

SOUTHWALL TECHNOLOGIES INC /DE/  
Form 10-K  
March 26, 2009

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UNITED STATES

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

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FORM 10-K

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(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF  
1934

For the fiscal year ended December 31, 2008

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF  
1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 0-15930

Southwall Technologies Inc.  
(Exact name of Registrant as specified in its Charter)

Delaware  
(State or Other Jurisdiction of Incorporation or  
Organization)

94-2551470  
(I.R.S. Employer Identification Number)

3788 Fabian Way  
Palo Alto, California 94303  
(Address of Principal Executive Offices including Zip Code)

(650) 798-1200  
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock  
(Title of Class)

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Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15 (d) of the Act. Yes  No

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer", "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check One).

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

The approximate aggregate market value of the Common Stock held by non-affiliates of the registrant on June 30, 2008 (based upon the closing sales price of the Common Stock on the Over-the-Counter Bulletin Market on such date) was \$21,345,944. For purposes of this disclosure, Common Stock held by stockholders whose ownership exceeds five percent of the Common Stock outstanding as of June 30, 2008, and Common Stock held by officers and directors of the registrant has been excluded because such persons may be deemed to be "affiliates" as that term is defined in the rules and regulations promulgated under the Securities Act of 1933, as amended. This determination is not necessarily conclusive.

The number of shares of the registrant's Common Stock outstanding on March 1, 2009 was 28,706,222.

#### DOCUMENTS INCORPORATED BY REFERENCE

Document Description	10-K Part
Portions of the Registrant's Proxy Statement for the Annual Meeting of Stockholders to be held May 13, 2009	III

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Cautionary Statement For the Purpose of the "Safe Harbor" Provisions of the Private Securities Litigation Reform Act of 1995

As used in this report, the terms "we," "us," "our," "Southwall" and the "Company" mean Southwall Technologies Inc. and its subsidiaries, unless the context indicates another meaning. This report 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, or similar terminology, although not all forward-looking statements contain these identifying words. Forward-looking statements are only predictions and include, without limitation, statements relating to:

- our strategy, expected future operations and financial plans;
- our revenue expectations and potential financial results;
- impact of current economic conditions on our business;
- the continued trading of our common stock on the Over-the-Counter Bulletin Board Market;
  - future applications of thin film coating technologies;
  - our development of new technologies and products;
  - the properties and functionality of our products;
- our projected need for additional borrowings and future liquidity;
- our ability to implement and maintain effective internal controls and procedures;
- the size of and the markets into which we sell or intend to sell our products;
- our intentions to pursue strategic alliances, acquisitions and business transactions;
- the possibility of patent and other intellectual property infringement;
- our opinions regarding energy consumption and the loss of energy through inefficient glass;
  - pending and threatened litigation and its outcome;
- our competition and our ability to compete in the markets we serve; and
  - our projected capital expenditures.

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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" below. These and other 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, we do not assume any responsibility for the future accuracy and completeness of these forward-looking statements.

XIR®, XUV®, Triangle Design®, Superglass®, Heat Mirror®, California Series®, Solis®, ETCH-A-FLEX®, and Southwall® are registered trademarks of Southwall. V-KOOL® is a registered trademark of V-Kool International Holdings Pte. Ltd. All other trade names and trademarks referred to in this Annual Report on Form 10-K are the property of their respective owners.

## PART I

(dollar amounts in thousands, except per share data)

### ITEM 1. BUSINESS

#### Overview

Southwall is a developer and manufacturer of high performance, energy-saving films and glass products for both the architectural and automotive domestic and international markets. Founded in response to the oil embargo of 1973, Southwall remains committed to its mission of developing innovative products that improve energy efficiency and decrease carbon emissions which reduce the use of oil and electricity in the heating and cooling of buildings and vehicles. In addition to our core energy conservation markets, we continue to explore new markets that can benefit from our 30 years of thin-film technology and roll-to-roll processing innovation.

In 2008, our net revenues were \$41,920, an 11% increase from net revenues of \$37,733 in 2007, primarily due to increased demand for automotive and window film products. In 2008, automotive glass products generated 46% of our net revenue, applied window film products generated 37% of our net revenue, architectural glass products generated 15% of our net revenue, and electronic displays generated 2% of our net revenue.

The current global economic condition and the credit market environment could have a material impact on our business, results of operations and financial condition in fiscal year 2009 and beyond. As a manufacturer of energy saving films and glass products for the domestic and international automotive and architectural markets, the Company is dependent upon automotive sales and new commercial real estate construction. Both the automotive and building industries are experiencing material sales declines. The financial condition of many companies in these industries is deteriorating. These sales declines and the weakening financial condition of these companies could materially reduce our revenue and income for 2009 and beyond. In addition, the weak economic climate could affect our suppliers which could increase our cost of manufacturing and, in general, have an adverse impact on our ability to manufacture our products and our costs of such manufacturing.

In April 2008, the Company formed Southwall Insulating Glass, LLC, a joint venture with Chicago-based manufacturer, Sound Solutions Windows & Doors, LLC, which markets, produces and sells energy efficient, dual-pane insulated glass units which are primarily used in the production of completed window units for the residential housing and commercial building industries. Southwall Insulating Glass incorporates automated

manufacturing in its production of insulated glass units to improve cost-competitiveness and establish broader adoption of its innovative Heat Mirror® film in insulating glass. The joint venture is intended to expand the markets for the Company's Heat Mirror product and increase the Company's product offerings. Southwall Insulating Glass was formed in response to the demand for higher energy efficiency in residential and commercial buildings. The joint venture combines the Company's experience in developing advanced coated films and suspended film technology with the insulating glass production experience of Sound Solutions Windows & Doors. The joint venture is located in Chicago and began production of Heat Mirror insulating glass units and other high performance insulated glass units in the second half of 2008.

