. 5 CV1695, pending in the United States District Court for the Eastern District of New York. Plaintiff is a manufacturer of insulated glass units which incorporate our Heat Mirror film. Plaintiff alleges that a sealant provided by the co-defendant is defective, asserts causes of action for breach of contract, unfair competition, and fraudulent concealment, and seeks monetary damages of approximately $36 million for past and future replacement costs, loss of customer goodwill, and punitive damages against all defendants. We filed a motion to dismiss. The Court has dismissed the unfair competition and fraudulent concealment claims against us. It has denied our motion to dismiss the breach of contract claim. We believe the claim to be without merit.

In October 2000, we were served with a complaint entitled Hurd Millwork, Inc. v. Southwall Technologies Inc., et. al., United States District Court, Northern District of California, Case No. C00-3820 (CRB). Hurd is a manufacturer of insulated glass units which incorporate Heat Mirror film. Hurd alleged that various failures and deficiencies associated with the insulated glass units gave rise to warranty and other consumer claims. We have reached a settlement with the plaintiff, the terms of which are confidential. The cash portion of the settlement was paid by our insurance carriers. We have also provided a discount on the price of future film sales as part of the settlement.

The insurance carriers in some of the litigation related to alleged product failures and defects in window products manufactured by others in which we were a defendant paid the defense and settlement costs related to such litigation. Those insurance carriers reserved their rights and have expressed their intent to proceed against us to recover a portion or all of such payments. As a result, those insurance carriers could seek from us up to an aggregate of $12.9 million plus defense costs, although any such recovery would be restricted to claims that were not covered by our insurance policies. We intend to vigorously defend any attempts by these insurance carriers to seek reimbursement. We are not able to estimate the likelihood that these insurance carriers will seek to recover any such payments, the amount, if any, they might seek, or the outcome of such attempts.

Our German subsidiary was a defendant in a lawsuit filed by one of our suppliers on March 21, 2000 in a German court to seek payment of $0.9 million for engineering services rendered in connection with developing the initial plans for the Dresden facility. We issued letters of award to the plaintiff amounting to $0.3 million prior to terminating plaintiff's services for not meeting expectations. The plaintiff claimed fees for services rendered, including the costs of significant modifications and revisions requested by us calculated in accordance with the German Federal Schedule of Architects' fees. The plaintiff further alleged that we utilized plaintiff's planning work in further developing the plant. In December 2001, a judgment was reached by the German court, in favor of the plaintiff, for approximately $0.3 million. In February 2002, the plaintiff elected to accept the court's ruling in lieu of an appeal. The judgment has been accrued at December 31, 2001 as additional construction costs.

Our counsel has received a letter from a lawyer purporting to represent a manufacturer of skylights that allegedly incorporates our Heat Mirror film. The letter alleges that a sealant provided by a third party and used with our film was defective, and as a result the manufacturer and others similarly situated have suffered elevated warranty replacement claims and costs. The letter states that the manufacturer will bring legal action in the form of a class action lawsuit if the parties are unable to resolve the matter promptly. We believe the allegations to be without merit and intend to defend any subsequent action vigorously.

In addition, we are involved in certain other legal actions arising in the ordinary course of business. We believe, however, that none of these actions, either individually or in the aggregate, will have a material adverse effect on our business, our consolidated financial position, results of operations or cash flows.

MANAGEMENT

Executive Officers and Directors

The names, ages and positions of our current directors and executive officers are as follows:

Name	Age	Position
Thomas G. Hood	46	President, Chief Executive Officer and Director
Robert R. Freeman	59	Senior Vice President, Chief Financial Officer and Secretary
Sicco W. T. Westra	51	Senior Vice President, Sales and Marketing
Wolfgang Heinze	52	Vice President, Dresden Operations
Nasser A. Lama	41	Vice President, U.S. Operations
Bruce M. Lairson	40	Vice President and Chief Technology Officer
John Lipscomb	52	Corporate Controller
Joseph B. Reagan(1)(2)	66	Chairman, Board of Directors
Bruce J. Alexander(2)	57	Director
Tadahiro Murakami(2)	60	Director
Robert C. Stempel(1)	68	Director
Walter C. Sedgwick(1)	54	Director

(1) Member of the audit committee.

(2) Member of the human resources committee.

Thomas G. Hood has served as Southwall's President and Chief Executive Officer since July 1998 and as a member of the board of directors of Southwall since March 1998. From March 1998 until July 1998, he served as Interim President and Chief Executive Officer. From July 1996 to March 1998, he served as Senior Vice President, General Manager, Energy Products Division. From January 1995 to July 1996, he was Vice President, General Manager, International Operations, and from October 1991 to January 1995, he was Vice President, Marketing and Sales. He is the inventor of record on ten of Southwall's patents. Mr. Hood has an MS degree in Mechanical Engineering from New Mexico State University.

Robert R. Freeman has been Senior Vice President, Chief Financial Officer and Secretary of Southwall since September 2000. From May 1999 to June 2000, he served as Senior Vice President and Chief Financial Officer of Rosendin Electric, Inc. From August 1993 to April 1999, he served as Senior Vice President and Chief Financial Officer of Helix Electric, Inc. Mr. Freeman has an MBA from the University of Southern California.

Sicco W. T. Westra has been Senior Vice President, Sales and Marketing of Southwall since May 2002. From August 1998 to May 2002, he served as our Senior Vice President, Engineering and Chief Technical Officer. From February 1998 until August 1998, he served as the Director of Global Production Management for Applied Materials, Inc. From March 1994 to August 1998, he served as a Manager of Business Development for BOC Coating Technology, Inc. Dr. Westra holds a PhD. from the University of Leiden in the Netherlands.

Wolfgang Heinze joined Southwall in January 1999 as Plant Manager of our Dresden factory. In December 2000, Mr. Heinze was promoted to the position of Vice President, Dresden Operations. Prior to joining Southwall, Mr. Heinze had been the Chief Executive Officer of FUBA Printed Circuits, GMBH from February 1991 to April 1998. Mr. Heinze has a MD of Commercial Science from the Technical University in Merseburg, Germany.

Nasser A. Lama joined Southwall in September 1999 as Plant Manger of our Palo Alto factory. He was promoted to Vice President, U.S. Operations in March 2000. Prior to joining Southwall, Mr. Lama was Vice President of Operations of Ink Jet Technology, a subsidiary of FrancoTyp-Postalia, from March 1998 to March 2000. From August 1994 to March 1998, he was Director of Operations of Akashic Memories. Mr. Lama has an MS degree in Mechanical Engineering from Memphis State University.

Bruce M. Lairson joined Southwall in August 2001 as Director of New Products Engineering. In May 2002, he was promoted to the position of Vice President and Chief Technology Officer. Prior to joining Southwall, Mr. Lairson had been the Engineering Project Manager at Maxtor Inc. from June 2000 to July 2001. From March 1999 to June 2000, he served as a Director of Development at Komag Inc. and Ultracard Inc. From December 1997 to April 1999, he served as the Director of Advanced Technology at Western Digital Inc. Mr. Lairson holds a ME in Applied and Engineering Physics from Cornell University and a MS and PhD in Materials Science from Stanford University.

John Lipscomb has been Vice President, Corporate Controller since November 2000. From March 1996 to November 2000, he served as a Finance Director with Informix Software and with ABB LTD. From June 1988 to February 1996, he served in various senior level financial management positions with Apple Computer. Mr. Lipscomb has a B.A. degree in Accounting from the University of Massachusetts at Amherst.

Joseph B. Reagan has served as a member of our board of directors since June 1993 and as Chairman of the board of directors since May 2000. He previously served as a director from October 1987 through May 1992. Dr. Reagan is a technology and senior management consultant to industry and to the United States Government. He retired in 1996 after 37 years with the Lockheed Martin Corporation where he was a Corporate Vice President and General Manager of the Research and Development Division of the Missiles and Space Company. Dr. Reagan holds a PhD in Space Science from Stanford University.

Bruce J. Alexander has served as a member of our board of directors since May 1981. In April 1999, he joined Needham & Company, Inc., an investment bank, as a Managing Director. From June 1997 until April 1999, he served as President and Chief Executive Officer of Black & Company, an investment bank. From May 1994 to June 1997, he was with Needham & Company, Inc., serving as a Managing Director. From January 1992 to May 1994, he was a General Partner with Materia Ventures, L.P., a venture capital firm investing in advanced materials companies. From March 1987 to July 1991, he was President and Chief Executive Officer of Southwall. From February 1982 to March 1987, he held various positions with Southwall, including Executive Vice President, Vice Chairman of the Board, Chairman of the Board, acting Chief Executive Officer, and Chief Financial Officer.

Tadahiro Murakami has served as a member of the board of directors of Southwall since May 2000. He is the Assistant to the President of Teijin-Bayer Polytec Ltd., a subsidiary of Teijin Limited. From April 1999 until May 2000, he served as President of Teijin-Bayer Polytec Ltd. From February 1997 until April 1999, he served as Director of the Plastics Division for Teijin DuPont Films, a subsidiary of Teijin Limited, and was the General Manager of the Sales Department for Teijin DuPont Films from December 1994 until February 1997.

Robert C. Stempel has served as a member of our board of directors since May 2000. He is Chairman of Energy Conversion Devices, Inc. (ECD), an energy and information company headquartered in Troy, Michigan. Mr. Stempel retired as Chairman and Chief Executive Officer of General Motors Corporation in November 1992. He was named Chairman and Chief Executive Officer in August 1990. Prior to serving as Chairman, he had been President and Chief Operating Officer of General Motors since September 1987.

Walter C. Sedgwick has served as a member of our board of directors since January 1979. Mr. Sedgwick has been a private investor since 1994.

Board of Directors

Our board of directors is comprised of six directors. Each director serves for a one-year term. In connection with Teijin's guarantee of a loan to us in the original principal amount of $10.0 million, we have agreed to use our best efforts to elect a Teijin nominee to our board of directors.

Our board of directors has an audit committee and a human resources committee. Messrs. Reagan, Alexander and Murakami are the members of the human resources committee. The human resources committee is authorized to make and review periodically recommendations regarding employee compensation, and to perform other duties regarding compensation for employees as the board of directors may direct. The human resources committee is also authorized to administer our stock option plans.

Messrs. Reagan, Stempel and Sedgwick are the members of the audit committee. The audit committee is responsible for reviewing the results and scope of audits and other services provided by our independent public accountants, and reviewing our system of internal accounting and financial controls. The audit committee also reviews other matters with respect to our accounting, auditing and financial reporting practices and procedures as it deems necessary or desirable.

Director Compensation

We pay each of our non-employee directors, other than the Chairman, an annual fee of $7,000 for their services as a director. We pay an annual fee of $30,000 to the Chairman. The directors' fees are payable in shares of our common stock at the director's option. In addition, each non-employee director receives $1,000 plus expenses for each board meeting attended. Non-employee directors also receive a fee of $500 for each board meeting held via teleconference. Non-employee directors who serve on committees of the board, other than committee chairmen, also receive $600 for each committee meeting attended. Committee chairmen receive $750 for each committee meeting attended.

Directors may also receive options under our 1997 stock incentive plan. During 2001, we granted options to non-employee directors to purchase the following number of shares, all at an exercise price of $2.81 per share: Dr. Reagan, 24,000 shares; Mr. Alexander, 7,000 shares; Mr. Murakami, 7,000 shares; Mr. Sedgwick, 7,000 shares; and Mr. Stempel, 7,000 shares. For a summary of the option grants we made to Mr. Hood in 2001, please see "Executive Compensation-Option Grants in Last Fiscal Year" below.

We pay no other compensation to our directors in respect of their services as directors.

Compensation Committee Interlocks and Insider Participation

Our human resources (compensation) committee is composed of Joseph B. Reagan, Tadahiro Murakami and Bruce J. Alexander. Neither Dr. Reagan nor Mr. Murakami has at any time since our formation been an officer or employee of Southwall. From February 1982 to July 1991, Mr. Alexander held various positions with us, including Executive Vice President, Vice Chairman of the Board, Chairman of the Board, Chief Executive Officer and Chief Financial Officer. Mr. Alexander is a Managing Director of Needham & Company, Inc., a managing underwriter for this offering. In his capacity as a Managing Director of Needham & Company, Inc., Mr. Alexander may be deemed to benefit indirectly from the underwriting commission to be paid by us to the underwriters in connection with in this offering. None of our executive officers currently serves, or in the past has served as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving on our board of directors or human resources committee.

