AXT INC
Form 10-K
March 23, 2007

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

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

For the fiscal year ended December 31, 2006

OR

o 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: 000-24085

AXT, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**94-3031310**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4281 Technology Drive, Fremont, California	**94538**
(Address of principal executive offices)	(Zip Code)

Registrant s telephone number, including area code: **(510) 683-5900**

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

Title of each class	**Name of each exchange on which registered**
Common Stock, $0.001 par value	The NASDAQ Stock Market LLC

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

None

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

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

Indicate by checkmark 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. x Yes o No

Indicate by checkmark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) 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. o

Indicate by checkmark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Act. (Check one):

Large accelerated filer o Accelerated filer o Non-accelerated filer x

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

The aggregate market value of the voting stock held by non-affiliates of the registrant, based upon the closing sale price of the common stock on June 30, 2006 as reported on the Nasdaq National Market, was approximately $55,603,853. Shares of common stock held by each officer, director and by each person who owns 5% or more of the outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not a conclusive determination for other purposes.

As of February 28, 2007, 29,894,949 shares, $0.001 par value, of the registrant s common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for the registrant s 2007 annual meeting of stockholders to be filed with the Commission pursuant to Regulation 14A not later than 120 days after the end of the fiscal year covered by this form are incorporated by reference into Part III of this Form 10-K report. Except for those portions specifically incorporated by reference herein, such document shall not be deemed to be filed with the Commission as part of this Form 10-K.

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PART I

This Annual Report (including the following section regarding Management s Discussion and Analysis of Financial Condition and Results of Operations) contains forward-looking statements regarding our business, financial condition, results of operations and prospects. Words such as expects, anticipates, intends, plans, believes, seeks, estimates and similar expressions or variations of such words are intended to ident forward-looking statements, but are not the exclusive means of identifying forward-looking statements in this Annual Report. Additionally, statements concerning future matters such as the development of new products, enhancements or technologies, sales levels, expense levels and other statements regarding matters that are not historical are forward-looking statements.

Although forward-looking statements in this Annual Report reflect the good faith judgment of our management, such statements can only be based on facts and factors currently known by us. Consequently, forward-looking statements are inherently subject to risks and uncertainties and actual results and outcomes may differ materially from the results and outcomes discussed in or anticipated by the forward-looking statements. Factors that could cause or contribute to such differences in results and outcomes include without limitation those discussed under the heading Risk Factors in Item 1A below, as well as those discussed elsewhere in this Annual Report. Readers are urged not to place undue reliance on these forward-looking statements, which speak only as of the date of this Annual Report. We undertake no obligation to revise or update any forward-looking statements in order to reflect any event or circumstance that may arise after the date of this Annual Report. Readers are urged to carefully review and consider the various disclosures made in this Annual Report, which attempt to advise interested parties of the risks and factors that may affect our business, financial condition, results of operations and prospects.

Item 1. *Business*

AXT, Inc. (AXT , we, us, and our refer to AXT, Inc. and all of its subsidiaries) is a leading developer and producer of high-performance compound and single element semiconductor substrates, including substrates made from gallium arsenide (GaAs), indium phosphide (InP) and germanium (Ge). We currently sell the following substrate products in the sizes and for the applications indicated:

Substrates	**Substrate Diameter**	**Applications**
GaAs (semi-insulating)	2 , 3 , 4 , 5 , 6	• Power amplifiers and radio frequency integrated circuits for wireless handsets (cell phones) • Direct broadcast television • High-performance transistors • Satellite communications
GaAs (semi-conducting)	2 , 3 , 4	• High brightness light emitting diodes • Lasers • Optical couplers
InP	2 , 3 , 4	• Broadband and fiber optic communications
Ge	2 , 4	• Satellite and terrestrial solar cells

We manufacture all of our semiconductor substrates using our proprietary vertical gradient freeze (VGF) technology, which enables us to add capacity quickly and cost effectively. Most of our revenue is from sales of GaAs substrates. We manufacture all of our products in the People s Republic of China (PRC or China), which generally has favorable costs for facilities and labor. We also have five joint ventures in China that provide us favorable pricing, reliable supply and shorter lead-times for raw materials central to our final manufactured products. We consolidate, for accounting purposes, three of these joint ventures and have equity interests of 25% in each of the other two. We use our direct sales

force in the United States and independent sales representatives in Europe and Asia to market our substrates. Our ten largest customers for 2006 were: Avago Technologies Manufacturing (Singapore) Pte. Ltd., Freescale Semiconductor, Inc., MBE Technology Pte. Ltd., Ningbo Ker Ning Da Ri Fang Magnet Co., Ltd., Osram Opto Semiconductors GmbH, Picogiga International SAS, IQE, plc., Sumika Epi Solution Co., Ltd., Visual Photonics Epitaxy Co., Ltd., and Recapture Metals Limited. We believe that, as the demand for compound semiconductor substrates is expected to increase, we are positioned to leverage our PRC-based manufacturing capabilities and access to favorably priced raw materials to increase our market share.