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### Additional Information

We maintain a website with the internet address of [www.southwall.com](http://www.southwall.com). We are not including the information contained on our website as a part of, or incorporating it by reference into, this Annual Report on Form 10-K. We make available free of charge through our website our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, and amendments, if any, to these reports, as soon as reasonably practicable after we electronically file such material with, or furnish such material to, the Securities and Exchange Commission ("SEC"). In addition, we intend to disclose on our website any amendments to, or waivers from, our code of business conduct and ethics that are required to be publicly disclosed pursuant to the rules of the SEC. You may read and copy any material that we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., 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. The SEC also maintains an internet site at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding issuers, including Southwall, that file electronically with the SEC.

### Industry Background

Large area, single layer, thin film coatings were developed in the early 1960s using vacuum evaporation, a less precise precursor to the process currently used called sputter coating. As a result of technological developments in the early 1970s, multi-layer coatings for large substrates became possible. Sputter coating based on these developments is used today in many 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 depositing 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, architectural glass and electronic display markets.

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

### Thin film coating methods

The Company believes 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 a flexible substrate, or film, by a number of different methods. Once a uniform thin layer of liquid is applied, the layer is cured either by temperature or by ultra violet radiation. This process is typically less expensive than sputter coating, but generally yields coatings with lower quality optical and mechanical characteristics.



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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 pyrolytic 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 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 material, generally metals and metal oxides, onto the surface of a flexible substrate, usually polyester. The substrate can then either be 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.

## Markets

The primary markets for the thin film coated substrates that we manufacture are the automotive glass, architectural glass and applied window film markets. We believe that advances in manufacturing processes coupled with improved thin film deposition technologies are improving performance and reducing production costs, allowing thin film coated substrates to more cost-effectively address these markets.

### Automotive glass products

The thin film coated substrates we sell in the automotive glass product market reflect infrared heat. These coatings allow automobile and truck manufacturers to use more glass and increase energy efficiency by reducing the demand on a vehicle's air conditioning system, as well as improve thermal comfort for passengers 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 North American and European manufacturers of new cars and trucks for worldwide distribution.

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 because solar energy is absorbed in the glass, causing the glass to heat up, which eventually increases the temperature inside the vehicle.

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### Architectural glass products

Climate change has become a global concern. Buildings account for a significant amount of the world's total energy consumption and carbon emissions, and it is generally acknowledged that a material amount can be attributed to the energy lost through inefficient glass. Window glass is a poor thermal barrier; thus, one of the primary sources of heat build-up and loss in buildings. The thin film coated substrates we sell to glass manufacturers in the architectural glass products market are primarily used to improve insulation performance by controlling the transmission of heat through window glass, as well as to limit ultra-violet light damage.

### Applied Window Film products

The thin film coated substrates we sell in this market are similar to the films sold into the OEM automotive and architectural glass markets, but include other product characteristics that allow these film products to be applied to existing windows. Applied films are used for retrofit application to the inside surface of architectural and automotive windows and are sold in the aftermarket through resellers who install the film.

### Other Markets

In the past, we have sold to the electronic display product market and may do so in the future. In 2008, we sold a minimal amount into this market. The thin film coated products we have sold primarily enhance the light output of liquid crystal display (LCD) screens used in notebook personal computers and increase the performance of high resolution touch panel screens used in cell phones and personal data assistants (PDAs). Thin film coated substrates in this market are generally sold to OEMs. Given the low margins in this market, we don't intend to pursue this market in the foreseeable future.

We also sell a small amount of product to the solar energy market.

### Technology

In a sputtering process, a solid target and 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.

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Intellectual Property

Protection of our intellectual property is critical to maintaining our competitive position. We rely on our knowledge, as well as a combination of patent, trademark, and trade secret protection to establish and protect our intellectual property. We have 22 issued patents and approximately 20 patent applications pending in the United States, and approximately 30 patent applications pending outside the United States. Our patents and patent applications cover materials, processes, products and production equipment. Our issued patents have expiration dates ranging from 2009 to 2020. Of our existing patents, three will expire in 2009. We also seek to avoid disclosure of our know-how and trade secrets through a number of means, including limiting access to our proprietary information to those persons who need to know the information to perform their tasks and requiring those persons with access to our proprietary information to execute nondisclosure agreements with us. We consider our proprietary technology, as well as our patent protection, to be an important competitive factor in our business.

Products

The following table describes the markets into which we sell our products, the applications our products serve, the categories of our various products, key features of our various products and representative customers in each of our markets and for our product categories.

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MARKET	APPLICATION	FILM PRODUCTS	KEY FEATURES	REPRESENTATIVE CUSTOMERS
Automotive glass	Solar control for windshields, 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 Sekurit  Pilkington PLC  Shatterprufe  Guardian Llodio Uno S.L.
Architectural glass	New and retrofit residential and commercial windows and doors	Suspended Heat Mirror	Improves energy efficiency: cool in summer; warm in winter  UV blocking  Noise reducing	Sofraver S.A.  Alpen Energy Group  ECO Insulating Glass
	Commercial buildings	Laminated (XIR)	Infrared reflecting  UV blocking  Cool in summer  Noise reducing	Kaisheng Building Materials  Cristales Curvados  Procesadora de Jalisco SA
Applied window film	Automotive and architectural glass for after-market installation	Solis/V-KOOL  Hüper Optik	Transmits up to 75% visible light  Reflects up to 85% of infrared heat energy	V-Kool International  Hüper Optik
Solar	Concentrated solar thermal (CSP) reflector systems  Flexible, thin film photovoltaic modules	Reflective Silver  Transparent Conductive (TCO)	High reflectivity  Lightweight  High transparency and Conductivity  Flexible	SkyFuel/ReflecTech  Konarka
Electronic display	Liquid crystal display (LCD) monitors and touch screens for notebook PCs, cell phones and PDAs	Reflective Silver  Indium Tin Oxide (ITO)	Enhance light output High transparency/conductivity	Synaptics  Dontech

#### Automotive glass products

Direct-to-glass sputtering for automotive windshields has not historically been well developed because of the need to bend the glass before it can be coated and then installed in an automobile. Coating flat glass and then bending it to match complex automobile designs is less difficult and is the method currently used by most windshield glass producers. Our sputter coated flexible substrates can be applied to windshields with different curvatures and incorporated into most in-line windshield production processes used by glass companies today.