Executive Compensation

The following summary compensation table sets forth the total compensation paid or accrued for services rendered in 2001, 2000 and 1999 by our chief executive officer and each of our four other most highly compensated executive officers (the "named executive officers"):

Name and Principal Position	Year	Annual Compensation Salary(1)	Annual Compensation Bonus(1)	Long-Term Compensation Awards Stock Underlying Options(#)	All Other Compensation(2)
Thomas G. Hood	2001	$ 270,000	$ 123,571	50,000	$ 1,000
President and Chief Executive Officer	2000	265,192	19,120	28,550	1,000
	1999	257,288		26,666	1,000
Robert R. Freeman(3)	2001	200,000	62,071	35,000	1,000
Senior Vice President, Chief Financial Officer	2000	58,462		50,000	1,000
and Secretary	1999				
Sicco W. T. Westra	2001	195,000	50,821	30,000	1,000
Senior Vice President, Sales and Marketing	2000	176,144	12,620	17,300	1,000
	1999	177,817		12,000	1,000
Wolfgang Heinze(4)	2001	175,910	70,545		
Vice President, Dresden Operations	2000	133,874	86,659	5,000	
	1999	45,257	5,570	20,000	
Ted L. Larsen(5)	2001	176,110	41,474	20,000	1,000
Vice President, Sales and Marketing Electronic	2000	174,446	920	6,500	1,000
Display Products	1999	138,280	296	5,000	1,000

(1) The amounts listed under Salary and Bonus include amounts deferred pursuant to our 401(k) Plan.

(2) The amounts listed under "All Other Compensation" for 1999, 2000 and 2001 consist of our matching contributions under our 401(k) Plan.

(3) Mr. Freeman joined us in September 2000 as Senior Vice President, Chief Financial Officer and Secretary.

(4) Mr. Heinze joined us in January 1999 and was promoted to the position of Vice President, Dresden Operations in December 2000.

(5) Mr. Larsen retired in April 2002.

Option Grants In Last Fiscal Year

The following table shows information concerning each stock option we granted to the named executive officers during our fiscal year ended December 31, 2001.

Name	Number of Shares Underlying Options Granted(1)	Percent of Total Options Granted to Employees in 2001	Exercise Price Per Share(2)	Expiration Date	Potential Realizable Values at Assumed Annual Rate of Stock Price Appreciation for Option Term(3) 5%	10%
Thomas G. Hood	50,000	9.2%	$ 3.71	1/24/2011	$ 116,660	$ 295,639
Robert R. Freeman	35,000	6.5	2.81	1/24/2011	61,907	156,884
Sicco W. T. Westra	30,000	5.5	2.81	1/24/2011	53,055	134,453
Wolfgang Heinze						

					Potential Realizable Values at Assumed Annual Rate of Stock Price Appreciation for Option Term(3)	
Ted L. Larsen	20,000	3.7	2.81	1/24/2011	35,375	89,648

(1) Option grants were made under our 1997 stock incentive plan. The options granted to Messrs. Freeman, Westra and Heinze vest in four equal annual installments, beginning one year after the grant date. The options granted to Mr. Hood vested in seven equal annual installments, beginning one year after the grant date and were subject to acceleration if we met certain earnings targets. We met these targets as of December 31, 2001, and Mr. Hood's options became fully vested. In the event of certain corporate transactions such as an acquisition or sale of our assets, the outstanding options of our named executive officers will become immediately exercisable for fully vested shares of common stock, unless the options are assumed or substituted with a comparable option by the acquiring company or its parent. In any event, our human resources committee may accelerate the vesting of outstanding options upon certain corporate transactions or involuntary terminations following a corporate transaction.

(2) We granted all options at an exercise price per share equal to the fair market value of the common stock on the date of grant. The exercise price may be paid in cash or cash equivalents, in shares of the underlying common stock valued at fair market value on the exercise date or in a same-day sale program with the assistance of a designated brokerage firm.

(3) The potential realizable values at assumed 5% and 10% annual rates of compounded stock price appreciation for the terms of the options are based on the fair market value or deemed fair market value of the common stock used by us for accounting purposes, as applicable, and do not represent our estimates or projections of our future stock prices. Actual gains, if any, on stock option exercises will be dependent on the future performance of our common stock.

Aggregated Option Exercises In Last Fiscal Year and Fiscal Year-End Option Values

The following table sets forth information concerning option exercises and unexercised stock options for our fiscal year ended December 31, 2001 with respect to each named executive officer. We determined the value of unexercised in-the-money options by calculating the difference between the exercise price per share payable upon exercise of these options and the closing price of our common stock on the Nasdaq National Market at December 31, 2001, which was $7.15 per share. The value realized has been calculated by determining the difference between the exercise price per share paid

upon exercise of the options and the closing price of our common stock on the Nasdaq National Market on the date of exercise of the options.

Name	Shares Acquired On Exercise	Value Realized	Number of Securities Underlying Unexercised Options at December 31, 2001		Value of Unexercised In-the-Money Options at December 31, 2001	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Thomas G. Hood	7,500	$ 1,875	137,266	168,750	$ 259,253	$ 377,381
Robert R. Freeman			12,500	72,500	24,300	224,713
Sicco W. T. Westra			49,550	59,750	123,676	188,004
Wolfgang Heinze			11,250	13,750	36,430	41,290
Ted L. Larsen	5,625	1,406	47,150	28,750	107,480	102,358

1997 Stock Incentive Plan and 1998 Stock Option Plan for Employees and Consultants

In May 1997, we adopted the 1997 stock incentive plan and reserved an aggregate of 400,000 shares of our common stock for issuance under the plan. The shares reserved for issuance under the plan automatically increase at the beginning of each year by 250,000. As of May 23, 2002, options to purchase a total of 1,401,859 shares of common stock were outstanding under the plan. The plan is administered by the human resources committee of the board of directors. The human resources committee has the authority to construe and interpret the plan and any agreement made under the plan, grant awards and make all other determinations necessary or advisable for administration of the plan.

In August 1998, we adopted the 1998 stock option plan for employees and consultants and reserved an aggregate of 250,000 shares of our common stock for issuance under the plan. The shares reserved for issuance under the plan automatically increase at the beginning of each year by 150,000. As of May 23, 2002, options to purchase a total of 694,345 shares of common stock were outstanding under the plan. The plan is administered by the human resources committee. The human resources committee has the authority to construe and interpret the plan and any agreement made under the plan, grant awards and make all other determinations necessary or advisable for the administration of the plan.

1997 Employee Stock Purchase Plan

In March 1997, our board of directors and stockholders adopted the 1997 employee stock purchase plan. We initially reserved 100,000 shares of our common stock for issuance under this plan. In May 2000, the board of directors and stockholders approved the reservation of an additional 29,904 shares for issuance under the plan. In May 2001 and April 2002, the board of directors approved the reservation of an additional 95,096 shares and 100,000 shares, respectively, for issuance under the plan. Our stockholders approved these increases at our 2002 annual stockholders meeting.

Severance Policy

We have a severance policy that covers all of our officers, including the named executive officers other than Ted Larsen, who retired in April 2002, and some of our key employees, under which they may become entitled to special benefits in connection with certain changes in control of Southwall affected by merger, liquidation or tender offer.

Under the policy, each named executive officer will become entitled to a lump sum severance payment upon his involuntary termination within 24 months after a change in control. The cash payment will be equal to (i) in the case of our chief executive officer, two times the sum of the chief executive officer's annual rate of base salary in effect at the time of his or her involuntary termination plus the bonuses earned by him or her for the immediately preceding fiscal year or (ii) in the case of the other named executive officers, between one and one and one-half times, as determined by our board of directors, the sum of the officer's annual rate of base salary in effect at the time of his or her involuntary termination plus the bonuses earned by him or her for the immediately preceeding fiscal year.

In the event benefits had become due as of May 22, 2002 under the severance policy currently in effect, the maximum cash amounts payable would be as follows: Mr. Hood, $540,000; Mr. Freeman, $300,000; Mr. Westra, $264,000; and Mr. Heinze, $232,500.

RELATED PARTY TRANSACTIONS

Teijin

On April 9, 1997, we signed a set of agreements with a major supplier of our raw materials, Teijin Limited. The agreements provided for, among other things, the purchase by Teijin of 667,000 shares of our common stock at a price of $7.50 per share; a guarantee by Teijin of a $10.0 million loan to us by a Japanese bank; and an agreement to collaborate on increasing marketing and product development ties between the two companies. We pay an annual loan guarantee fee to Teijin of 0.5625% of the outstanding principal balance of the loan guaranteed by Teijin. We paid a loan guarantee fee of approximately $57,344, $56,875 and $53,000 to Teijin during 1999, 2000 and 2001, respectively. As of March 31, 2002, $7.5 million was outstanding under the loan guaranteed by Teijin. Pursuant to letter agreements dated March 28, 2002 and May 9, 2002, between us and Teijin, we are obligated to repay $2.5 million of the loan guaranteed by Teijin with the proceeds of this offering. See "Use of Proceeds."

Also, we have agreed to use our best efforts to elect a Teijin nominee to our board of directors. Mr. Hideo Nakamori, President and CEO of Metton America, Inc., a subsidiary of Teijin, was appointed to our board of directors in May 1999 and served as a member of the board until May 2000. Mr. Tadahiro Murakami, the Assistant to the President of Teijin-Bayer Polytec Ltd., a subsidiary of Teijin, was appointed to our board of directors in May 2000. During 2001, we paid Teijin approximately $9.0 million for purchases of raw material substrates.

Globamatrix

We have a distribution agreement with Globamatrix under which we granted it an exclusive world-wide license to distribute our after-market applied film in the automotive and architectural glass markets. Under the agreement, which is scheduled to expire in 2011, Globamatrix agreed to purchase an annually increasing amount of our products subject to volume and quality standards. Our failure to produce required amounts of product under the agreement will result in penalties under which we would be required to reimburse Globamatrix for the full cost of any product not timely delivered. During 1999, 2000 and 2001, respectively, we had $2.0, $2.2 and $5.6 million in sales to Globamatrix under a prior distribution agreement.

On April 20, 2001, Globamatrix purchased 422,119 shares of our common stock for $1.0 million (approximately $2.37 per share) pursuant to a stock purchase agreement. The closing price of our common stock on the Nasdaq National Market on April 19 and 20, 2001, was $2.10 and $2.19 per share, respectively. The shares were not registered under the Securities Act. Globamatrix holds registration rights with respect to the shares.

Transactions Involving Directors

In April 1997, we entered into a development and technology agreement with Energy Conversion Devices, Inc., or ECD. Robert C. Stempel, a director of Southwall since May 2000, is the Chairman of ECD. This agreement provides that we will pursue with ECD the commercialization of the process of sputter coating on flexible substrates using PECVD techniques. The agreement further provides that we will pay ECD a royalty in an amount which is based upon the sales volume of product produced through PECVD techniques. We agree to pay to ECD 2.25% of net sales received by us in connection with PECVD technology for five years and 1.25% of net sales after that. To date, the process has not been commercialized and we have not paid ECD royalties under the agreement, but expect we will begin to pay royalties during 2002. In February 1999, we entered into an equipment purchase contract with ECD pursuant to which ECD agreed to modify one of our production machines (PM 7) so that the machine would produce our products by means of PECVD techniques. We paid ECD approximately $0.9 million in 1999, $0.01 million in 2000 and $0.3 million in 2001 in connection with its conversion of PM 7 to the use of PECVD technology. We owed ECD an additional $0.7 million at

December 31, 2001 and $0.5 million at March 31, 2002 in connection with the conversion of PM 7, which is represented by a note payable. We have agreed under the note to pay ECD $0.05 million per month through December 2002, with a final payment of $0.07 million in January 2003. We have further agreed to attempt to procure for ECD a first priority security interest in PM 7.

Bruce J. Alexander, one of our directors, is a Managing Director of Needham & Company, Inc., a managing underwriter for this offering. In this capacity, Mr. Alexander may be deemed to benefit indirectly from the underwriting commission to be paid by us to the underwriters in connection with this offering.

Loans to Officers and Directors

During 1998, 1999, 2000 and 2001, we lent $43,875, $25,313, $0 and $18,750, respectively, to Thomas G. Hood, our President, Chief Executive Officer and a director, to permit him to exercise stock options that were about to expire at a time when he was not able to sell the shares issuable upon exercise to pay the exercise price. The indebtedness is represented by full recourse notes payable to us due on June 28, 2002 ($14,063), December 1, 2002 ($43,875), December 15, 2002 ($11,250) and February 13, 2003 ($18,750), each bearing interest at the rate of 7.0% per annum. The largest amount of indebtedness outstanding under these notes at any time during 2001 was $87,937. In addition, on March 8, 2002, we lent Mr. Hood an additional $14,700 to exercise additional options. This note is due March 8, 2003, and bears interest at 7.0% per annum. As of May 20, 2002, the aggregate amount of indebtedness under Mr. Hood's notes was $102,637.

We believe that all transactions described above were made on terms no less favorable to us than would have obtained from unaffiliated third parties. Future transactions, if any, with our executive officers, directors and affiliates will be on terms no less favorable to us than could be obtained from unrelated third parties and will be approved by a majority of the board of directors and by a majority of our disinterested members of the board of directors.

PRINCIPAL AND SELLING STOCKHOLDERS

The following table sets forth material information regarding beneficial ownership of our common stock as of May 23, 2002 by:

- each person who we know to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors;
- each selling stockholder; and
- all executive officers and directors as a group.