In 2005, we made a number of important changes to our management team. Philip C.S. Yin, Ph.D., joined the company in March 2005 as chief executive officer and restructured the organization from the top down. In June 2005, two new positions were created: chief operating officer and chief technology officer. Also, the former president of AXT s China operations became president of joint venture operations. In September 2005, our new vice president of global sales and marketing joined us. This new structure enables us to maximize the expertise and skill sets of our team while placing enhanced emphasis on manufacturing, production and quality, and quality systems improvement.

With the new management team in place, quality, quality systems and revenue began to improve beginning in the third quarter of 2005. In December 2005, we reduced the workforce at our Fremont, California facility by 15 full-time equivalent positions that we no longer required to support production and operations, or approximately 29% of the workforce based at this facility.

We were incorporated in California in December 1986 and reincorporated in Delaware in May 1998. We changed our name from American Xtal Technology, Inc. to AXT, Inc. in July 2000. Our corporate office is located at 4281 Technology Drive, Fremont, California 94538, and our telephone number at this address is (510) 683-5900. Our web site is *www.axt.com*; however, the information on our web site does not constitute a part of this Annual Report on Form 10-K and is not incorporated herein. We make available, free of charge, on or through our web site, our annual, quarterly and current reports, and any amendments to those reports.

Industry Background

Certain electronic and opto-electronic applications have performance requirements that exceed the capabilities of conventional silicon substrates and often require high-performance compound or single element substrates. Examples of higher performance non-silicon based substrates include GaAs, InP, gallium nitride (GaN), silicon carbide (SiC) and Ge.

For example, power amplifiers and radio frequency integrated circuits for wireless handsets are made with semi-insulating GaAs substrates. Semi-conducting GaAs substrates are used to create opto-electronic products including high brightness light emitting diodes (HBLEDs) which are often used to backlight wireless handsets and liquid crystal display (LCD) TVs and for automotive and general illumination applications. InP is a high performance semiconductor substrate used in broadband and fiber optic applications. Ge substrates are used in emerging applications such as solar cells for space and terrestrial photovoltaic applications.

The total market for high performance GaAs, InP and Ge substrates is expected to grow from $529 million in 2005 to $1.1 billion in 2010, a compound annual growth rate of approximately 16%, according to Strategy Analytics, an independent research firm.

The primary costs of manufacturing compound semiconductor substrates are labor, raw materials and manufacturing equipment such as crystal growing furnaces. Substrate manufacturers are shifting production to larger wafers to reduce manufacturing costs. Strategy Analytics estimates that demand for 6 wafers will grow at a compound annual growth rate of approximately 28% from 2005 through 2010.

Suppliers of compound semiconductor substrates typically compete on product quality, product lead-time, price, device performance, meeting customer specifications and providing customer support. A compound semiconductor substrate customer typically has two or three substrate suppliers that it has qualified for the production of its products. These qualified suppliers must meet industry-standard specifications for quality, on-time delivery and customer support. Once a substrate supplier has qualified with a customer, price, consistent quality and current and future product delivery lead times become the most important competitive factors. A supplier that cannot meet customers current lead times or that a customer perceives will not be able to meet future demand and provide consistent quality can lose current market share.

The AXT Advantage

We believe that we benefit from the following advantages:

- *Low-cost manufacturing operation in the PRC.* Since 2004, we have manufactured all of our products in China, which generally has favorable costs for facilities and labor. Approximately 983 of our 1,022 employees are in China. Our primary competitors have their manufacturing operations in Germany or Japan.

- *Favorable access to raw materials.* Our joint ventures provide us favorable pricing, reliable supply and shorter lead-times for raw materials central to our final manufactured products. These materials include gallium, arsenic, germanium, germanium dioxide, paralytic boron nitride crucibles and boron oxide. As a result, we believe that our joint ventures will enable us to meet potential increases in demand from our customers.