Our XIR coated solar-control films are 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. We sell our XIR coated solar-control films primarily to OEMs that produce glass for sale to European manufacturers of new cars and trucks for worldwide distribution.

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Our net revenues from sales of automotive glass products were \$19,298, \$15,113 and \$13,433 in 2008, 2007 and 2006, respectively.

### Architectural glass products

Windows containing our Heat Mirror films have the equivalent insulating capacity of conventional, triple pane windows but at a lighter weight, helping to lower annual energy costs and reducing carbon emissions from buildings. They also provide high levels of solar shading while transmitting a high percentage of visible light. In addition, our products offer ultra-violet protection and reduce noise and condensation. Our products allow architectural glass manufacturers to improve insulation without adding the weight of numerous panes of glass that are impractical to lift and, in some cases, cannot be supported by a structure's frame. We primarily sell our Heat Mirror film in rolls to window manufacturers, who then suspend the film in the airspace between sealed double-pane residential and commercial windows. We have also developed proprietary film-mounting technology, which we license to window fabricators. We have licenses with approximately 50 window fabricators in approximately 20 countries for the sale of our Heat Mirror Films and the license of our film-mounting technology. We currently offer 14 different Heat Mirror films for architectural applications. We also began selling heat-mirror insulated glass units to window manufacturers through our newly-formed joint venture, Southwall Insulating Glass.

### 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 licenses with approximately 20 fabricators in approximately 15 countries for the sale of this architectural film product.

Our net revenues from sales of architectural film products were \$6,358, \$5,957 and \$5,528 in 2008, 2007 and 2006, respectively.

### Applied window film products

Our aftermarket applied window film is sold pursuant to an exclusive worldwide license contained in our distribution agreement with V-Kool International and its subsidiaries, V-KOOL, Hüper Optik and iQue. The automotive glass and architectural glass aftermarket use our XIR and other patented coating technologies. These products are applied to existing windows and have a protective hard coat over the patented, transparent solar-control coating on one side and an adhesion layer on the other.

Our net revenues from sales of aftermarket applied window film products were \$15,691, \$13,989 and \$10,449 in 2008, 2007 and 2006, respectively.

### Other 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 \$523, \$2,674 and \$10,799 in 2008, 2007 and 2006, respectively. Given the low margins in this market, we don't intend to pursue this market in the foreseeable future.



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We also sell a limited amount of solar products. Our net revenues for the sales of solar product were \$494, \$951 and \$1,684 in 2008, 2007, and 2006, respectively. Our net revenues from solar products are reported as part of our electronic display and other revenues in the accompanying consolidated statements of operations.

### Sales and Marketing

#### Distribution channels

We sell our automotive related products primarily to OEMs in North America, and through our direct sales force in Europe.

We supply our Heat Mirror architectural products to approximately 50 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 six regionally based architectural glass sales representatives.

We sell a finished, applied window film product to Novamatrix, who markets the product under three brands: V-KOOL, Hüper Optik and iQue for the after-market automotive and architectural markets through a worldwide distribution network of companies owned by or affiliated with V-Kool International.

#### International Revenues

International revenues amounted to approximately 81%, 77% and 68% of our net revenues during 2008, 2007 and 2006, respectively. The principal foreign markets for our products were Germany and France, accounting for \$16,199, \$8,824 and \$6,781, respectively, in net revenues in 2008, 2007 and 2006 and the Pacific Rim other than Japan, accounting for \$13,399, \$10,925 and \$7,997 in 2008, 2007 and 2006, respectively.

#### Customers

We have created glass products which fill the needs of certain customers who require a superior quality product. Such customers represent a small portion of the overall automotive and architectural glass market.

A small number of customers have accounted for a substantial portion of our revenues. Our seven largest customers accounted for approximately 74% of our net revenues in 2008. Our ten largest customers accounted for approximately 78%, and 77% of our net revenues in 2007 and 2006, respectively. During 2008, V-Kool International, Saint Gobain Sekurit, Hüper Optik International, a subsidiary of V-Kool International and Pilkington PLC accounted for 33.2%, 12.5%, 4.3% and 15.9%, respectively, of our net revenues. During 2007, V-Kool International, Saint Gobain Sekurit, Hüper Optik International and Pilkington PLC accounted for 32.1%, 11.4%, 11.2% and 10.1%, respectively, of our net revenues. 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 effect on our revenues, profitability and cash flow.



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The timing and amount of sales to many of our 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.

### Automotive Glass Market

Our customers are suppliers in the automotive glass industry, including Saint Gobain Sekurit, Pilkington PLC, and Asahi India Glass Ltd, who sell glass to OEM automobile manufacturers, including DaimlerChrysler, Renault, Audi, BMW, Volvo, Volkswagen and the PSA Group (which includes Peugeot and Citroen).

### Automotive Glass and Architectural Glass, After Market

Our aftermarket applied film in the automotive and architectural glass markets is sold pursuant to an exclusive worldwide license contained in our distribution agreement with V-Kool International. Under our agreement, V-Kool International agreed to purchase a set amount 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 distribution agreement will result in penalties under which we would be required to reimburse V-Kool International for the full cost of any product not timely delivered. We have supplied at least the minimum volumes required in each of the contract years. Each year for the duration of the agreement, V-Kool International is required to purchase an amount of product equal to 110% of the amount of product it was required to purchase in the prior year. V-Kool International was obligated to purchase approximately \$13,400 of products in 2008. During 2008, V-Kool International purchased approximately \$13,900 of product. V-Kool International's contract is to purchase at least \$14,700 from us in 2009.