Except as noted below, the address of each person listed on the table is c/o Southwall Technologies Inc., 1029 Corporation Way, Palo Alto, California, 94303, and each person named has sole voting and investment power over the shares shown as beneficially owned, except to the extent authority is shared by spouses under applicable law.

Name and Address of Beneficial Owner	Number of Shares(1)	Percent of Common Stock Outstanding(1) Before Offering	After Offering(2)
Teijin Limited(3) 67, Minamihonmachi, 1-chome Chuoku, Osaka 541, Japan	667,000	7.8%	5.5%
Advisory Clients of Dimensional Fund Advisors, Inc. 1299 Ocean Avenue, 11th Floor Santa Monica, CA 90401	509,400	5.9	4.2
Globamatrix Holdings Pte. Ltd. 3 Science Park Drive 01-06 Singapore 118223	408,919	4.8	3.4
Joseph B. Reagan(4)	96,812	1.1	*
Bruce J. Alexander(5)	161,592	1.9	1.3
Tadahiro Murakami	11,750	*	*
Walter C. Sedgwick(6)	278,809	3.2	2.3
Robert C. Stempel(7)	11,750	*	*
Thomas G. Hood(8)	237,641	2.7	1.9
Robert R. Freeman(7)	21,250	*	*
Sicco W. T. Westra(7)	64,400	*	*
Wolfgang Heinze(7)	11,250	*	*
Ted L. Larsen(9)	58,975	*	*
All current executive officers and directors as a group (12 persons)(10)	1,057,369	11.5%	8.3%

* Less than one percent.

(1) The table is based upon information supplied by EquiServe and questionnaires received from the above directors and officers.

(2) Does not assume the underwriters exercise the over-allotment option.

(3) Tadahiro Murakami may be deemed a beneficial owner of the Teijin Limited shares under Rule 13d-3 of the Securities Exchange Act of 1934. Mr. Murakami disclaims beneficial ownership of such shares.

(4) Includes options to purchase 64,496 shares that are exercisable within 60 days of May 23, 2002.

(5)

(6) Includes options to purchase 26,420 shares that are exercisable within 60 days of May 23, 2002.

(7) Includes options to purchase 55,744 shares that are exercisable within 60 days of May 23, 2002, 49,000 shares held in trust for Mr. Sedgwick's benefit, 17,272 shares held by Mr. Sedgwick's son and 3,000 shares held in trust for Mr. Sedgwick's children.

(8) Consists of options that are exercisable within 60 days of May 23, 2002.

(9) Includes options to purchase 198,516 shares that are exercisable within 60 days of May 23, 2002.

(10) Includes options to purchase 44,650 shares that are exercisable within 60 days of May 23, 2002.

(11) Includes options to purchase an aggregate of 613,415 shares that are exercisable within 60 days of May 23, 2002 and the shares held in trust described in note 6 above.

If the underwriters' over-allotment option is exercised in full, we will sell an additional 507,300 shares of common stock and the selling stockholders identified below will sell an aggregate of 17,700 shares of common stock. The following table presents information regarding the selling stockholders' beneficial ownership of our common stock as of May 23, 2002 as adjusted to reflect the sale of common stock by us and each selling stockholder assuming the underwriters exercise the over-allotment option in full.

The address of the person listed in the table is c/o Southwall Technologies Inc., 1029 Corporation Way, Palo Alto, California, 94303, and such person named has sole voting and investment power over the shares shown as beneficially owned, except to the extent authority is shared by his spouse under applicable law.

	Common Stock Beneficially Owned Prior to the Offering(1)		Common Stock to be Sold in the Offering	Common Stock Beneficially Owned After the Offering	
Name and Address of Selling Stockholders	Number	Percent		Number	Percent
Sicco W. T. Westra(2)	64,400	*	17,700	46,700	*
All current executive officers and directors as a group (12 persons)(3)	1,057,369	11.5%	17,700	1,039,669	7.9%

* Less than one percent.

(1) The table is based upon information supplied by EquiServe and questionnaires received from the above officer.

(2) Common stock beneficially owned prior to the offering includes options that are exercisable within 60 days of May 23, 2002, 16,500 shares of which will be exercised and sold as part of this offering.

(3) Common stock beneficially owned prior to the offering includes options to purchase an aggregate of 613,415 shares that are exercisable within 60 days of May 23, 2002, 16,500 of which will be sold as part of this offering.

DESCRIPTION OF CAPITAL STOCK

Authorized and Outstanding Capital Stock

Upon the closing of this offering, our authorized capital stock will consist of 20,000,000 shares of common stock, par value $.001 per share and 5,000,000 shares of preferred stock, par value $.001 per share.

The following summary description of the material provisions of our capital stock, as of the closing of this offering, is qualified by reference to the provisions of applicable law and to our restated certificate of incorporation filed as an exhibit to the registration statement of which this prospectus is a part.

Common Stock

As of May 23, 2002, there were approximately 8,586,278 shares of our common stock outstanding and held of record by approximately 350 stockholders. Based upon the number of shares outstanding as of May 23, 2002 and giving effect to the issuance of the shares of common stock offered by Southwall hereby, but not the exercise of the underwriters' over-allotment option, there will be approximately 12,086,278 shares of common stock outstanding upon the closing of this offering. In addition, as of May 23, 2002, there were outstanding stock options to purchase a total of 1,929,004 shares of our common stock. Each share of common stock entitles its holder to one vote. The holders of common stock do not have cumulative voting rights in the election of directors and have no preemptive rights to subscribe for additional shares of our capital stock.

Preferred Stock

As of May 23, 2002, there were no shares of our preferred stock outstanding. Our preferred stock may be issued in one or more series and our board of directors is authorized without stockholder approval to determine or alter the rights, preferences, privileges and restrictions to be granted or imposed on any series of our preferred stock.

Anti-Takeover Provisions of Our Organizational Documents and Delaware Law

Our restated certificate of incorporation and by-laws and the Delaware General Corporation Law contain certain provisions that could discourage, delay or prevent a change in control of Southwall or our acquisition at a price which many stockholders may find attractive. The existence of these provisions could limit the price that investors might be willing to pay for our common stock.

Certificate of Incorporation and By-Laws

Certain provisions of our restated certificate of incorporation and by-laws, which will be in effect after the closing of this offering, might discourage, delay or prevent a change of control or a change in our management, even if such changes would be beneficial to our stockholders. The most important provision is the ability of our board of directors, without stockholder approval, to issue any class or series of preferred stock with dividend rights, dividend rates, conversion rights, redemption rights, preferences on liquidation or dissolution, voting rights and any other preferences, which could adversely affect the voting power of the holders of common stock. The existence of this provision could limit the price that investors might be willing to pay for our common stock and could deprive you of an opportunity to receive a premium for your common stock as part of a sale.

Effect of Delaware Anti-Takeover Statute

We are subject to Section 203 of the General Corporation Law of Delaware which, subject to some exceptions, prohibits a publicly held Delaware corporation from engaging in any business combination

with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder.

Section 203 does not apply if:

prior to that date, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;

upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or

on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

The application of Section 203 may limit the ability of stockholders to approve a transaction that they may deem to be in their best interests.

Section 203 defines "business combination" to include:

any merger or consolidation involving the corporation and the interested stockholder;

any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;

subject to some exceptions, any transaction which results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;

any transaction involving the corporation which has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or

the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an "interested stockholder" as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation or which is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within the past three years, and any entity or person associated with, affiliated with or controlling or controlled by the entity or person.

Registration Rights

One of our major customers, Globamatrix, has the right to demand registration of the shares of our common stock purchased pursuant to a Stock Purchase Agreement dated April 20, 2001. Globamatrix also has the right to include the unregistered shares of common stock owned by it in a public offering of our stock. Globamatrix has elected not to include any of our shares held by it in this offering. The agreement provided for the purchase by Globamatrix of 422,119 shares of our common stock for $1.0 million or a price of approximately $2.37 per share. The securities sold were not

registered under the Securities Act in reliance upon an exemption from the registration provisions of the Securities Act set forth in Section 4(2) thereof.

Limitation of Liability

Our restated certificate of incorporation provides that none of our directors shall be personally liable to us or to our stockholders for monetary damages for breach of fiduciary duty as a director, except that the limitation shall not eliminate or limit liability to the extent that the elimination or limitation of the liability is not permitted by the Delaware General Corporation Law.

Our by-laws provide for the indemnification of our directors and permit us to indemnify our officers to the fullest extent permitted by the Delaware General Corporation Law. A principal effect of these provisions is to limit or eliminate the potential liability of our directors and officers for monetary damages arising from breaches of their duty of care, subject to certain exceptions. These provisions may also shield directors and officers from liability under federal and state securities laws.

Stock Transfer Agent

The transfer agent and registrar for our common stock is EquiServe Trust Company, N.A., Canton, Massachusetts.

UNDERWRITING

We and the selling stockholders have entered into an underwriting agreement with the underwriters named below. The underwriters' obligations are several, which means that each underwriter is required to purchase a specific number of shares, but is not responsible for the commitment of any other underwriter to purchase shares. Subject to the terms and conditions of the underwriting agreement, each underwriter has severally agreed to purchase from us the number of shares of common stock set forth opposite its name below:

Underwriter	Number of Shares
Needham & Company, Inc.	1,750,000
Adams, Harkness & Hill, Inc.	1,050,000
Wells Fargo Securities, LLC	700,000
Total	3,500,000

The underwriters have advised us and the selling stockholders that the underwriters propose to offer the shares of common stock to the public at the public offering price per share set forth on the cover page of this prospectus. The underwriters may offer shares to securities dealers, who may include the underwriters, at that public offering price less a concession of up to $0.15 per share. The underwriters may allow, and these dealers may re-allow, a concession to other securities dealers of up to $0.10 per share. After the offering to the public, the offering price and other selling terms may be changed by the underwriters.

We and the selling stockholders have granted to the underwriters an option to purchase up to 525,000 additional shares of common stock at the public offering price per share, less the underwriting discount, set forth on the cover page of this prospectus. This option is exercisable during the 30-day period after the date of this prospectus. The underwriters may exercise this option only to cover over-allotments, which are discussed below, made in connection with this offering. If this option is exercised, each of the underwriters will be obligated to purchase approximately the same percentage of the additional shares as the number of shares of common stock to be purchased by that underwriter, as shown in the table above, bears to the total number of shares shown.

The underwriting discount is equal to the public offering price per share of common stock less the amount paid by the underwriters to us and the selling stockholders per share of common stock. The underwriting discount is 6.0% of the public offering price. The following table shows the per share and total underwriting discount to be paid to the underwriters by us and the selling stockholders. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

		Total	
	Per Share	No Exercise	Full Exercise
Paid by Southwall	$ 0.27	$ 945,000	$ 1,081,971
Paid by the selling stockholders	$ 0.27	$ -0-	$ 4,779

The underwriting agreement provides that the obligations of the several underwriters to purchase the shares of common stock offered hereby are subject to certain conditions precedent and that the underwriters will purchase all shares of the common stock offered hereby, other than those covered by the over-allotment option described above, if any of these shares are purchased.

The underwriting agreement also provides that we and the selling stockholders will indemnify the underwriters against certain liabilities that may be incurred in connection with this offering, including

liabilities under the Securities Act, or to contribute to payments that the underwriters may be required to make in respect thereof.

The underwriters are offering the shares of our common stock, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officers' certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

We have agreed, subject to certain exceptions, not to offer, sell, contract to sell, grant options to purchase, or otherwise dispose of any shares of our common stock or securities exchangeable for or convertible into our common stock for a period of 180 days after the date of this prospectus without the prior written consent of Needham & Company, Inc. This agreement does not apply to options outstanding under any existing employee benefit plans. Our directors, officers and the selling stockholders have agreed, subject to certain exceptions, not to, directly or indirectly, sell, hedge, or otherwise dispose of any shares of common stock, options to acquire shares of common stock or securities exchangeable for or convertible into shares of common stock, for a period of 180 days after the date of this prospectus without the prior written consent of Needham & Company, Inc. Needham & Company, Inc. may, in its sole discretion and at any time without notice, release all or any portion of the securities subject to these lock-up agreements.

In connection with this offering, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock. Specifically, the underwriters may over-allot shares of our common stock in connection with this offering by selling more shares than are set forth on the cover page of this prospectus. This creates a short position in our common stock for their own account. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase under the over-allotment option. To close out a short position, the underwriters may bid for, and purchase, common stock in the open market. The underwriters may also elect to reduce any short position by exercising all or part of the over-allotment option. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the over-allotment option. If the underwriters sell more shares than could be covered by the over-allotment option, a naked short position, the position can only be entirely closed out by buying shares in the open market. A naked short position is more likely to be created if the underwriter is concerned that there may be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase shares in the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter or dealer repays selling concessions allowed to it for distributing our common stock in this offering because the underwriters repurchase that stock in stabilizing or short covering transactions.