- *Flexible manufacturing infrastructure*. Our total manufacturing space in China is approximately 190,000 square feet, 90,000 square feet of which we currently use and the remainder of which we have configured for relatively rapid expansion. We believe that our competitors typically purchase crystal growing furnaces from original equipment manufacturers. In contrast, we design and build our own VGF crystal growing furnaces, which should allow us to increase our production capacity more quickly and cost effectively.

Given these advantages, we believe that, as the demand for compound semiconductor substrates increases, we are positioned to leverage our PRC-based manufacturing capabilities and access to favorably priced raw materials to increase our market share. As an example, we are currently working to add significant additional capacity in 6 GaAs substrates to meet expected increasing market demands. In addition, each of our five joint ventures are also increasing capacity.

Strategy

Our goal is to become the leading worldwide supplier of high-performance compound and single element semiconductor substrates. Key elements of our strategy include:

Continue to provide customers high and consistent quality products and service. We seek to improve our manufacturing processes continually in order to meet and exceed our customers high product quality standards, ensure on-time delivery of our products and optimize the cost of ownership. In addition, we plan to continue to enhance our support functions, including service and applications engineering.

Increase market share.We intend to leverage our product quality, competitive pricing and lead times both to establish relationships with new customers and to increase our market share with current customers in the integrated circuits for wireless handsets and HBLED markets.

Add capacity to meet customers increasing demand for substrates. We believe that the markets for our substrates are currently capacity constrained. We intend to add additional capacity in order to meet our customers current and anticipated increased demands, specifically in 6 GaAs substrates.

Establish leadership in emerging substrate applications. We intend to expand our served markets by exploring new opportunities for our substrates. For example, due to Ge s inherent high efficiency and the increasing supply constraints of traditional poly-silicon, some customers have begun to research the use of Ge substrates for terrestrial solar cell applications.

Technology

Our core technologies include our proprietary VGF technique used to produce high quality crystals that are processed into compound substrates, and the technologies of our joint venture companies, which enable us to manufacture a range of products that are used in the manufacture of compound semiconductor substrates or can be sold as raw materials to third parties.

Our VGF technique is designed to control the crystal-growth process with minimal temperature variation and is the technique we use to produce our GaAs, InP and Ge substrates. Unlike traditional techniques, our VGF technique places the hot compound melt above the cool crystal, and minimizes the temperature gradient between the crystal and the melt which reduces the turbulence at the interface of the melt and the solid crystal. In comparison, in the Liquid Encapsulation Czochralski (LEC) technique the melt and crystal are inverted, there is a higher temperature gradient between the melt and the crystal, and more turbulence at the interface of the melt and solid crystal. These aspects of the VGF technique enable us to grow crystals that have a relatively low defect density and high uniformity. The crystal and the resulting substrate are mechanically strong, resulting in lower breakage rates during a customer s manufacturing process. Since the temperature gradient is controlled electronically rather than by physical movement, the sensitive crystal is not disturbed as it may be during some competitors VGF-like growth processes. In addition, the melt and growing crystal are contained in a closed chamber, which isolates the crystal from the outside environment to reduce potential contamination. This substrate isolation allows for more precise control of the gallium-to-arsenic ratio, resulting in better consistency and uniformity of the crystals.

Our VGF technique offers several benefits when compared to traditional crystal growing technologies. The Horizontal Bridgman (HB) technique is the traditional method for producing semi-conducting GaAs substrates for opto-electronic applications. The HB technique holds the GaAs melt in a semi-cylindrical

container, causing crystals grown using the HB method to have a semi-circular, or D-shaped, cross-section. Accordingly, more crystal material is discarded when the D-shaped substrate is subsequently trimmed to a round shape. In addition, crystals grown using the HB technique have a higher defect density than VGF-grown crystals. The HB technique cannot be used cost-effectively to produce substrates greater than three inches in diameter. The HB technique houses the GaAs melt in a quartz container during the growth process, which can contaminate the GaAs melt with silicon impurities, making it unsuitable for producing semi-insulating GaAs substrates.