### Customers for Architectural, New and Retrofit Markets

Our customers are suppliers to the architectural glass industry, including: Sofraver S.A., Alpen Energy Group, Kaisheng Building Materials, ECO Insulating Glass, and about 60 other companies worldwide. These customers manufacture and supply insulated glass units (IGUs) or laminated glass that incorporates our films. Additionally, a significant portion of the aftermarket applied film that we sell to V-Kool International under our distribution agreement is installed on architectural glass in homes and buildings. Our customers represent a small portion of the worldwide architectural glass market.

### Other Markets

Our net revenues from sales of electronic display products were \$523, \$2,674 and \$10,799 in 2008, 2007 and 2006, respectively. Given the low margins in this market we don't intend to pursue this market in the foreseeable future.

We also sell a limited amount of solar products. Our net revenues for the sales of solar product were \$494, \$951 and \$1,684 in 2008, 2007 and 2006, respectively. Our net revenues from solar products are reported as part of our electronic display and other revenues in the accompanying consolidated statements of operations.

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## Research and Development

Our research and development activities are focused on the development of new proprietary products, thin film materials science, deposition process optimization and automation and applied engineering. Our research and development expenditures totaled \$2,996, \$4,505 and \$6,782 or approximately 7.1%, 11.9% and 16.9% of net revenues in 2008, 2007 and 2006, respectively.

Historically, our research and development efforts have been driven by customer requests for the development of new applications for thin film coated substrates. In 2008, a new family of Heat Mirror film optimized to improve the energy efficiency of structural glazing used in the world's largest commercial projects was introduced. In 2007, we successfully introduced a new and enhanced window film product. We also began developing Indium Tin Oxide (ITO) conductive coatings for a rapidly expanding touch panel market, and we initiated research and development into thin film technology that may enable us to introduce products for new applications and markets. We cannot guarantee that we will be successful in developing or marketing these applications or that our films will continue to meet the demanding requirements and the changing technology of the markets we serve.

## Integration

The Company is currently pursuing strategic alliances that may result in vertical integration of our products in the production and distribution channels. However, there can be no assurances with respect to future revenue or income pertaining to these alliances, if any at all.

## Manufacturing

The table below provides information about our current production machines and the class of products that each was tooled to produce in 2008.

Location	Primary Markets For Current Production	Year Commercial Production Initiated	Estimated Annual Capacity (Millions of Sq. Ft.) (1)
Palo Alto, California	Research and Development	1982	8.0
Dresden, Germany	Automotive, architectural, electronic display and window film	2000	48.0

(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.

Although our production systems are built by outside vendors, we work closely with our vendors on the design for our production machines. 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. Currently we have sufficient production capacity to meet our customers' requirements.

Germany Facility

We own a production facility in Großröhrsdorf, Germany, near the city of Dresden. This facility is ISO 9001/2000 certified. The facility has three production machines and manufactured 100% of our products during all of 2008.

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### Environmental Matters

We use potentially 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 emissions and the storage, use, treatment and disposal of hazardous materials and waste. We contract with outside vendors to collect and dispose of waste from our facilities in compliance with applicable environmental laws. In addition, we have implemented procedures that we believe enable us to deal properly with the gasses emitted in our production process, and we have a program to monitor our 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 in connection with our air and water emissions and with our storage use, treatment and disposal of hazardous materials and waste. Further, our failure to comply with current or future laws and regulations could subject us to substantial penalties, fines, costs and expenses.

### 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, the substrate we use in the manufacture of our Heat Mirror products is currently available from one main qualified source, Dupont Teijin Limited. The loss of our current source of supply would adversely affect our ability to meet our scheduled product deliveries to customers. 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 such sources. In addition, increases in prices charged by our suppliers 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 rely on third-party subcontractors to add properties, primarily adhesives, to some of our products. There are only a limited number of qualified subcontractors that can provide some of the services we require. Also, 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 produce. 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. Though we currently have sufficient production capacity with our existing machines for the foreseeable future, if capacity requirements were to change significantly, our inability to have new production machines manufactured and prepared for commercial production in a timely manner would have a material adverse effect on our ability to grow the business.

### Backlog

Our backlog primarily consists of purchase orders for products to be delivered within 90 days. As of February 28, 2009 and February 29, 2008, we had a backlog of orders for shipment over the following 12 months of approximately \$3,890 and \$10,212, respectively. We expect to ship the entire backlog listed as of February 28, 2009 during 2009. These are firm orders and are not subject to cancellation.

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### Competition

The thin film coatings industry and the markets in which our customers compete experience rapid technological change. Adoption by our competitors of new equipment or process technologies or the development by our competitors of new products could adversely affect us. We have a number of present and potential competitors, including some of our customers who could develop products and processes that replace ours, many of which have greater financial resources and greater selling, marketing and technical resources than we possess. In addition, many of our competitors have well established relationships with our current and potential customers and have knowledge of our industry.

**Automotive glass market.** Large, worldwide glass laminators typically have divisions selling products to the commercial flat glass industry and provide solar control products in the automotive OEM market. We face technological competition from companies, such as PPG Industries, Pilkington PLC, Saint Gobain Sekurit, Asahi, Guardian and Glaverbel that have direct-to-glass sputtering capability. We may also be subject to future competition from companies that are able to infuse glass with solar control properties. We estimate that in 2008 our coated substrates were used in less than 1% of the total worldwide automotive OEM glass produced.

**Architectural glass market.** Products that provide solar control and energy conservation have been available to this market for approximately 25 years. Since our introduction of our Heat Mirror film products in 1979, large glass producers, such as Guardian, PPG Industries, Apogee Enterprises, Pilkington PLC, Saint Gobain Sekurit and Asahi, have produced their own direct-to-glass sputtered products that provide solar control and energy conservation similar to our Heat Mirror products. We estimate that in 2008 our coated substrates were used in less than 1% of the glass used worldwide in residential and commercial buildings.