Finally, the underwriters and selling group members, if any, or their affiliates may engage in passive market making transactions in our common stock on the Nasdaq National Market immediately prior to the commencement of sales in this offering, in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934. Rule 103 generally provides that:

- a passive market maker may not effect transactions or display bids for our common stock in excess of the highest independent bid price by persons who are not passive market makers;
- net purchases by a passive market maker on each day are generally limited to 30% of the passive market maker's average daily trading volume in our common stock during a specified

two-month prior period or 200 shares, whichever is greater, and must be discontinued when that limit is reached; and

passive market making bids must be identified as such.

Any of these activities may stabilize or maintain the market price of our common stock at a price that is higher than the price that might otherwise exist in the absence of these activities or may prevent or retard a decline in the market price of our stock. The underwriters are not required to engage in these activities, and may discontinue any of these activities at any time without notice. These transactions may be effected on the Nasdaq National Market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor any of the underwriters make any representation that the underwriters will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Bruce J. Alexander, a member of our board of directors since May 1981, presently serves as a Managing Director of Needham & Company, Inc. From March 1987 to July 1991, he was President and Chief Executive Officer of Southwall, and from February 1982 to March 1987, he held various offices with us, including Executive Vice President, Vice Chairman of the Board, Chairman and acting Chief Executive Officer, and Chief Financial Officer.

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us. They have received customary fees and commissions for these transactions.

LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed upon for us by Choate, Hall & Stewart, Boston, Massachusetts. Certain legal matters will be passed upon for the underwriters by Tonkon Torp LLP, Portland, Oregon.

EXPERTS

The financial statements as of December 31, 2001 and December 31, 2000 and for each of the three years in the period ended December 31, 2001 included in this prospectus have been so included in reliance on the report (which contains an explanatory paragraph relating to Southwall's non-compliance with covenants of a guarantee agreement which have been waived through and including September 30, 2003, as described in Note 4 to the financial statements) of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any reports, statements and other information we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C., 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available on the SEC's Internet site as part of the EDGAR database (*http://www.sec.gov*).

We have filed with the SEC a registration statement on Form S-1 (including the exhibits and schedules thereto) under the Securities Act and the rules and regulations thereunder, for the registration of the common stock offered in this prospectus. This prospectus is part of the registration statement. This prospectus does not contain all the information included in the registration statement because we have omitted certain parts of the registration statement as permitted by the SEC rules and regulations. For further information about us and our common stock, you should refer to the registration statement. Statements contained in this prospectus as to any contract, agreement or other document referred to are not necessarily complete. Where the contract or other document is an exhibit to the registration statement, each statement is qualified by the provisions of that exhibit.

SOUTHWALL TECHNOLOGIES INC.

Index to Consolidated Financial Statements

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and Stockholders of
Southwall Technologies Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of stockholders' equity and of cash flows present fairly, in all material respects, the financial position of Southwall Technologies Inc. (the "Company") and its subsidiaries at December 31, 2000 and 2001, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2001 in conformity with accounting principles generally accepted in the United States of America. These consolidated financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits of these consolidated financial statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether these consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in these consolidated financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

As discussed in Note 4, the Company was not in compliance with certain of the financial covenants of a loan guarantee agreement with Teijin Limited, a stockholder and supplier of the Company. Compliance with these covenants has been waived through and including September 30, 2003.

PricewaterhouseCoopers LLP

San Jose, California
March 4, 2002, except as to Note 4, which is dated as of May 17, 2002,
and Note 9, which is dated as of May 22, 2002.

SOUTHWALL TECHNOLOGIES INC.

CONSOLIDATED BALANCE SHEETS

(dollars and shares in thousands, except for per share data)

December 31,

	December 31,		March 31,
	2000	2001	2002
			(unaudited)
ASSETS			
Current assets			
Cash and cash equivalents	$ 61	$ 3,362	$ 2,713
Restricted cash	1,849	1,602	1,120
Accounts receivable, net	13,317	9,020	10,239
Inventories, net	10,174	6,151	7,053
Other current assets	2,008	3,471	2,932
Total current assets	27,409	23,606	$ 24,057
Property, plant and equipment, net	49,884	47,841	47,326
Restricted loan proceeds	794	738	741
Other assets	2,375	973	943
Total assets	$ 80,462	$ 73,158	$ 73,067
LIABILITIES AND STOCKHOLDERS' EQUITY			
Current liabilities:			
Current portion term debt (Note 4)	$ 5,806	$ 8,315	$ 7,579
Line of credit (Note 3)	8,719	2,974	4,606
Accounts payable	16,857	10,338	8,757
Accrued compensation	1,915	2,794	2,535
Other accrued liabilities	4,551	5,656	5,567
Government grants advanced (Note 5)	1,085		
Term debt reclassified to current (Note 4)	20,624		
Total current liabilities	59,557	30,077	29,044
Term debt (Note 4)		14,513	13,800
Government grants advanced (Note 5)		941	771
Other	767	1,175	1,166
Total liabilities	60,324	46,706	44,781
Commitment and contingencies (Note 9)			
Stockholders' equity			
Common stock, $0.001 par value per share, 20,000 shares authorized; issued and outstanding 7,889, 8,332 and 8,563 (unaudited) at December 31, 2000, 2001 and March 31, 2002, respectively	8	8	9
Capital in excess of par value	51,764	52,614	53,467
Less cost of treasury stock 166 and 0 shares outstanding	(839)		
Notes receivable	(99)	(88)	(103)
Accumulated other comprehensive income (loss)			
Cumulative translation loss	(151)	(172)	(356)
Accumulated deficit	(30,545)	(25,910)	(24,731)

	December 31,		
Total stockholders' equity	20,138	26,452	28,286
Total liabilities and stockholders' equity	$ 80,462	$ 73,158	$ 73,067

The accompanying notes are an integral part of these consolidated financial statements.

SOUTHWALL TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF OPERATIONS

(dollars and shares in thousands, except per share data)

	Year Ended December 31,			Three Months Ended	
	1999	2000	2001	April 1, 2001	March 31, 2002
				(unaudited)	(unaudited)
Net revenues	$ 54,598	$ 85,348	$ 82,976	$ 17,713	$ 19,269
Cost of sales	40,706	69,060	60,148	14,849	12,425
Gross profit	13,892	16,288	22,828	2,864	6,844
Operating expenses					
Research and development	5,249	6,732	5,456	1,425	1,777
Selling, general and administrative	8,670	12,614	11,036	2,656	3,745
Legal settlements	500	536			
Total operating expenses	14,419	19,882	16,492	4,081	5,522
Income (loss) from operations	(527)	(3,594)	6,336	(1,217)	1,322
Interest expense, net	(1,350)	(2,808)	(2,872)	(757)	(466)
Other income, net	62	350	1,385	864	378
Income (loss) before provision for income taxes	(1,815)	(6,052)	4,849	(1,110)	1,234
Provision for income taxes	(50)	(128)	(214)	(21)	(53)
Net income (loss)	$ (1,865)	$ (6,180)	$ 4,635	$ (1,131)	$ 1,181

	Three Months Ended		
Net income (loss) per share:			
Basic	$ (0.25)	$ (0.81)	$ 0.58	$ (0.15)	$ 0.14
Diluted	$ (0.25)	$ (0.81)	$ 0.57	$ (0.15)	$ 0.13
Weighted average shares of common stock and dilutive common stock equivalents:					
Basic	7,421	7,642	8,032	7,743	8,417
Diluted	7,421	7,642	8,186	7,743	9,277

The accompanying notes are an integral part of these consolidated financial statements.

SOUTHWALL TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

(in thousands)

	Common Stock		Capital in Excess of Par Value	Treasury Stock	Notes Receivable	Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity	Accumulated Comprehensive Income (Loss)
	Shares	Amount							
Balance at December 31, 1998	7,889	$ 8	$ 52,181	$ (2,852)	$ (1,020)	$ 0	$ (22,500)	$ 25,817	$ (7,869)
Interest paid with stock			(55)	148				93	
Exercise of options			(264)	607				343	
Sales to employees under stock purchase plan			(81)	181				100	
Issuance of stock for bonuses			(10)	28				18	
Stock option loans, net					114			114	
Translation loss on foreign subsidiary						(40)		(40)	(40)
Net loss							(1,865)	(1,865)	(1,865)
Balance at December 31, 1999	7,889	8	51,771	(1,888)	(906)	(40)	(24,365)	24,580	(1,905)
Exercise of options			(175)	640				465	
Sales to employees under stock purchase plan			(69)	209				140	
Issuance of stock for bonuses			(23)	149				126	
Repayments of notes receivable					807			807	
Translation loss on foreign subsidiary						(111)		(111)	(111)
Issuance of stock for legal settlement			260	51				311	
Net loss							(6,180)	(6,180)	(6,180)
Balance at December 31, 2000	7,889	8	51,764	(839)	(99)	(151)	(30,545)	20,138	(6,291)
Exercise of options	22		(107)	644				537	
Sale of stock, net	422		970					970	
Sales to employees under stock purchase plan			(107)	192				85	
Issuance of stock for bonuses			(1)	3				2	
Accelerated vesting on exercise of stock option			94					94	

	Common Stock								Accumulated Comprehensive Income (Loss)
Repayments of notes receivable					11			11	
Translation loss on foreign subsidiary						(21)		(21)	(21)
Net income							4,635	4,635	4,635
Balance at December 31, 2001	8,333	8	52,614	0	(88)	(172)	(25,910)	26,452	4,614
Exercise of options	230	1	853					854	
Stock option loans					(15)			(15)	
Translation loss on foreign subsidiary						(184)		(184)	(184)
Net income							1,179	1,179	1,179
Balance at March 31, 2002	8,563	$ 9	$ 53,467	$	$ (103)	$ (356)	$ (24,731)	$ 28,286	$ 5,610

The accompanying notes are an integral part of these consolidated financial statements.

SOUTHWALL TECHNOLOGIES INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Year Ended December 31,			Three Months Ended	
	1999	2000	2001	April 1, 2001 (unaudited)	March 31, 2002 (unaudited)
Cash flows (used in) or provided by operating activities:					
Net income (loss)	$ (1,865)	$ (6,180)	$ 4,635	$ (1,131)	$ 1,181
Adjustments to reconcile net income (loss) to net cash provided by operating activities:					
Depreciation and amortization	4,946	5,662	5,982	1,382	1,375
Change in assets and liabilities:					
Accounts receivable, net	1,290	(2,188)	4,297	3,678	(1,219)
Inventories, net	(1,164)	(2,953)	4,023	897	(902)
Other current and non-current assets	(2,442)	(573)	(610)	(329)	556
Accounts payable, and accrued liabilities	3,758	7,420	(4,535)	(2,275)	(1,938)
Cash provided by (used in) operating activities	4,523	1,188	13,791	2,222	(947)
Cash flows from investing activities:					
Short-term investments	7				
Restricted cash	(1,883)	34	247	1,300	482
Expenditures for property, plant and equipment and other assets	(24,066)	(12,889)	(5,945)	(360)	(849)
Net cash provided by (used in) investing activities	(25,942)	(12,855)	(5,698)	940	(367)

				Three Months Ended	
Cash flows from financing activities:					
Proceeds from foreign government grants	4,943	1,007			
Proceeds from investment allowances		1,085	2,050		
Proceeds from borrowings	9,859	5,151	1,710		
Principal payments on borrowings	(1,224)	(2,896)	(4,311)	(1,211)	(1,449)
Borrowings (payments) on line of credit	4,920	3,799	(5,745)	(1,413)	1,632
Proceeds from sale of stock			970		
Repayment of stockholder's note receivable	298	807	11		
Stock issued under stock options and purchase plans	259	1,041	687	65	838
Net cash provided by (used in) financing activities	19,055	9,994	(4,628)	(2,559)	1,021
Effect of foreign exchange rate changes on cash and cash equivalents		(38)	(165)	(446)	(356)
Net increase (decrease) in cash and cash equivalents	(2,364)	(1,711)	3,301	157	(649)
Cash and cash equivalents, beginning of year	4,136	1,772	61	61	3,362
Cash and cash equivalents, end of year	$ 1,772	$ 61	$ 3,362	$ 218	$ 2,713
Supplemental cash flow disclosures:					
Interest paid	$ 1,408	$ 4,598	$ 2,971	$ 501	$ 233
Income taxes paid	$ 50	$ 156	$ 111	$ 22	$ 21
Supplemental schedule of non-cash investing and financing activities:					
Treasury stock used for payment of interest	$ 93				
Treasury stock used for payment of bonuses and legal settlements	$ 18	$ 436			
Exercise of stock options with issuance of stockholders notes receivable	$ 184		$ 19	$ 19	$ 15
Offset deposit to reduce sale-leaseback obligations			$ 1,000		

The accompanying notes are an integral part of these consolidated financial statements.