Our VGF technique also offers advantages over the LEC technique for producing semi-insulating GaAs substrates for electronic applications. During the LEC process, the crystal is grown by dipping a seed crystal through molten boric oxide into a melt of gallium and arsenic poly-crystal material and slowly pulling the seed up into the cool zone above the boron oxide where the crystal hardens. Unlike the VGF technique, the LEC technique is designed so that the hotter GaAs melt is located beneath the cooler crystal, resulting in greater turbulence in the melt, and at a temperature gradient that is significantly higher than the VGF technique. The turbulence and high temperature gradient cause LEC-grown crystals to have a higher dislocation density than VGF-grown crystals, resulting in a higher rate of breakage during the device manufacturing process. As an open process, the LEC technique also results in greater propensity for contamination and difficulty controlling the ratio of gallium to arsenic. It requires large, complex electro-mechanical systems that are expensive and require highly skilled personnel to operate.

The following table provides a comparison of these three techniques:

	VGF	**HB**	**LEC**
Substrate applications	Electronic and opto-electronic	Opto-electronic	Electronic
Largest wafer size in commercial use	6	3	6
Stress/defect levels	Very Low	Low	High
Crystal purity	Good	Poor	Good
Applicability to multiple materials	GaAs, InP, Ge	GaAs	GaAs, InP, GaP
Equipment and labor cost	Very Low	Low	High
Amount of waste material	Very Low	High	Low
Equipment flexibility	Versatile	Limited	Limited
Equipment downtime	Minimal	Moderate	High
Number of competitors	Several	Declining	Declining

Products

We design, develop, manufacture and distribute high-performance semiconductor substrates. The table below sets forth our products and selected applications:

Product	**Applications**	
Substrates	**Electronic**	**Opto-electronic**
GaAs	• Cellular phones • Direct broadcast television • High-performance transistors • Satellite communications	• LEDs • Lasers • Optical couplers
InP	• Fiber optic communications • Satellite communications • High-performance transistors • Automotive collision avoidance radar	• Lasers
Ge	• Satellite solar cells	

Substrates. We currently sell compound substrates manufactured from GaAs and InP, as well as single-element substrates manufactured from Ge. We supply GaAs substrates in two-, three-, four-, five- and six-inch diameters. We manufacture InP substrates in two-, three- and four-inch diameters and Ge substrates in two- and four-inch diameters.

Materials. We participate in five joint ventures in China that sell raw materials used by us in substrate manufacturing and by others. These joint ventures produce products including 99.99% pure gallium (4N Ga), high purity gallium, arsenic, and germanium, germanium dioxide, paralytic boron nitride (pBN) crucibles, and boron oxide (B2O3). In 2006 and 2005, sales of raw materials to parties other than us were approximately $5.3 million and $4.8 million, respectively, which comprised of all of these products.

Customers

We sell our compound semiconductor substrates and materials worldwide. Our top revenue producing customers include:

•Avago Technologies Manufacturing (Singapore) Pte. Ltd.	• Intelligent Epitaxy Technology	• Picogiga International SAS
•Bookham	• IQE (Europe) Limited	• Recapture Metals Limited
•China Electronics Technology Group	• IQE, plc.	• Sumika Epi Solution Co., Ltd.
•Continental Metals, Inc.	• Ningbo Ker Ning Da Ri Fang Magnet Co., Ltd.	• Visual Photonics Epitaxy Co., Ltd.
•Epitech Technology Corporation	• MBE Technology Pte. Ltd.	• Xiamen Sanan Electronics Co., Ltd.
•Epiworks, Inc.	• MCP, UK.	• Xiamen Xinde Co., Ltd.
•Freescale Semiconductor, Inc.	• Osram Opto Semiconductors GmbH	

Historically, we have sold a significant portion of our products in any particular period to a limited number of customers. One customer, Visual Photonics Epitaxy Co., Ltd., represented greater than 10% of revenue, totaling 12.8%, for the year ended December 31, 2006, two customers, Osram Opto Semiconductors GmbH, and MBE Technology Pte. Ltd., represented greater than 10% of revenue, totaling 20.7%, for the year ended December 31, 2005, while no customers represented greater than 10% of revenue for the year ended December 31, 2004. Our top five customers represented 40.0% of revenue for the year ended December 31, 2006, 37.5% of revenue for the year ended December 31, 2005, and 30.1% of revenue for the year ended December 31, 2004. We expect that sales to a small number of customers will continue to comprise a significant portion of our revenue in the future.

The third party customers for our raw materials products are in many instances the same as our customers for substrates. There have been no third party customers for our raw materials that account for greater than 10% of revenue for the years ended December 31, 2006, 2005 and 2004. Our joint ventures are a key strategic benefit for us as they give us a strong competitive advantage of allowing our customers to work with one supplier for all their substrate and raw material requirements.