**Applied window film market.** In the applied window film segment of the 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. We estimate that in 2008 our applied window films were used in less than 1% of the total worldwide applied film market.

**Electronic display market.** The electronics display market, specifically the plasma television display market, has become a price sensitive, low margin market. Our sales in 2008 to the electronic display market were insignificant.

### Basis of competition

We believe we compete principally on the basis of:

- Proprietary thin film sputtering process knowledge and proprietary control systems that consistently deliver very high quality, complex, nano scale optical and electrical thin films on plastic webs;
- Our extensive thin film materials expertise and optical design capabilities, which allow us to bring new products to the market very quickly;
- The high quality of our products; and
- Our ability to easily alter the format of our products, providing our customers with inventory versatility and higher production yields.

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Quality Claims

We accept sales returns for quality claims on our products. We believe our returns plan is competitive for the markets in which our products are sold. The nature and extent of these quality claims depends on the product, the market, and in some cases the customer being served. We carry liability insurance; however, our insurance does not cover quality claims.

Employees

As of December 31, 2008, we had 119 employees, of whom 14 were engaged in engineering, 72 in manufacturing, 13 in sales and marketing, 2 in purchasing and 18 in general management, finance and administration. We are highly dependent upon the continuing services of certain technical and management personnel. None of our employees are represented by labor unions. We consider our employee relations to be good.

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ITEM 1A. RISK FACTORS

(amounts in thousands, except per share data)

Financial Risks

The global economic and financial market crisis we are experiencing may have a negative effect on our business and operations.

The global economic and financial market crisis we are experiencing has caused, among other things, a general tightening in the credit markets, lower levels of liquidity, increases in the rates of default and bankruptcy, lower consumer and business spending, and lower consumer net worth, all of which could have a negative effect on our business, results of operations, financial condition and liquidity. Many of our customers, distributors and suppliers have been or may be severely affected by the current economic turmoil. Current or potential customers and suppliers and subcontractors may no longer be in business, may be unable to fund purchases or determine to reduce purchases, all of which could lead to reduced demand for our products, reduced gross margins, and increased customer payment delays or defaults. Further, suppliers and subcontractors may not be able to supply us with needed raw materials on a timely basis, may increase prices or go out of business, which could result in our inability to meet consumer demand or affect our gross margins. Our suppliers and subcontractors may also impose more stringent payment terms on us. The timing and nature of any recovery in the credit and financial markets remains uncertain, and there can be no assurance that market conditions will improve in the near future or that our results will not be materially and adversely affected. Such conditions make it very difficult to forecast operating results, make business decisions and identify and address material business risks.

Declining production of automobiles and commercial and residential real estate due to the economic climate could harm our business.

Global production of automobiles and commercial and residential real estate construction declined significantly in 2008 and is expected to further decline in 2009. As a manufacturer of energy saving films and glass products for the domestic and international automotive and architectural markets, we are dependent upon automobile sales, and new commercial and residential real estate construction. We sell a substantial portion of our products to a relatively small number of OEMs, and the timing and amount of our sales to these customers ultimately depend on sales levels and shipping schedules for the OEM products, such as automobiles and commercial and residential real estate construction, into which our products are incorporated. Continuing declines in the automobile and commercial and residential real estate markets could adversely impact our sales volume, and could cause certain of our customers and suppliers to experience liquidity problems, potentially resulting in our write-off of amounts due from these customers and cost impacts of changing suppliers. Additionally, a change in our suppliers or other delays or problems suffered by our suppliers could have an adverse impact on our ability to manufacture our products on a timely basis, if at all. If our significant customers or suppliers fail or significantly reduce their operations or purchases from us, our business will be harmed. As a result, our revenues, income and financial condition may decline in 2009 and beyond.

Capital markets are currently experiencing a period of disruption and instability, which could have a negative impact on the availability and cost of capital.

The general disruption in the global capital markets has impacted the broader financial and credit markets and reduced the availability of debt and equity capital for the market as a whole. Our ability to access the capital markets may be restricted at a time when we would like, or need, to access those markets, which could have an impact on our flexibility to react to changing economic and business conditions. The resulting lack of available credit, lack of confidence in the financial sector, increased volatility in the financial markets and reduced business activity could

materially and adversely affect our business, financial condition, results of operations and our ability to obtain and manage our liquidity. In addition, the cost of debt financing and the proceeds of equity financing may be materially adversely impacted by these market conditions.



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Credit market developments may reduce availability under our credit agreement.

Due to the current uncertainty in the credit markets, there is risk that lenders, even those with strong balance sheets and sound lending practices, could fail or refuse to honor their legal commitments and obligations under existing credit commitments, including but not limited to: extending credit up to the maximum permitted by a credit facility, allowing access to additional credit features and otherwise accessing capital and/or honoring loan commitments. If our lenders fail to honor their legal commitments under our credit facilities, it could be difficult in the current environment to replace our facilities on similar terms. The failure of any of the lenders under our credit facilities may impact our ability to finance our operating or investing activities.

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

As of December 31, 2008, we had total outstanding obligations under our loan and capital lease agreements of \$6,268. Our current credit facilities contain financial covenants that require us to meet certain financial performance targets and operating covenants that limit our discretion with respect to business matters. Among other things, these operating covenants restrict our ability to borrow additional money, create liens or other encumbrances, and make certain payments including dividends and capital expenditures. 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 inability to make timely payments of interest or principal under these facilities or our failure to comply with financial performance or operating covenants will constitute a default under these facilities and will entitle the lenders to accelerate the maturity of the outstanding indebtedness. Any such default will likely prevent us from borrowing money under existing credit facilities, securing additional borrowings or functioning as a going concern. As of December 31, 2008, we were in compliance with all of our debt covenants.