SOUTHWALL TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(dollars and shares in thousands, except per share data)

NOTE 1 THE COMPANY AND A SUMMARY OF ITS SIGNIFICANT ACCOUNTING POLICIES

The Company

Southwall Technologies Inc. is a global developer, manufacturer and marketer of thin film coatings for the automotive glass, electronic display and architectural markets. The Company has developed a variety of products that control sunlight in automotive glass, reduce light reflection and improve image quality in electronic display products and conserve energy in architectural products. The Company's products consist of transparent solar-control films for automotive glass, anti-reflective films for computer screens, including flat panel and plasma

displays, transparent conductive films for use in touch screen and liquid crystal displays, energy control films for architectural glass, and various other coatings.

Principles of consolidation

The consolidated financial statements include the accounts of Southwall and its wholly-owned subsidiaries. All inter-company balances and transactions have been eliminated in consolidation.

Certain amounts in prior years have been reclassified to conform to the current year's presentation.

Foreign currency translation

The Company's German subsidiary used its local currency as its functional currency in 2001. Accordingly, the financial statements of this subsidiary are translated into U.S. dollars in accordance with SFAS No. 52, "Foreign Currency Translation." Assets and liabilities are translated at exchange rates in effect at the balance sheet date and revenue and expense accounts at average exchange rates during the quarter. Exchange gains or losses from the translation of monetary assets and liabilities that are not denominated in U.S. dollars are recorded directly to a separate component of stockholders equity. Where the functional currency is U.S. dollars, gains and losses for remeasuring foreign currency denominated balances into U.S. dollars are included in other income.

Management estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Interim financial information

The interim consolidated statements of operations and cashflows for the three-month period ended March 31, 2002 and April 1, 2001, together with the financial data and other information for this period disclosed in these notes to the financial statements, are unaudited. In the opinion of management, the interim financial statements have been prepared on the same basis as the audited financial statements and reflect all adjustments (consisting only of normal recurring adjustments) necessary for the fair presentation of the interim results. The results of operations for the interim periods are not necessarily indicative of the results to be expected for any future periods.

Cash and cash equivalents

The Company deposits its cash in an interest bearing bank account. The Company did not have any cash equivalents at December 31, 2000 or 2001.

Restricted cash

Restricted cash consists of the unapplied portion of grants received from the Saxony government to co-finance the costs of the construction of the Company's Dresden facility. In the event the Company fails to meet certain conditions related to the grants, the Saxony government has the right to reclaim the grants. (See Note 5). In addition, restricted cash includes a $0.5 million irrevocable standby letter of credit secured by a certificate of deposit. As of January 2, 2002, the holder drew on the letter of credit to reduce outstanding amounts related to leases of production machines.

Revenue recognition

Revenues from product sales are recognized upon product shipment when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable, collection of resulting receivables is reasonably assured and product returns are reasonably estimable. Provisions for estimated cost of warranty repairs and returns and allowances are recorded at the time products are shipped and are adjusted periodically to reflect historical and anticipated experience.

The Company has agreements under which it receives fees for certain licensing rights to technology and products. The Company does not allocate cost of sales to license revenues because such costs are insignificant. License revenues associated with these agreements are recognized ratably over the period of the contract when collection of the resulting receivable is probable. License revenues were $515, $503 and $211 for the years 1999, 2000 and 2001, respectively.

Certain risks and concentrations

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash equivalents, short-term investments and trade accounts receivable.

The Company invests in a variety of financial instruments such as certificates of deposits and money market funds. By policy, the Company limits the amount of credit exposure to any one financial institution or commercial issuer.

The Company sells its products throughout the world. The Company performs ongoing credit evaluations of its customers' financial condition and, generally, requires no collateral from its customers. The Company maintains an allowance for uncollectible accounts receivable based upon anticipated collectibility of all accounts receivable.

The Company's ten largest customers accounted for approximately 69%, 85% and 85% of net sales in 1999, 2000 and 2001, respectively. During 2001, three customers each accounted for more than 10% of its net revenues. The Company expects to continue to derive a significant portion of its net product sales from a relatively small number of customers. Accordingly, the loss of a large customer could materially hurt the Company's business, and the deferral or loss of anticipated orders from a small

number of customers could materially reduce its revenue, operating results and cash flows in any period. At December 31, 2000, accounts receivables from two customers represented 19% and 13% of the Company's accounts receivables, respectively. At December 31, 2001, accounts receivable from two customers represented 16% and 16% of the Company's accounts receivable, respectively.

The Company manufactures all of its products using materials procured from third-party suppliers. Certain of these materials are obtained from a limited number of sources. Delays or reductions in product shipments could damage the Company's relationships with customers. Further, a significant increase in the price of one or more of the materials used in the Company's products could have a material adverse effect on the Company's cost of goods sold and operating results.

The Company relies on third-party subcontractors to add properties, such as adhesives, to some of its products. There are only a limited number of qualified subcontractors that can provide some of the services the Company requires. Qualifying alternative subcontractors could take a great deal of time or cause the Company to change product designs. The loss of a subcontractor could adversely affect the Company's ability to meet its scheduled product deliveries to customers, which could damage its relationships with customers. If the Company's subcontractors do not produce a quality product, the Company's yield will decrease and its margins will be lower. Further, a significant increase in the price charged by one or more of the Company's subcontractors could force it to raise prices on its products or lower its margins, which could have a material adverse effect on its operating results.

The Company's production machines are large, complex and difficult to manufacture. It can take up to a year from the time the Company orders a machine until it is delivered. Following delivery, it can take the Company, with the assistance of the manufacturer, up to six additional months to test and prepare the machine for commercial production. There are a very limited number of companies that are capable of manufacturing these machines. The Company's inability in the future to have new production machines manufactured and prepared for commercial production in a timely manner would prevent the Company from delivering product on a timely basis and limit the Company's capacity for revenue growth.

Inventories

Inventories are stated at the lower of cost (determined by the first-in, first-out method) or market. Cost includes materials, labor and manufacturing overhead. Southwall establishes provisions for excess and obsolete inventories to reduce such inventories to their estimated net realizable value. Such provisions are charged to cost of sales.

Property and equipment

Property and equipment are stated at cost. The Company uses the units-of-production method for calculating depreciation on certain of its production machines and the straight-line method for all other property and equipment. Estimated useful lives of the assets range from five to ten years. On its large-scale production machines for which the units-of-production depreciation method is used, the Company records minimum annual depreciation of at least one-half of the depreciation that would have been

recorded utilizing the straight-line depreciation method over a ten-year life. Leasehold improvements are amortized using the term of the related lease or the economic life of the improvements, if shorter.

Additions, major renewals and betterments are included in the asset accounts at cost. Ordinary maintenance and repairs are charged to expense as incurred. Gains or losses from disposal are included in earnings.

Interest capitalized

Interest incurred during the construction of long-lived assets is capitalized as part of the cost of acquiring property and equipment, in accordance with SFAS No. 34, "Capitalization of Interest Cost". Capitalization of interest is discontinued when the assets are ready for their intended use, which is generally upon completion of construction.

Intangible assets

Patents, licenses and trademarks relating to the Company's commercial products are stated at cost less accumulated amortization. Amortization is computed on the straight-line basis over terms of up to 17 years. At December 31, 2000 and 2001, patents, licenses and trademarks are included in other assets in the amount of $0.6 million and $0.7 million respectively, net of accumulated amortization of $1.3 million and $1.3 million, respectively. Amortization expense for 1999, 2000 and 2001 was $0.2 million, $0.2 million, and $0.1 million, respectively.

Impairment of long-lived assets

The Company evaluates the recoverability of its long-lived assets in accordance with SFAS No. 121, "Accounting for Impairment of Long-Lived Assets and for Long-Lived Assets to be disposed of." SFAS No. 121 requires recognition of impairment of long-lived assets in the event the net book value of such assets exceeds the future undiscounted cash flows attributable to such assets. No such losses have been recognizable through December 31, 2001. In October 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," which addresses financial accounting and reporting for the impairment or disposal of long-lived assets. This Statement supersedes SFAS 121 and the accounting and reporting provisions of Accounting Principles Board, or APB, Opinion 30, "Reporting the Results of Operations Reporting the effects of Disposal of Segment of a Business, and Extraordinary, Unusual and infrequently Occurring events and Transactions." The provisions of SFAS 144 are required to be adopted during Southwall's fiscal year beginning January 1, 2002. The Company does not expect that the adoption of SFAS 144 will have a significant effect on its financial position or results of operations.

Fair value disclosures of financial instruments

The Company has estimated the fair value amounts of its financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, debt and accrued liabilities using available market information and valuation methodologies considered to be appropriate and have determined that the book value of those instruments at December 31, 2000 and 2001 approximates fair value.

Stock-based compensation

The Company accounts for stock based compensation to employees using the intrinsic value method in accordance with Accounting Principles Board Opinion No. 25, ("APB 25"), "Accounting for Stock Issued to Employees," as permitted under the provisions of SFAS 123, "Accounting for Stock-Based Compensation." The Company also provides additional pro forma disclosures as required under SFAS 123. If equity instruments such as stock, options or warrants are granted to non-employees, such instruments are accounted for at fair value in accordance with SFAS 123 and related interpretations.

Research and development expense

Research and development costs are expensed as incurred.

Comprehensive income (loss)

The Company has adopted the provisions of Statement of Financial Accounting Standards No. 130 "Reporting Comprehensive Income," ("SFAS No. 130"). SFAS No. 130 establishes standards for reporting and display in the financial statements of total net income and the components of all other non-owner changes in equity, referred to as comprehensive income (loss). Accordingly, the Company has reported the translation loss from consolidation of its foreign subsidiary in comprehensive income (loss).

Income taxes

The Company accounts for deferred income taxes under the liability approach whereby the expected future tax consequences of temporary differences between the book and tax basis of assets and liabilities are recognized as deferred tax assets and liabilities. A valuation allowance is established for any deferred tax assets for which realization is uncertain.

Net income (loss) per share

Basic net income (loss) per share is computed by dividing income available to common shareholders (numerator) by the weighted average number of common shares outstanding (denominator) for the period. Diluted net income (loss) per share gives effect to all dilutive potential common shares outstanding during the period. The computation of diluted earnings per share uses the average market prices during the period. During 2000, there was no difference between the denominators used for calculation of basic and diluted net income (loss) per share. At December 31, 2001, the dilutive stock options were 8,186 shares for dilutive earnings per share, and 8,032 shares for basic earnings for share. The total amount of the difference in the basic and diluted weighted average shares of common stock and common stock equivalents in the periods where there is net income is attributable to the effect of dilutive stock options. In net loss periods, the basic and diluted weighted average shares of common stock and common stock equivalents are the same because inclusion of stock options would be anti-dilutive.

Recent accounting pronouncements

In July 2001, the Financial Accounting Standards Board issued SFAS No. 141, "Business Combinations." SFAS No. 141 addresses financial accounting and reporting for business combinations and supersedes APB Opinion No. 16, "Business Combinations," and SFAS No. 38, "Accounting for Preacquisition Contingencies of Purchased Enterprises." SFAS No. 141 requires applicable business combinations to be accounted for using one method, the purchase method. The provisions of SFAS No. 141 apply to all business combinations initiated after June 30, 2001. The Company does not expect that the adoption of SFAS 141 will have a significant effect on its financial position or results of operations.

In July 2001, the FASB issued SFAS No. 142, "Goodwill and Other Intangible Assets," which is effective for fiscal years beginning after March 15, 2001. SFAS No. 142 requires, among other things, the discontinuance of goodwill amortization. In addition, the standard includes provisions upon adoption for the reclassification of certain existing recognized intangibles as goodwill, reassessment of the useful lives of existing recognized intangibles, reclassification of certain intangibles out of previously reported goodwill and the testing for impairment of existing goodwill and other intangibles. The Company does not expect the adoption of SFAS 142 will have a significant effect on its financial position or results of operations.

In June 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations," which addresses financial accounting and reporting for obligations related to the retirement of tangible long-lived assets and associated asset retirement costs. SFAS No. 143 is effective for fiscal years beginning after June 15, 2002. The Company does not expect that the adoption of SFAS 143 will have a significant effect on its financial position or results of operations.

In October 2001, the FASB issued SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets," which addresses financial accounting and reporting for the impairment or disposal of long-lived assets. This Statement supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of," and the accounting and reporting provisions of APB Opinion No. 30, "Reporting the Results of Operations Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions" for the disposal of a segment of a business. The provisions of SFAS No. 144 are required to be adopted during the Company's fiscal year beginning January 1, 2002. The Company does not expect that the adoption of SFAS 144 will

have a significant effect on its financial position or results of operations.

In May 2002, the FASB issued SFAS 145, "Rescission of FAS Nos. 4, 44, and 64, Amendment of FAS 13, and Technical Corrections." Among other things, SFAS 145 rescinds various pronouncements regarding early extinguishment of debt and allows extraordinary accounting treatment for early extinguishment only when the provisions of Accounting Principles Board Opinion No. 30, "Reporting the Results of Operations Reporting the Effects of Disposal of a Segment of a Business, and Extraordinary, Unusual and Infrequently Occurring Events and Transactions" are met. SFAS 145 provisions regarding early extinguishment of debt are generally effective for fiscal years beginning after May 15, 2002. Management does not believe that the adoption of this statement will have a material impact on the Company's consolidated financial statements.