Manufacturing, Raw Materials and Supplies

We believe that our results are partially due to our manufacturing efficiency and high product yields and we continually emphasize quality and process control throughout our manufacturing operations. We perform our substrate manufacturing operations at our facilities in Beijing, China. During 2004, we discontinued our manufacturing and research and development activities at our Fremont, California

facility. We believe that our capital investment and subsequent operating costs are lower for our manufacturing facilities in China relative to the U.S. Many of our manufacturing operations are fully automated and computer monitored or controlled, enhancing reliability and yield. We use proprietary equipment in our substrate manufacturing operations to protect our intellectual property and control the timing and pace of capacity additions. All of our manufacturing facilities are ISO 9001 or 9002 certified. In January 2006, our Beijing facility successfully passed the ISO 14001 certification audit.

Although we purchase supply parts, components and raw materials from several domestic and international suppliers, we depend on a single or limited number of suppliers for certain critical materials used in the production of our substrates, such as quartz tubing, and polishing solutions. We generally purchase these materials through standard purchase orders and not pursuant to long-term supply contracts. Although we seek to maintain sufficient inventory levels of certain materials to guard against interruptions in supply and to meet our near term needs, and have to date been able to obtain sufficient supplies of materials in a timely manner, there may be shortages of certain key materials, such as gallium. Accordingly, to help ensure continued supply of materials, we formed five joint ventures with and made investments in some suppliers of key raw materials required to manufacture our products, including gallium, arsenic, germanium, germanium dioxide, pyrolitic boron nitride crucibles, and boron oxide. We believe that these joint ventures and investments will be advantageous in procuring materials to support our growth and cost management goals.

Sales and Marketing

We advertise in trade publications, distribute promotional materials, conduct marketing and sales programs, and participate in industry trade shows and conferences in order to raise market awareness of our products. We sell our substrate products through our direct sales force in the U.S. and through independent sales representatives in France, Germany, Japan, South Korea, Taiwan and the United Kingdom. Our direct sales force is knowledgeable in the use of compound and single-element substrates. Our applications engineers work with customers during all stages of the substrate manufacturing process, from developing the precise composition of the substrate through manufacturing and processing the substrate to the customer s specifications. We believe that maintaining a close relationship with customers and providing them with ongoing engineering support improves customer satisfaction and will provide us with a competitive advantage in selling other substrates to our customers. The substrate division launched a program in late 2000 with selected customers in which we guaranteed that certain volumes of six-inch GaAs and other substrates would be delivered on specific dates and the customer made a prepayment for part of the value of the entire order. Several major customers participated in this program. We did not continue this program. As of December 31, 2006, there were no remaining unearned pre-payments under this program.

International Sales. International sales are an important part of our business. For the year ended December 31, 2006, sales to customers outside North America (primarily United States) accounted for 71% of our revenue, as compared with 81% in 2005 and with 79% in 2004. The primary markets for sales of our substrate products outside of the United States include countries in Asia and Western Europe.

In 2006, through our joint ventures we expanded our raw material offering that included 4N, 6N, and 7N gallium, boron oxide, germanium, arsenic, germanium dioxide, paralytic boron nitride crucibles used in crystal growth and parts for MBE (Molecular Beam Epitaxy). Our joint ventures are a key strategic benefit for us as they give us a strong competitive advantage of allowing our customers to work with one supplier for all their substrate and raw material requirements.

Research and Development

To maintain and improve our competitive position, we focus our research and development efforts on designing new proprietary processes and products, improving the performance of existing products and reducing manufacturing costs. We have assembled a multi-disciplinary team of skilled scientists, engineers and technicians to meet our research and development objectives.

Our current substrate research and development activities focus on continued development and enhancement of GaAs, InP and Ge substrates, including haze reduction, improved yield, enhanced surface and electrical characteristics and uniformity, greater substrate strength and increased crystal length. During 2006, we continued to spend some research and development resources to reduce surface quality problems we experienced with our GaAs and InP substrates for some customers, particularly related to surface morphology. We continue to work on issues related to surface quality.

Research and development expenses were $2.4 million in 2006, compared with $1.7 million in 2005 and $1.5 million in 2004. We expect to maintain our rate of expenditure on research and development costs in 2007.

Research and development at our joint ventures will remain at a minimal level.