Our ability to borrow is limited by the customized nature of our equipment and some of our foreign 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 customized equipment and foreign accounts receivable, lenders will generally allow us to borrow less against these item assets as collateral than they would for other types of equipment or domestic accounts receivable, or require us to provide additional credit enhancements. As a result, we may not be able to borrow a sufficient amount to fund our operations or, if such funding is available, it may be at an unacceptable cost.

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, Germany facility, to secure the loans. If we default under our secured credit facilities, and our senior lenders foreclose on one or more of those machines, our ability to produce product would be materially impaired or completely interrupted. 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 other 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 senior credit facilities or under our other financing arrangements, the lenders could declare all of the funds borrowed there under, 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.



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Our quarterly revenue and operating results are volatile and difficult to predict.

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 by 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 repair, and the hiring and training of additional staff;
  - our ability to enhance our products, improve our processes and introduce new products on a timely basis;
- 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; and
- product returns and customer allowances stemming from product quality defects and the satisfaction of product warranty claims.

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

In 2008, 2007 and 2006, approximately 48%, 42% and 30% of our net revenues, respectively, were denominated in Euros, including sales to one of our largest customers, Saint-Gobain Sekurit, a global automotive glass manufacturer. Also, certain purchases from foreign suppliers are denominated in foreign currencies. A strengthening in the dollar relative to the Euro 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 and cash flows. These fluctuations could also cause prospective customers to cancel or delay orders because of the increased relative cost of our products. Conversely, during 2008 and 2007, the dollar continued to weaken against the Euro, which negatively impacted our cost of doing business.

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Operational Risks

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

Our seven largest customers accounted for approximately 74% of our net revenues in 2008. Our ten largest customers accounted for approximately 78% and 77% of net revenues in 2007 and 2006, respectively. We expect to continue to derive a significant portion of our net revenues from this relatively small number of customers. Accordingly, the loss of a customer could have an adverse effect on our business. The deferral or loss of anticipated orders from a large customer or from a number of small customers will materially reduce our revenue and operating results.

Some of our largest automotive glass customers have the resources to develop products competitive with ours; if they do so, our revenues and operating results would be materially and adversely affected.

Some of our largest automotive glass customers have used a technology—direct-to-glass sputtering—as an alternative to our window films. The continued or expanded use of this technology by our automotive glass customers would limit their need for our products, would reduce our sales to these customers and would have a material adverse effect on our revenues, results of operations and financial position. Many of our customers also have the financial and technical resources to develop products competitive with ours. If any of our customers develop any such competitive products, the demand for our products would be adversely affected and results of operations and our financial position would be materially and adversely affected.

We must continue to develop new products and processes 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, and processes and 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 automotive and architectural markets. Technological changes, process improvements or operating improvements that could adversely affect us include:

- changes in the way coatings are applied to alternative substrates such as tri-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 efficiency and resulting product quality of alternatives to the sputtering technology we use to produce our products, such as plasma enhanced chemical vapor deposition, or PECVD.

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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 implement process or operating improvements, our competitive position, operations and prospects would be materially adversely affected.

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

A 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. We might also issue shares of capital stock as partial or full payment of the purchase price for a target company or raise additional equity capital to finance such purchases. Such an issuance would dilute our current shareholders' interest as a percentage of ownership or in net book value per share. Given the current weakness in the economy and the global credit crisis, there can be no assurance that we will be able to secure any acquisition financing under acceptable terms. Even if we successfully identify, finance the acquisition price and acquire suitable target companies, products, or technologies, the success of any acquisitions will depend upon our ability to integrate the acquired operations, retain and motivate acquired personnel and increase the customer base of the combined businesses.

We may not be able to accomplish any or 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. While we currently have sufficient manufacturing capacity to meet our foreseeable needs, if we lose the use of any of our production machines for any extended period, due to failures of such production machines or unanticipated maintenance and repairs, our production capacity will be compromised. 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 our customers and cause our customers to buy similar products from our competitors if we are unable to meet their needs. 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 and adversely affect our results of operations.



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Our major customers are suppliers to OEMs; we therefore are dependent upon the end customers' demand for products supplied by these OEMs.

We sell a substantial portion of our products to a relatively small number of suppliers to 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 OEM customers or shipping dates, and we cannot be certain that these suppliers to OEM customers will continue to ship products that incorporate our products at current levels or at all. We currently have long-term contracts with only one of our suppliers to OEM customers. Failure of this customer or other suppliers to 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 our suppliers to OEM customers to inform us of changes in their production needs in a timely manner could also adversely affect 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 accurately anticipate end-user needs, we may fail to develop needed new products or modify our existing products for the end-user markets for our products, or we may spend resources on developing products that are not commercially successful.

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

We have a distribution agreement with V-Kool International Holdings Pte. Ltd., or V-Kool International, which if not renewed would expire in 2011, under which we granted V-Kool International an exclusive worldwide license to distribute our after-market applied window film in the automotive and architectural glass markets. Failure of V-Kool International 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. Further, the termination of our distribution agreement with V-Kool International would have a material adverse affect on our business.

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

The market for each of our products is intensely competitive and we expect competition to increase in the future. We compete based on the functionality and the quality of our product. Our competitors vary in size and in the scope and breadth of the products they offer. 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. If our competitors develop new technologies or new products, improve the functionality or quality of their current products, or reduce their prices, and if we are unable to respond to such competitive developments quickly either because our research and development efforts do not keep pace with our competitors or because of our lack of financial resources, we may be unable to compete effectively.

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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. Some of the materials we require are obtained from a limited number of sources and, in the case of certain materials, from a sole source. Interruptions in our supply of material or increases in the prices for such materials would delay or increase the costs of our shipments to our customers. 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, if we are unable to pass these price increases along to our customers, would 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 them. Qualifying additional subcontractors could take a great deal of time or cause us to change product designs. The loss of one or more subcontractors 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. Our inability to obtain new production machines on a timely basis from such suppliers 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 design and 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. While we currently have sufficient manufacturing capacity with our existing production machines, our inability in the future to have new production machines designed, 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.