NOTE 2 LIQUIDITY

The Company' current liabilities of $30.1 million at December 31, 2001, exceeded current assets of $23.6 million (a working capital deficit) and the Company must meet commitments for debt service payments of $8.3 million. Management believes that existing liquidity sources, including expected cash flows from operations, existing cash reserves and existing credit facilities, will satisfy its cash requirements for the next twelve months. To fully achieve its business objective for 2003 and beyond, Southwall will need to raise additional capital from external sources.

The Company is addressing its liquidity needs through a combination of achieving profitable operations, improving cash flow from operations, obtaining waivers from lenders for events of default, renegotiating provisions of key financing agreements and obtaining additional sources of financing. The Company is in discussions with lenders regarding establishing new credit facilities to meet projected working capital and capital expenditure needs in 2002. Additionally, the Company continues to explore a number of alternative equity transaction proposals to meet or supplement working capital and capital expenditure needs. While the company has received proposals, no assurances can be made that alternative sources of financing will be available, if at all, or on terms acceptable to the Company.

NOTE 3 LINE OF CREDIT

The Company has a $10 million receivable financing line of credit with a financial institution that expires on June 30, 2003. Availability under the line of credit is based upon 80% of the approved accounts receivable balances and bears a finance fee of 0.88% per month of the average daily accounts receivable against which the Company is borrowing during the settlement period. In connection with the line of credit, the Company granted to the financial institution a continuing lien upon and security interest in, and right of set off with respect to all of the Company's interest in all accounts receivable, inventory, monies, remittances and fixed assets. As of December 31, 2001, the Company had approximately $7.0 million of availability under the line of credit of which it had borrowed $3.0 million, which is classified as current on the accompanying balance sheet.

NOTE 4 TERM DEBT

The Company's indebtedness consisted of the following at December 31, 2001:

Description	Rate	Balance at December 31, 2001	Due in 2002
Line of credit	(1)	$ 2,974	(1)
Term debt:			
Japanese bank loan, guaranteed by Teijin	LIBOR + 1.0%	7,500	$ 2,500
German bank loan dated May 12, 1999	6.13%(2)	2,465	308
German bank loan dated May 28, 1999	7.10%(3)	2,259	

Description	Rate	Balance at December 31, 2001	Due in 2002
German bank loan dated May 28, 1999	3.75%	1,290	258
German bank loan dated July 25, 2000	7.15%	1,918	266
German bank loan due June 30, 2009	5.75%	1,525	
German bank loan dated June 29, 2000	5.75%	347	154
German bank loan dated July 10, 2000	7.10%	385	193
German bank loan dated December 19, 2000	7.50%	162	90
German bank loan dated December 18, 2000	7.50%	234	78
Note Payable dated September 21, 2001	8.00%	720	600
Other equipment financings		256	101
Total term debt		19,061	4,548
Capital leases:			
Sale-leaseback dated July 19, 1999	13.00%	2,321	2,321
Sale-leaseback dated October 19, 1999	13.00%	1,446	1,446
Total capital leases		3,767	3,767
Total term debt and capital leases		22,828	$ 8,315
Less current portion		8,315	
Term debt, non-current		$ 14,513	

(1) This line of credit expires in June 2003. Under the line, the Company can borrow an amount equal to 80% of eligible accounts receivable. The Company pays a finance fee equal to 0.88% per month of the average daily balance of the amount of accounts receivable against which the Company has borrowed. The Company is required to repay the lender amounts borrowed when it receives payments of these accounts receivable.

(2) Interest rate will be reset to the then prevailing market rate in 2004.

(3) Interest rate will be reset to the then prevailing market rate in 2009.

The Japanese bank loan, dated May 6, 1997, is guaranteed by a Japanese company, Teijin Limited (Teijin). Teijin is a stockholder and supplier of substrate materials to the Company. The Teijin guarantee is collateralized by certain equipment located in Southwall's Tempe and Palo Alto manufacturing facilities and inventory, to the extent necessary to provide 120% net book value coverage of the outstanding loan balance. The interest rate on the loan is re-set semi-annually at LIBOR plus 1.0%, (7.70% and 3.16% at December 31, 2000 and 2001, respectively). The Company is also subject to certain financial covenants under the guarantee. A loan guarantee service fee is payable to Teijin semi-annually on the outstanding balance at the rate of 0.5625%. The note provides for semi-annual payments of interest only during the first four years, followed by semi-annual installments plus interest

for the remaining three and one half year term. The scheduled principal payments for 2002 are $2.5 million. Teijin also received warrants in 1997 to purchase 158,000 shares of Southwall's common stock at $9 per share. These warrants were not exercised and expired on May 30, 2000. At December 31, 2001 and March 31, 2002, the Company was not in compliance with certain of the financial covenants with Teijin pertaining to this promissory note. Southwall has received a waiver from Teijin and the Japanese bank of any defaults that may exist through and including September 30, 2003 arising out of its failure to comply with the financial covenants of the guarantee agreement relating to minimum quick ratio, tangible net worth and maximum debt/tangible net worth. The waiver was conditioned on the Company's agreement to prepay $2.5 million of

the debt in the event that it raises additional equity from the sale of common stock in a public offering or to prepay an amount equal to 10% of the proceeds from a sale of stock other than in a public offering. Accordingly, the Company has classified $5.0 million as long-term debt on the balance sheet at December 31, 2001 and March 31, 2002. The Company is current in all principal and interest payments due under the loan. As a result of the waiver, the next covenant measurement date would be December 31, 2003; if the Company were not in compliance at that date, the loan could be called. If all scheduled interest and principal payments were made through December 31, 2003, the remaining balance outstanding would be $2.5 million, assuming no prepayments were made under the conditions of the waiver.

During 1999, Southwall entered into a master equipment sale-leaseback agreement with a leasing company ("lessor"). Because the Company has an option to purchase the equipment at a price to be determined between Southwall and the lessor at the end of the lease period, the sale-leaseback agreements have been treated as a financing. One lease has a lease term of three years and the other lease has an initial lease term of two years with an option to extend it for an additional year. At December 31, 2001, the Company had a total of $3.8 million outstanding and due under these leases. The leased equipment and certain other production equipment owned by the Company collateralize the sale-leaseback agreements. The effective interest rate of both is approximately 13% per annum and the leases are repayable over the lease term commencing in May 2000. Additionally, Southwall has provided the lessor an irrevocable standby letter of credit in the amount of $0.5 million to collateralize all of its obligations under these agreements. In addition, $1 million of the amounts due from the Lessor was not funded, but will be released upon the Company satisfying certain financial conditions. The Company is in dispute with the lessor over interpretation of certain terms of the lease agreement and has withheld lease payments due since March 2001. The lessor has notified the Company that it is in default and has drawn down on the letter of credit in the amount of $0.5 million in January 2002; in May, 2002 a suit was filed against the Company demanding payment of unpaid lease payments and alleged residual values (Note 9). The Company is in negotiations with the lessor to buy out the lease at amounts which approximate the unpaid obligations, to be reduced by the $1.0 million holdback not funded by the lessor and the $0.5 million payment under the letter of credit. The Company has classified $3.8 million due under the leases as a current liability in the accompanying balance sheet at December 31, 2001, including $0.2 million that would otherwise be classified as a long-term liability.

On May 12, 1999, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 3.1 million ($2.9 million). Under the terms of this agreement, the funds were used solely for the purpose of capital investment by Southwall's German subsidiary. The term of the loan is for a period of 10 years and the principal is repayable in euros after the end of one year in 36 quarterly payments. The loan bears interest at 6.125% per annum for the first five years, and will be revised to the prevailing rate at the end of the fifth year. The Company is current in all principal and interest payments due under the loan; the agreement contains various covenants with which the

Company was in compliance at December 31, 2001. Of the borrowings outstanding of $2.5 million under this bank loan at December 31, 2001, $2.2 million was classified as noncurrent in the accompanying balance sheet.

On May 28, 1999, the Company entered into a general loan agreement with a German bank. Under the terms of the loan agreement, funds are available in three tranches, and shall be used solely for the purpose of capital investment by the Company's German subsidiary. The agreement contains various covenants with which the Company was in compliance at December 31, 2001; the Company is current with respect to all principal and interest payments due under the loan agreement. The first tranche provides for borrowings of euro 2.5 million ($2.2 million) for a term of twenty years. The principal is repayable in deutschemarks after ten years in ten equal, semi-annual payments. The loan bears fixed interest of 7.1% per annum for the first ten years, after which time the rate is adjusted to a current prevailing rate. Of the borrowings outstanding under this tranche of $2.2 million at December 31, 2001, $2.2 million is classified as noncurrent in the accompanying balance sheet. The second tranche provides for borrowings of euro 1.7 million $(1.5 million) for a term of seven years and the principal is repayable after one year in twelve equal, semi-annual payments. The loan bears fixed interest at 3.75% per annum for the period of seven years. At December 31, 2001, the amount due was $1.3 million, and $1.0 million is classified as a noncurrent liability. The third tranche, dated July 25, 2000, provides for borrowings of euro 2.121 million ($1.87 million) for a term of ten years, and the principal is repayable after one year, in thirty-six equal quarterly payments. The loan bears fixed interest of 7.15% per annum for the first five years. At December 31, 2001, the amount due was $1.9 million; of this amount, $1.6 million was classified as noncurrent.

On August 14, 1999, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 1.7 million ($1.5 million). Under the terms of this agreement, the funds will be used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is due in a single payment on June 30, 2009 and bears interest at a rate of 5.75% per annum. The interest is payable quarterly in euros. 50% of the loan proceeds are restricted in an escrow account for the duration of the loan period and are classified as non-current "Restricted loan proceeds." The agreement contains various covenants with which the Company was in compliance at December 31, 2001. The amount due under this bank loan at December 31, 2001 was $1.5 million, which was classified as noncurrent.

On June 29, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.5 million ($0.481 million). Under the terms of this agreement, the funds will be used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 12 quarterly payments beginning June 2001 and bears interest at a rate of 5.8% per annum. The interest is payable quarterly in euros. The agreement contains various covenants with which the Company was in compliance at

December 31, 2001. The amount due under this bank loan was $0.3 million at December 31, 2001; of this amount, $0.2 million was classified as noncurrent.

On July 10, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.511 million ($0.480 million). Under the terms of this agreement, the funds will be used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 12 quarterly payments beginning June 2001 and bears interest at a rate of 7.10% per annum. The interest is payable quarterly in euros. The agreement contains various covenants with which the Company was in compliance at December 31, 2001. The amount due under

this bank loan was $0.4 million; of this amount, $0.2 million was classified as noncurrent at December 31, 2001.

On December 18, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to DM 0.5 million ($0.2 million). Under the terms of this agreement, the funds will be used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 9 quarterly payments beginning March 2002 and bears interest at a rate of 7.5% per annum. The interest is payable quarterly in euros. At December 31, 2001, the amount outstanding under this bank loan was $0.2 million; of this amount, $0.1 million was classified as noncurrent at December 31, 2001.

On December 19, 2000, the Company entered into a loan agreement with a German bank that provides for borrowings up to euros 0.3 million ($0.2 million). Under the terms of this agreement, the funds will be used solely for the purpose of capital investment by the Company's German subsidiary. The principal balance is repayable in 12 quarterly payments beginning March 2002 and bears interest at a rate of 7.5% per annum. The interest is payable quarterly in euros. At December 31, 2001, the amount outstanding under this bank loan was $0.2 million; all of this amount was classified as noncurrent at December 31, 2001.

The preceding German bank loans are collateralized by the production equipment, building and land owned by the Company's German subsidiary. In addition, effective January 1, 2002, all of these banks loans were denominated in euros.

On September 21, 2001, the Company entered into a note payable agreement with the manufacturer of the Company's production machinery, PM 7, located at the Company's Tempe facility, for the remaining balance of $0.96 million owed on the machine. The first installment on the note was paid on September 26, 2001 in the amount of $0.14 million. The remaining balance of the note is payable in 16 monthly installments. The note bears interest at 8.0% per annum. At December 31, 2001, the amount outstanding under this bank loan was $0.7 million; of this amount, $0.1 million was classified as noncurrent at December 31, 2001. Other term debt consists of capitalized leases related primarily to certain computer equipment used by the Company.

Scheduled principal reductions of term debt for the next five years and thereafter, are as follows:

Year	Amount
2002	$ 8,315
2003	3,949
2004	3,497
2005	779
2006	779
Thereafter	5,509
Total	$ 22,828

The Company incurred total interest on indebtedness of $2.6 million, $4.6 million and $2.9 million in 1999, 2000 and 2001, respectively. Of these amounts, Southwall capitalized $1.2 million in 1999, $1.8 million in 2000 and $0.1 million in 2001 as part of the costs related to the construction of new production machines and facilities.