Competition

The semiconductor substrate industry is characterized by rapid technological change and price erosion, as well as intense foreign and domestic competition. We believe we currently have a leading position in the market for GaAs substrates for HBLED applications primarily as a result of our expertise in VGF technology, overall product quality, response times and prices. However, we face actual and potential competition from a number of established domestic and international companies who have advantages not available to us.

We believe that the primary competitive factors in the markets in which our substrate products compete are:

- quality;
- price;
- performance;
- meeting customer specifications; and
- customer support and satisfaction.

Our ability to compete in target markets also depends on factors such as:

- the timing and success of the development and introduction of new products and product features by us and our competitors;
- the availability of adequate sources of raw materials;
- protection of our products by effective use of intellectual property laws; and
- general economic conditions.

Our primary competition in the market for compound semiconductor substrates includes Crystal Technologies, Freiberger Compound Materials, Japan Energy, Mitsubishi Chemical Corporation, and Sumitomo Electric Industries. We believe that at least two of our competitors are shipping high volumes of GaAs substrates manufactured using a technique similar to our VGF technique. In addition, as a result of quality problems that we have experienced, we believe that some customers have allocated some of their

requirements for VGF grown substrates across more competitors and we believe that we may have lost revenue and market share as a result of these customer decisions. In addition, we also face competition from compound semiconductor device manufacturers that produce substrates for their own internal use, including Hitachi, and from companies such as IBM that are actively developing alternative compound semiconductor materials.

We are the only compound semiconductor substrate supplier to offer a full suite of raw materials and we believe that it gives us a strong competitive advantage in our marketplace.

Protection of our Intellectual Property

Our success and the competitive position of our VGF technique depend on our ability to maintain trade secrets and other intellectual property protections. We rely on a combination of patents, trademark and trade secret laws, non-disclosure agreements and other intellectual property protection methods to protect our proprietary technology. We believe that, due to the rapid pace of technological innovation in the markets for our products, our ability to establish and maintain a position of technology leadership depends as much on the skills of our development personnel as upon the legal protections afforded our existing technologies. To protect our trade secrets, we take certain measures to ensure their secrecy, such as executing non-disclosure agreements with our employees, customers and suppliers. However, reliance on trade secrets is only an effective business practice insofar as trade secrets remain undisclosed and a proprietary product or process is not reverse engineered or independently developed.

To date, we have been issued three U.S. patents which relate to our VGF products and processes. We have six patent applications pending, (in Patent Cooperation Treaty (PCT)/national stage process) in Europe, Canada, China, Japan and South Korea which are based on our U.S. patents that relate to our VGF processes. We have one issued foreign patent.

In connection with a final settlement of litigation, we entered into a global intellectual property cross-licensing agreement with Sumitomo Electric Industries, Ltd. (SEI). Under the terms of the settlement, we will make on-going royalty payments through 2012 on certain products sold by us in Japan.

In the normal course of business, we periodically receive and make inquiries regarding possible patent infringement. In dealing with such inquiries, it may become necessary or useful for us to obtain or grant licenses or other rights. However, there can be no assurance that such licenses or rights will be available to us on commercially reasonable terms. If weare not able to resolve or settle claims, obtain necessary licenses on commercially reasonable terms and/or successfully prosecute or defend its position, our business, financial condition and results of operations could be materially and adversely affected.

Environmental Regulations

We are subject to federal, state and local environmental laws and regulations, including laws in China as well as the U.S. These laws, rules and regulations govern the use, storage, discharge and disposal of hazardous chemicals during manufacturing, research and development and sales demonstrations. We maintain a number of environmental, health and safety programs that are primarily preventive in nature. As part of these programs, we regularly monitor ongoing compliance. If we fail to comply with applicable regulations, we could be subject to substantial liability for clean-up efforts, personal injury and fines or suspension or cessation of our operations.

Employees

As of December 31, 2006, we had 1,022 employees, of whom 819 were principally engaged in manufacturing, 119 in sales and administration, and 84 in research and development. Of these employees, 39 are located in the U.S., and 983 in China. As of December 31, 2005, we had 842 employees, of whom

680 were principally engaged in manufacturing, 116 in sales and administration, and 46 in research and development. Of these employees, 55 were located in the U.S., and 787 in China.

In December 2005, as part of our ongoing effort to reduce our Fremont, California facility headcount, we reduced the workforce at the facility by 15 full-time equivalent positions that we no longer required to support production and operations, or approximately 29% of the workforce based at this facility. Some of our employees in China are represented by a union, but we have never experienced a work stoppage. Although morale has been affected by our workforce reductions in California, we consider our relations with our employees to be good.