If we are unable to adequately protect our intellectual property, third parties may be able to duplicate our products or processes, 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 processes or to obtain and use information that we regard as proprietary. Policing unauthorized use of our intellectual property is difficult and can be expensive. 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 the same extent as do the laws of the United States. One of our U.S. patents relating to our architectural products, Heat Mirror, expired in 2006. Expiration of our other patents, which will occur from 2009 to 2020, 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.





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The sale of our products and the use of our technology may inadvertently infringe upon the intellectual property rights of others. In such event, we may be restrained in the sale of specific products or the continued use of specific technology, or we may be required to pay license fees to the owner of such other intellectual property.

The sale of our products and the use of our technology may inadvertently otherwise infringe upon the intellectual property rights of others. In such event, we may be prevented from the continued sale of such products or the continued use of such technology, or we may be required to pay substantial license fees to the owner of such other intellectual property. This could have a material, adverse effect on our business and results of operations.

The European Patent Office has allowed a European Patent owned by Pilkington Automotive GmbH.

During 2008, the European Patent Office allowed a European patent owned by Pilkington Automotive GmbH which may impede our ability to use a specific process in manufacturing film in certain European markets or could increase our costs and adversely affect our income.

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

We manufacture our products according to specific, technical requirements of each of our customers. We believe that future orders of our products will depend in part on our ability to satisfy 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.

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

We require the services of a substantial number of qualified technical personnel. Intense competition and aggressive recruiting, as well as a high-level of employee mobility, characterize the market for skilled technical personnel. 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 there compared with many other parts of the country. If we are unable to recruit and retain a sufficient number of qualified technical employees, we may not be able to enhance our products or develop new products or processes in a timely manner. As a result, our business may be harmed and our operating results may suffer.

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We may be unable to attract or retain the other highly skilled management personnel 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. Our officers have technical and industry knowledge that cannot easily be replaced. Competition for similar personnel in the industry in which we operate is intense. We have experienced, and we expect to continue to experience, difficulty in hiring and retaining highly skilled management personnel with appropriate qualifications. If we do not succeed in attracting and retaining the necessary management personnel, our business could be adversely affected.

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

Revenues from international sales amounted to approximately 81%, 77% and 68% of our net revenues during 2008, 2007 and 2006, respectively. To achieve acceptance in international markets, our products must be modified to address a variety of factors specific to each particular country, as well as local regulations within each country. 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;

- the continuation of global, economic turbulence, the crisis in global credit markets, political instability and general economic conditions within each region or country;

- our ability to adapt to cultural differences that may affect our sales and marketing strategies; and

- currency fluctuations described above.

If we fail to comply with environmental regulations, our operations could be suspended and we could be subject to substantial fines and remediation costs.

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 or our inadvertent failure to comply with regulations in the past could result in the imposition of substantial fines on us, significant remediation expenses, suspension of production, alteration of our manufacturing processes, increased costs or cessation of operations. We might also be required to incur substantial expenses to comply with changes in such local, state and federal governmental regulations.

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We rely on our domestic sales representatives for the sale of our architectural products. The failure of our domestic sales representatives to sell our architectural products in sufficient quantities would adversely affect our revenues.

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, otherwise become unable or unwilling to promote our products, or fail to sell our products in sufficient quantities, 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. The current weakness in commercial and residential real estate construction may have a material, adverse effect on our sales representatives. 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 may become engaged in similar or other lawsuits in the future. 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. It is our policy to satisfy claims from our customers that are covered by our product warranties. Unanticipated warranty claims that do not result in litigation may still expose us to substantial costs and expenses.

## Market Risks

A few stockholders own a majority of our shares and will be able to exert control over us and over significant corporate decisions.

As of December 31, 2008 and 2007, Needham & Company, Inc. and its affiliates and Dolphin Direct Equity Partners, L.P. owned common stock and securities convertible into common stock, constituting in the aggregate 62.0% of our outstanding common stock. Needham & Company, Inc. and its affiliates, together as our largest stockholder, could delay or prevent a change of control of our company, control corporate decisions, or otherwise control the company in ways that might have a material adverse effect on our company or our other shareholders. Needham & Company, Inc. and its affiliates, together with Dolphin Direct Equity Partners, L.P., have sufficient beneficial ownership of our outstanding common stock to be able to control all corporate decisions requiring majority stockholder approval.

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.

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ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

(dollar amounts in thousands, except per share data)

Our administrative, sales, marketing, research and development facilities are located in one location totaling 30,174 square feet in Palo Alto, California. This location is covered under two leases, both of which expire on June 30, 2011. A second building, also located in Palo Alto, California, consisting of approximately 9,000 square feet, has been subleased to a third party.

In January 2006, we commenced restructuring actions to improve our cost structure. These actions included the closure of our Palo Alto, California manufacturing facility during 2006. We accrued \$1,509 for the closure of our manufacturing facility and an additional \$153 in the fourth quarter of 2007 as a leasehold asset retirement obligation in connection with the surrender of our manufacturing facility to the landlord. In January 2008, a \$1,000 letter of credit and \$100 cash security deposit were released to the landlord. In February 2008, we entered into a settlement agreement with the landlord under which we paid the landlord an additional \$400, and we were released from any further rent or building restoration obligations under the lease for that specific manufacturing facility.

ITEM 3. LEGAL PROCEEDINGS

In September 1995, Pilkington filed a patent application in Germany for XIR film characteristics. Southwall challenged the patent. This patent was revoked by the German Patent Court on April 20, 2004. A separate patent application had been filed by Pilkington in the European Patent Office on September 13, 1996, and a patent was granted. A separate opposition was filed by Southwall. However, the European Patent Office did not allow the opposition and maintained the patent. While the reasons for the final decision of the European Patent Office were issued September 9, 2008, the Company is unable to determine the impact, if any, at this time.