NOTE 5 GOVERNMENT GRANTS AND INVESTMENT ALLOWANCES

The Company has an agreement to receive a grant award (the "Grant"), which was approved by the Saxony government in May 1999. As of December 31, 2001, the Company had received approximately euros 5.6 million ($4.7 million) under this Grant and accounted for the Grant by applying the proceeds received to reduce the cost of fixed assets of the Dresden manufacturing facility. Additionally, the Company received euros 1.1 million ($0.9 million) of government grants that have been recorded as an advance and held as restricted cash until the Company earns the grant through future expenditures.

Initially, the Grant was subject to the following requirements:

(a) The grant was earmarked to co-finance the costs of the construction of a facility to manufacture XIR® film for the automotive glass industry.

(b) The construction period for the project was from March 15, 1999 to March 14, 2002.

(c) The total investment should be at least euros 47.0 million ($39.2 million).

(d) The project must create at least 143 permanent jobs and 7 apprenticeships by December 2003.

However, on February 20, 2002, the Saxony government extended the date by which the Company must comply with the requirements to June 30, 2006. In the event that the Company fails to meet the above requirements, the Saxony government has the right to reclaim the Grant.

In addition to the Grant, the Company is further eligible for investment allowances calculated based on the capital investment of euros 47.0 million ($39.2 million), subject to European Union regulatory approval. During 2000, the Company received euros 1.2 million ($1.0 million) in investment allowances from the Saxony government and those proceeds were applied to reduce the capitalized construction cost of the Dresden facility. The Company received an additional euros 2.5 million ($2.1 million) in investment allowances from the Saxony government in 2001, and those proceeds were also applied to reduce the capitalized construction cost of the Dresden facility. The Company has also applied for approximately euros 1.2 million ($1.0 million) in investment allowances in 2002. The investment allowance is subject to the following requirements:

(a) The movable and immovable assets, the acquisition costs of which are taken into account in determining the investment allowance, shall be employed within the subsidized territory for a period of at least five years following the acquisition or production.

(b) The movable assets, the acquisition costs of which are taken into account in determining the increased investment allowance, shall remain in a business that is engaged in the processing industry, or in a similar production industry, for a period of at least five years following the acquisition or production.

In the event that the Company fails to meet the above requirements, the Saxony government has the right to reclaim the allowances.

The investment grants and investment allowances that the Company is entitled to seek varies from year to year based upon the amount of capital expenditures that meet the above requirements. Generally, Southwall is not eligible to seek total investment grants for any year in excess of 33% of its eligible capital expenditures for that year. The Company cannot guarantee that it will be eligible for or receive additional grants in the future.

NOTE 6 INCOME TAXES

The income tax provision in 2000 and 2001 relates primarily to foreign withholding taxes on royalty payments and federal statutory and state alternative minimum tax obligations. The effective income tax rate differs from the federal statutory rate as a result of valuation allowances established for deferred tax assets. The Company believes that sufficient uncertainty exists with regard to the realization of these tax assets; accordingly, a full valuation allowance is necessary. These factors include the lack of a significant history of consistent profits and the lack of carryback capacity to realize these assets. Based on this absence of objective evidence, the Company is unable to assert that it will generate sufficient taxable income to realize the deferred tax assets.

Deferred tax (liabilities) assets are comprised of the following:

	December 31,	
	2000	2001
Depreciation	$ (3,679)	$ (4,388)
Other	(44)	(277)
Gross deferred tax liabilities	(3,723)	(4,665)
Inventory reserves	552	540
Other	2,952	4,354
Loss carryforwards	12,396	9,377
Credit carryforwards	952	1,364
Gross deferred tax assets	16,852	15,635
Deferred tax assets valuation allowance	(13,129)	(10,970)
Net deferred taxes	$	$

At December 31, 2001, the Company had net federal operating loss carryforwards of approximately $26.1 million that expire at various dates from 2002 through 2019. The net operating loss carryforwards include approximately $3.9 million resulting from employee exercises of non-incentive stock options or disqualifying dispositions, the tax benefit of which, when realized, will be accounted for as an addition to capital in excess of par value, rather than as a reduction of the provision for income taxes. The Company has state and German net operating loss carryforwards that expire at various future dates. Research and development, investment and foreign tax credit carryovers of approximately $1.3 million are also available to reduce future federal and state income taxes and expire at various dates through 2004. If certain substantial changes in ownership of the Company occur, there would be an annual limitation on the amount of the carryforwards that can be utilized.

NOTE 7 BENEFIT PLANS

Stock Option Plans

The Company has granted stock options under various option plans and agreements in the past and currently grants stock options under the 1997 Stock Incentive Plan and the 1998 Stock Option Plan for Employees and Consultants. The board of directors adopted the 1998 Stock Option Plan for Employees and Consultants on August 6, 1998. The human resources committee of the board of directors administers the plans and agreements. The exercise price of options granted under the 1997 and 1998 plans must be at least 85% of the fair market value of the stock at the date of grant.

Generally, options granted under the plans vest at a rate of 25% per year, are non-transferable and expire over terms not exceeding ten years from the date of grant or three months after the optionee terminates his relationship with the Company.

During 1998 and 1999, certain employees, officers and directors of Southwall exercised stock options under the plans by issuing full recourse notes with an annual rate of interest of generally 7%. During 1998 and 1999, outstanding notes from certain of those employees, officers and directors were extended from terms of one year to terms of two years. Both the principal and the interest accrued on the notes are due at the end of the term of each note. These notes aggregate $0.1 million and $0.1 million at December 31, 2000 and 2001 respectively.

As of December 31, 2001, there were 314,675 shares of Common Stock available for grant under the two stock option plans.

The activity under the option plans, combined, was as follows:

	Options	Range of Exercise Price	Weighted Average Exercise Price

Options outstanding at January 1, 1999	1,413		
Granted	637	$2.75 - $4.50	3.77
Exercised	(127)	$2.50 - $4.38	2.89
Cancelled or expired	(262)	$2.50 - $8.63	5.15
December 31, 1999	1,661	$2.50 - $8.63	$ 4.59
Granted	752	$1.56 - $11.50	5.35
Exercised	(128)	$2.50 - $9.87	3.82
Cancelled or expired	(317)	$1.56 - $11.50	4.66
December 31, 2000	1,968	$1.56 - $11.50	$ 4.92
Granted	541	$2.13 - $6.06	3.19
Exercised	(150)	$1.56 - $6.88	3.59
Cancelled or expired	(448)	$2.13 - $11.50	4.80
December 31, 2001	1,911	$1.56 - $11.50	$ 4.81
Granted (unaudited)	320	2.67 - 8.00	7.93
Exercised (unaudited)	(230)	2.13 - 11.50	5.20
Cancelled or expired (unaudited)	(22)	2.13 - 11.50	5.82
March 31, 2002	1,979	$2.13 - $11.50	$ 6.75

Employee Stock Purchase Plan

In March 1997, the Company adopted the 1997 Employee Stock Purchase Plan ("the 1997 Plan") and reserved 100 shares of Common Stock for issuance thereunder. Employees, subject to certain limitations, may purchase shares at 85% of the lower of the fair market value of the Common Stock at the beginning of the six-month offering period, or the last day of the purchase period. During 1999, 2000 and 2001, 36, 41 and 38 shares, respectively, were sold under the 1997 Plan. At December 31, 2001, there were 58 shares available for issuance under the 1997 Plan.

Stock-Based Compensation

Southwall has stock option plans that reserve shares of Common Stock for issuance to employees, officers, directors and consultants. The Company applies APB Opinion 25 and related interpretations in accounting for its plans. Accordingly, no compensation cost is recognized for grants at fair market value. Southwall adopted the disclosure-only provisions of SFAS No. 123, Accounting for Stock-Based Compensation. Had compensation cost for our stock option plans and stock purchase plans been determined based on the fair value at the grant date for awards granted in 1999, 2000 and 2001 consistent with the provisions of SFAS No. 123, net income (loss) and net income (loss) per share would have been reduced to the pro forma amounts indicated below:

	1999	2000	2001
Net income (loss) as reported	$ (1,865)	$ (6,180)	$ 4,635
Net income (loss) pro forma	$ (2,659)	$ (7,830)	$ 3,833
Net income (loss) per share as reported			
Basic	$ (0.25)	$ (0.81)	$ 0.58
Diluted	$ (0.25)	$ (0.81)	$ 0.57
Net income (loss) per share pro forma			
Basic	$ (0.36)	$ (1.02)	$ 0.48
Diluted	$ (0.36)	$ (1.02)	$ 0.47

For the stock option plans, the fair value of each option grant is estimated on the date of grant using the Black-Scholes option-pricing model for the multiple option approach with the following weighted average assumptions used for grants in 1999, 2000 and 2001, respectively.

Expected volatility of 110% in 1999, 134% in 2000, and 89% in 2001; risk-free interest rate of 5.4%, 6.2% and 4.6%; and expected lives from vesting date of 3.23, 2.54 and 3.26 years. Southwall has not paid dividends and assumed no dividend yield. The weighted average fair value of stock options granted in 1999, 2000 and 2001 was $2.60, $3.74 and $1.89 per share, respectively.

For the employee stock purchase plans, the fair value of each purchase right is estimated at the beginning of the offering period using the Black-Scholes option-pricing model with the following weighted-average assumptions used in 1999, 2000, and 2001 respectively. Expected volatility of 139%, 134% and 89%; risk-free interest rate of 5.8%, 6.32% and 4.19%; and expected lives of 0.5 years in each year. The Company has not paid dividends and assumed no dividend yield. The weighted-average fair value of those purchase rights granted in 1999, 2000 and 2001 was $1.98, $2.19 and $1.21 per right, respectively.

NOTE 7 BENEFIT PLANS (Continued)

The following table summarizes information about stock options outstanding at December 31, 2001:

	Options Outstanding			Options Exercisable	
Range of Exercise Price	Number Outstanding at 12/31/01	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable at 12/31/01	Weighted Average Exercise Price
$1.56 - $2.75	137	5.96	$ 2.39	12	$ 2.20
$2.81 - $2.81	230	6.07	2.81		0.00
$2.94 - $3.71	221	4.44	3.38	106	3.14
$3.75 - $4.50	275	4.65	4.16	161	4.18
$4.63 - $5.00	307	2.81	4.91	239	4.89
$5.07 - $5.07	70	6.72	5.07		0.00
$5.20 - $5.20	209	5.74	5.20	53	5.21
$5.75 - $6.88	216	3.51	6.59	175	6.58
$7.00 - $8.13	193	4.87	7.30	79	7.23
$8.25 - $11.50	53	5.60	10.24	25	9.82
$1.56 - $11.50	1,911	4.71	$ 4.81	850	$ 5.23

401(k) Plan

In 1998, the Company sponsored a 401(k) defined contribution plan covering eligible employees who elect to participate. Southwall is allowed to make discretionary profit sharing and 401(k) matching contributions as defined in the plan and as approved by the board of directors. The Company matches 25% of each eligible participant's 401(k) contribution up to a maximum of 20% of the participant's compensation, not to exceed one thousand dollars per year. Southwall's actual contribution may be reduced by certain available forfeitures, if any, during the plan year. No discretionary or profit sharing contributions were made for the years ending December 31, 1999, 2000 and 2001. Matching contributions for the years ended December 31, 1999, 2000 and 2001 were $0.1 million, $0.2 million, and $0.1 million respectively.

NOTE 8 SEGMENT REPORTING

Southwall reports segment information using the management approach to determine segment information. The management approach designates the internal organization that is used by management for making operating decisions and assessing performance as the source of its reportable segments. The Company has one segment and is organized on the basis of products and services. The

total net revenues for the automotive glass, electronic display, and architectural product lines were as follows:

	Year			Quarter ended	
	1999	2000	2001	April 1, 2001 (unaudited)	March 31, 2002 (unaudited)
Automotive glass	$ 19,477	$ 20,198	$ 37,385	$ 8,007	$ 7,003
Electronic display	16,014	47,734	29,691	6,724	7,925
Architectural	19,107	17,416	15,900	2,982	4,341
Total net revenues	$ 54,598	$ 85,348	$ 82,976	$ 17,713	$ 19,269

The following is a summary of net revenue by geographic area for 1999, 2000 and 2001.

	Year			Quarter ended	
	1999	2000	2001	April 1, 2001 (unaudited)	March 31, 2002 (unaudited)
United States	$ 12,550	$ 12,750	$ 10,881	$ 3,211	$ 2,710
Japan	12,948	34,956	26,755	4,989	7,600
France	9,508	12,030	19,842	3,763	4,034
Pacific Rim	8,088	14,681	9,113	1,972	1,856
Rest of world	5,735	6,763	7,830	1,421	1,549
Germany	5,769	4,168	8,555	2,357	1,520
Total net revenues	$ 54,598	$ 85,348	$ 82,976	$ 17,713	$ 19,269

Southwall operates from facilities located in the United States and Germany. Identifiable assets were as follows:

	As of December 31,	
	2000	2001
United States	$ 64,145	$ 54,813
Germany	16,317	18,345
Consolidated	$ 80,462	$ 73,158

Four customers accounted for net sales in 1999, 2000, 2001, and the quarters ended:

	Year			Quarter ended	
Customer	1999	2000	2001	April 1, 2001 (unaudited)	March 31, 2002 (unaudited)
A	18.0%	14.5%	24.0%	20.9%	20.9%
B	9.4%	39.5%	20.5%	26.0%	20.9%
C	0.0%	0.0%	7.7%	4.9%	14.6%
D	11.7%	6.7%	15.3%	18.5%	10.8%
Total	39.1%	60.7%	67.5%	70.3%	67.2%

NOTE 9 COMMITMENTS and CONTINGENCIES

Commitments

The Company leases certain property and equipment as well as its facilities under noncancellable operating leases. These leases expire at various dates through 2009. As of December 31, 2001, the future minimum payments under these leases are as follows:

	Operating Leases
2002	$ 3,601
2003	2,832
2004	2,846
2005	475
2006	475
Thereafter	
Future minimum lease payments	$ 10,229

Rent expense under operating leases was approximately $1.5 million, $3.2 million and $3.7 million in 1999, 2000, and 2001 respectively.

Contingencies

The Company is a defendant in an action entitled "Portfolio Financial Servicing Company v. Southwall Technologies Inc.," which was filed in state court in Utah on May 22, 2002. This action arises out of sale-leaseback agreements which the Company entered into with an entity formerly known as Matrix Funding Corporation, or Matrix, in 1999 in connection with the acquisition of two of our production machines, as described in Note 4 to these financial statements. Matrix thereafter filed bankruptcy. In the action, the plaintiff purports to be an agent of the successor to Matrix. The plaintiff demands payment of $6,468,534, which it alleges constitutes unpaid lease payments, plus the alleged residual value of the equipment, less monies that Matrix owes to the Company. The Company intends to defend the action vigorously.

The Company is a defendant in an action filed on April 5, 1996 entitled "Four Seasons Solar Products Corp. vs. Black & Decker Corp., Bostik, Inc. and Southwall Technologies Inc.", No. 5 CV1695, pending in the United States District Court for the Eastern District of New York. Plaintiff is a manufacturer of insulated glass units which incorporate our Heat Mirror film. Plaintiff alleges that a sealant provided by the co-defendant is defective, asserts causes of action for breach of contract, unfair competition, and fraudulent concealment, and seeks monetary damages of approximately $36 million for past and future replacement costs, loss of customer goodwill, and punitive damages against all defendants. The Company filed a motion to dismiss. The Court has dismissed the unfair competition and fraudulent concealment claims against the Company. It has denied the Company's motion to dismiss the breach of contract claim. The Company believes the claim to be without merit. Defense of this action is covered by the Company's insurance carrier and the Company expects that settlements, if any, will be substantially covered by its insurance policy. The action is in the early stages, thus an estimate of the Company's loss exposure cannot be made. Management plans to vigorously contest the claim.

In October 2000, the Company was served with a complaint entitled Hurd Millwork, Inc. v. Southwall Technologies Inc., et. al., United States District Court, Northern District of California, Case No. C00-3820 (CRB). Hurd is a manufacturer of installed glass units which incorporated Heat Mirror film. Hurd alleged that various failures and deficiencies associated with the installed glass units gave rise to warranty and other consumer claims. The Company reached a settlement with plaintiffs, the terms of which are confidential. The cash portion of the settlement was paid by the Company's insurance carrier. The Company also agreed to provide a discount on the price of future film sales as part of the settlement. The Company did not commit to or guarantee an aggregate dollar amount that Hurd would be entitled to receive as a discount; the discount is entirely contingent on future purchases of architectural glass product by Hurd from the Company during a four-year period ending February 2006. Due to the contingent nature of the discount to be granted in the future, no amount has been recorded by the Company as a sales discount liability for the settlement at December 31, 2001 or March 31, 2002.

The Company's German subsidiary was a defendant in a lawsuit filed by one of our suppliers on March 21, 2000 in a German court to seek payment of $0.9 million for engineering services rendered in connection with developing the initial plans for the Dresden facility. The Company issued letters of award to the plaintiff amounting to $0.3 million prior to terminating plaintiff's services for not meeting expectations. The plaintiff claimed fees for services rendered, including the costs of significant modifications and revisions requested by us calculated in accordance with the German Federal Schedule of Architects' fees. The plaintiff further alleged that the Company utilized plaintiff's planning work in further developing the plant. In December 2001, a judgment was reached by the German court, in favor of the plaintiff, for approximately $0.3 million. In February 2002, the plaintiff elected to accept the court's ruling in lieu of an appeal. The award for engineering services has been accrued at December 31, 2001 as additional construction costs.

The insurance carriers in some of the litigation related to alleged product failures and defects in window products manufactured by third parties in which the Company was a defendant paid the defense and settlement costs related to such litigation. Those insurance carriers reserved their rights and have expressed their intent to proceed against the Company to recover a portion or all of such payments. As a result, those insurance carriers could seek from the Company up to an aggregate of $12.9 million plus defense costs, although any such recovery would be restricted to claims that were not covered by the Company's insurance policies. The Company intends to vigorously defend any attempts by these insurance carriers to seek reimbursement. The Company is not able to estimate the likelihood that these insurance carriers will seek to recover any such payments, the amount, if any, they might seek, or the outcome of such attempts. As a result, no adjustment has been recorded due to the uncertainty surrounding the potential exposure. Management can give no assurance that a material claim will not be asserted at some future date by the insurers.

The Company's counsel has received a letter from a lawyer purporting to represent a manufacturer of skylights that allegedly incorporates the Company's Heat Mirror film. The letter alleges that a sealant provided by a third party and used with the Company's film was defective, and as a result the manufacturer and others similarly situated have suffered elevated warranty replacement claims and costs. The letter states that the manufacturer will bring legal action in the form of a class action lawsuit

if the parties are unable to resolve the matter quickly. The Company believes the allegations to be without merit and intends to defend any related action vigorously.

In addition, the Company is involved in certain other legal actions arising in the ordinary course of business. The Company believes, however, that none of these actions, either individually or in the aggregate, will have a material adverse effect on the Company's business or consolidated financial position, results of operations or cash flows.

NOTE 10 RELATED PARTY TRANSACTIONS

Teijin

On April 9, 1997, Southwall signed a comprehensive set of collaborative agreements with a major supplier of the Company's raw materials, Teijin Limited. The agreements provided for, among other things, the purchase by Teijin of 667,000 shares of the Company's common stock at a price of $7.50 per share; a guarantee by Teijin of a $10.0 million loan to the Company; and an agreement to collaborate to achieve closer marketing and product development ties between the two companies. The Company pays an annual loan guarantee fee to Teijin of 0.5625% of the outstanding principal balance of the loan guaranteed by Teijin. The Company paid a loan guarantee fee of approximately $53,000 to Teijin during 2001. As of December 31, 2001, $7.5 million was outstanding under the loan guaranteed by Teijin. Pursuant to a letter agreement dated March 28, 2002, the Company is obligated to repay $2.5 million of the loan guaranteed by Teijin with the proceeds from common stock sold in a public offering or an amount equal to 10% of the proceeds from a sale of stock other than in a public offering.

Also under these agreements, Teijin has the right to nominate a representative to the Company's board of directors. During 1999, 2000 and 2001, the Company paid Teijin approximately $3.2 million, $10.3 million and $9.0 million for purchases of raw material substrates. At December 31, 2000 and 2001, accounts payable to Teijin were $2.8 million and $1.8 million.

Globamatrix

The Company has two distribution agreements with Globamatrix under which the Company granted it exclusive licenses in North America to distribute the Company's after-market applied film in the automotive and architectural glass markets. Under the agreements, which are scheduled to expire in 2007 and 2008, Globamatrix agreed to purchase an annually increasing amount of our products. During 1999, 2000 and 2001, sales to Globamatrix were $2.1 million, $2.2 million and $5.6 million. At December 31, 2000 and 2001, accounts receivable from Globamatrix were $0.6 million and $1.5 million.

On April 20, 2001, Globamatrix purchased 422,119 shares of the Company's common stock for $1.0 million (approximately $2.37 per share) pursuant to a stock purchase agreement. The closing price of the Company's common stock on the Nasdaq National Market was $2.10 per share on April 19, 2001, and $2.19 per share on April 20, 2001. The shares were not registered under the Securities Act. Globamatrix holds registration rights with respect to the shares.

Transactions Involving Directors

In April 1997, the Company entered into a development and technology agreement with Energy Conversion Devices, Inc., or ECD. This agreement provides that the Company will pursue with ECD the commercialization of the process of sputter coating on flexible substrates using PECVD processes. The agreement further provides that the Company will pay ECD a royalty in an amount based upon the sales volume of product produced through the PECVD process. Southwall agreed to pay to ECD 2.25% of its net sales in connection with PECVD technology for five years and 1.25% of net sales after that. Through March 1, 2002, the process had not been commercialized and the Company had not paid ECD royalties under the agreement but expected to begin to pay royalties in 2002. In February 1999, the Company entered into an equipment purchase contract with ECD pursuant to which ECD agreed to modify one of the Company's production machines (PM 7) so that the machine would produce products by means of the PECVD process. The Company paid ECD approximately $0.9 million in 1999, $0.01 million in 2000 and $0.29 million in 2001 in connection with its conversion of PM 7 to the use of PECVD technology. A director of Southwall is the Chairman of ECD. The Company presently owes ECD approximately $0.57 million in connection with the conversion of PM 7, which is represented by a note payable. As of December 31, 2001, the Company owed ECD approximately $0.72 million. The Company has agreed under the note to pay ECD $0.05 million per month through December 2002, with a final payment of $0.07 million in January 2003. The Company has further agreed to attempt to procure for ECD a first priority security interest in PM 7.

NOTE 11 BALANCE SHEET DETAIL

	December 31,	
Accounts receivable, net:	**2000**	**2001**
Accounts receivable	$ 13,957	$ 9,409
Allowance for doubtful accounts	(640)	(389)
Accounts receivable, net	$ 13,317	$ 9,020

	December 31,		
Inventories, net:	**2000**	**2001**	**March 31, 2002**
			(unaudited)
Raw materials	$ 4,394	$ 3,545	$ 3,033
Work-in-process	4,799	2,430	3,279
Finished goods	981	176	741
Total Inventories	$ 10,174	$ 6,151	$ 7,053

	December 31,	
Property, plant and equipment, net:	**2000**	**2001**

	December 31,	
Land, buildings and leasehold improvements	$ 11,179	$ 8,968
Machinery and equipment	63,717	70,986
Furniture and fixtures	4,075	4,730
Construction-in-process	6,999	5,179
	$ 85,970	$ 89,863
Less Accumulated depreciation	(36,086)	(42,022)
Total property, plant and equipment	$ 49,884	$ 47,841

Depreciation and amortization expense for the years ended December 31, 1999, 2000 and 2001 was $4.9 million, $5.7 million, and $6.0 million respectively. See Note 5 to the financial statements with respect to a government grant received to offset construction and equipment costs for the German subsidiary.

	December 31,	
Other accrued liabilities:	**2000**	**2001**
Reserve for warranties and sales returns	$ 1,903	$ 2,642
Legal settlement	550	475
Accrued sales commission	441	405
Insurance premium financing	314	967
Accrued taxes	120	383
Accrued professional fees	393	187
Other	830	597
Total other accrued liabilities	$ 4,551	$ 5,656

REPORT OF INDEPENDENT ACCOUNTANTS ON FINANCIAL STATEMENT SCHEDULE

To the Board of Directors and Stockholders of
Southwall Technologies Inc.

Our audits of the consolidated financial statements referred to in our report dated March 4, 2002, except as to Note 4, which is dated as of May 17, 2002, and Note 9, which is dated as of May 22, 2002, appearing in Item 14(a)(1) of the Annual Report on Form 10-K of Southwall Technologies Inc. included an audit of the financial statement schedule listed in Item 14(a)(2) of the Form 10-K. In our opinion, this financial statement schedule presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements.

PricewaterhouseCoopers LLP

San Jose, California
March 4, 2002

FINANCIAL STATEMENT SCHEDULE

Valuation and qualifying accounts and reserves

Description	Balance at Beginning of Year	Additions	Deductions	Balance at End of Year
		(in thousands)		
December 31, 2001				
Inventory reserves	$ 1,418	$ 876	$ 1,293(2)	$ 1,001
Allowance for doubtful accounts	640	460	712(2)	388
Reserve for warranty and sales returns	1,903	3,945(1)	3,206(2)	2,642
December 31, 2000				
Inventory reserves	1,182	2,098	1,862(2)	1,418
Allowance for doubtful accounts	875	737	972(2)	640
Reserve for warranty and sales returns	1,174	3,008(1)	2,279(2)	1,903

(1) Charged against revenue.

(2) Reserves utilized during the year.

QuickLinks