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.

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

None.

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## PART II

## ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the Over-the-Counter Bulletin Board Market under the symbol "SWTX.OB". Over-the-counter market quotations reflect inter-dealer prices without retail mark-up, mark-down, or commission and may not necessarily represent actual transactions. Prices in the following table represent the high and low bid quotations per share for our common stock as reported by Over-the-Counter Bulletin Board Market during the periods indicated.

	High	Low
2008		
1st Quarter	\$ 0.88	\$ 0.69
2nd Quarter	1.87	0.68
3rd Quarter	1.60	1.02
4th Quarter	1.10	0.60
2007		
1st Quarter	\$ 0.73	\$ 0.38
2nd Quarter	1.14	0.63
3rd Quarter	1.26	0.59
4th Quarter	0.90	0.55

On March 3, 2009, the last reported sale price for our common stock as reported on the Over-the-Counter Bulletin Board Market was \$0.55 per share. On such date, there were approximately 280 holders of record of our common stock, and we believe there were approximately 3,000 beneficial owners of our common stock.

## Dividends

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. Our Series A 10% Cumulative Convertible Preferred Stock (the "Series A Preferred Stock") is entitled to cumulative dividends of 10% per year, payable at the discretion of our Board of Directors. However, we have not paid dividends on the Series A Preferred Stock, nor do we intend to pay dividends on the Series A Preferred Stock in the foreseeable future. We currently intend to retain future earnings, if any, to fund the expansion and growth of our business. Furthermore, payment of cash dividends on our common stock is prohibited without the consent of our holders of Series A Preferred Stock and Wells Fargo Bank, per the terms set forth in our credit facility agreement.

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## Comparison of Cumulative Total Stockholder Return

The following performance graph assumes an investment of \$100 on December 31, 2003 and compares the changes thereafter in the market price of our common stock with a broad market index, Composite Market Index, and an industry index, General Building Materials Index. We paid no dividends during the periods shown; the performance of each index is shown on a total return (dividend reinvestment) basis. The graph lines merely connect fiscal year-end dates and do not reflect fluctuations between those dates.

\*\$100 invested on 12/31/03 in stock & index- including reinvestment of dividends.  
Fiscal year ending December 31.

	12/03	12/04	12/05	12/06	12/07	12/08
Southwall Technologies Inc.	100.00	179.17	63.54	47.92	83.33	83.33
Composite Market	100.00	112.21	119.05	137.47	146.78	91.47
General Building Materials	100.00	124.96	134.80	172.03	174.37	127.79

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## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data as of and for each of the five years ended December 31, 2008 is derived from our consolidated financial statements. 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 for the three fiscal years ended December 31, included elsewhere in this Annual Report on Form 10-K.

## Consolidated Statements of Operations Data:

	Years Ended December 31,				
	2008	2007	2006	2005	2004
	(in thousands, except per share data)				
Net revenues	\$ 41,920	\$ 37,733	\$ 40,209	\$ 54,754	\$ 57,573
Cost of revenues	24,378	23,907	24,746	37,241	36,787
Gross profit	17,542	13,826	15,463	17,513	20,786
Gross profit %	41.8%	36.6%	38.5%	32.0%	36.1%
Operating expenses:					
Research and development	2,996	4,505	6,782	5,104	3,199
Selling, general and administrative	8,199	9,843	12,005	8,332	10,217
Contract termination settlement	-	(2,959)	-	-	-
Restructuring costs (recoveries), net	-	56	915	--	--
Impairment charge (recoveries) for long-lived assets, net	-	(32)	(214)	(170)	(1,513)
Total operating expenses	11,195	11,413	19,488	13,266	11,903
Income (loss) from operations	6,347	2,413	(4,025)	4,247	8,883
Interest expense, net	(586)	(692)	(737)	(973)	(2,206)
Costs of warrants issued	--	--	--	--	(6,782)
Other income (expense), net	(62)	2,346	210	75	534
Income (loss) before provision for income taxes	5,699	4,067	(4,552)	3,349	429
Provision for income taxes	511	510	958	29	614
Net income (loss)	5,188	3,557	(5,510)	3,320	(185)
Deemed dividend on preferred stock	489	489	489	490	--
Net income (loss) attributable to common stockholders	\$ 4,699	\$ 3,068	\$ (5,999)	\$ 2,830	\$ (185)
Net income (loss) per share:					
Basic	\$ 0.17	\$ 0.11	\$ (0.22)	\$ 0.11	\$ (0.01)
Diluted	\$ 0.15	\$ 0.11	\$ (0.22)	\$ 0.10	\$ (0.01)

Weighted average shares used in computing net income (loss) per share:



Basic	28,252	27,576	26,949	26,743	14,589
Diluted	34,262	33,240	26,949	32,895	14,589

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## Consolidated Balance Sheet Data:

	2008	2007	As of December 31, 2006		2005	2004
			(in thousands)			
Cash, cash equivalents and restricted cash	\$ 11,050	\$ 6,786	\$ 5,733	\$ 7,002	\$ 5,233	
Working capital	12,607	7,879	3,686	8,691	6,528	
Property, plant and equipment	15,012	17,071	17,232	16,857	21,110	
Total assets	37,285	37,267	35,501	39,641	44,947	
Term debt and capital leases including current portion	6,268	9,426	9,627	10,107	13,107	
Total liabilities	15,877	20,574	23,655	23,702	30,374	
Preferred stock	4,810	4,810	4,810	4,810	4,810	
Total stockholders' equity	16,598	11,883	7,036	11,129	9,763	

## Selected Cash Flow Data:

	2008	Years Ended December 31,			2004
		2007	2006	2005	
		(in thousands)			
Net cash provided by (used in) operating activities	\$ 7,100	\$ 5,695	\$ 748		