Available of Information

Our principal executive offices are located at 4281 Technology Drive, Fremont, CA 94538, and our main telephone number is (510) 683-5900. The public may read and copy any material we file with the Securities and Exchange Commission, or SEC, at the SEC s Public Reference Room at 450 Fifth Street, N.W., Washington D.C., 20549. The public may obtain information on the operations of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site, *http://www.sec.gov*, that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC.

Item 1A. *Risk Factors*

For ease of reference, we have divided these risks and uncertainties into the following general categories:

- Risks related to our general business;
- Risks related to international aspects of our business;
- Risks related to our financial results and capital structure;
- Risks related to our intellectual property; and
- Risks related to compliance and other legal matters.

Risks Related to Our General Business

Defects in our products could diminish demand for our products.

Our products are complex and may contain defects. We have experienced quality control problems with many of our products, which caused customers to return products to us, reduce orders for our products, or both. Although our quality has improved, resulting in some increases in product sales, we believe that we continue to experience some reduction in orders as a result of our prior product quality problems. If we continue to experience quality control problems, or experience these or other problems in new products, customers may cancel or reduce orders or purchase products from our competitors, we may be unable to maintain or increase sales to our customers and sales of our products could decline. Defects in our products could cause us to incur higher manufacturing costs and suffer product returns and additional service expenses, all of which could adversely impact our operating results.

If new products developed by us contain defects when released, our customers may be dissatisfied and we may suffer negative publicity or customer claims against us, lose sales or experience delays in market acceptance of our new products.

Decreases in average selling prices of our products may reduce gross margins.

The market for compound semiconductor substrates is characterized by pressures on average selling prices resulting from factors such as increased competition or overcapacity. We have experienced and expect to continue to experience price pressures on our products, and if average selling prices decline in the future, our revenue and gross margins could decline. We may be unable to reduce the cost of our products sufficiently to offset the effect of lower selling prices and allow us to keep pace with competitive pricing pressures, and our margins could be adversely affected.

The loss of one or more of our key substrate customers would significantly hurt our operating results.

A small number of substrate customers have historically accounted for a substantial portion of our total revenue. Our top five customers represented 40.0% of revenues for the year ended December 31, 2006, 37.5% of revenue for the year ended December 31, 2005, and 30.1% of revenue for the year ended December 31, 2004. We expect that a significant portion of our future revenue will continue to be derived from a limited number of substrate customers. Our customers are not obligated to purchase a specified quantity of our products or to provide us with binding forecasts of product purchases. In addition, our customers may reduce, delay or cancel orders at any time without any significant penalty. In the past, we had experienced slower bookings, significant push-outs and cancellation of orders from customers. If we lose a major customer or if a customer cancels, reduces or delays orders, our revenue would decline. In addition, customers that have accounted for significant revenue in the past may not continue to generate revenue for us in any future period. Any delay in scheduled shipments of our products could cause revenue

to fall below our expectations and the expectations of market analysts or investors, causing our stock price to decline.

Our results of operations may suffer if we do not effectively manage our inventory.

We must manage our inventory of component parts, work-in-process and finished goods effectively to meet changing customer requirements, while keeping inventory costs down and improving gross margins. Some of our products and supplies have in the past and may in the future become obsolete while in inventory due to changing customer specifications, or become excess inventory due to decreased demand for our products and an inability to sell the inventory within a foreseeable period. Furthermore, if current costs of production increase or sales prices drop below the standard prices at which we value inventory, we may need to take a charge for a reduction in inventory values. We have in the past had to take inventory valuation and impairment charges. Any future unexpected changes in demand or increases in costs of production that cause us to take additional charges for un-saleable, obsolete or excess inventory, or to reduce inventory values, could adversely affect our results of operations.

If we have low product yields, or if there is a deliberate sabotage of our products, the shipment of our products may be delayed and our operating results may be adversely impacted.

Our products are manufactured using complex technologies, and the number of usable substrates we produce can fluctuate as a result of many factors, including:

- impurities in the materials used;
- contamination of the manufacturing environment;
- substrate breakage;
- equipment failure, power outages or variations in the manufacturing process; and
- performance of personnel involved in the manufacturing process.

If our yields decrease, our revenue could decline if we are unable to produce needed product on time. At the same time, our manufacturing costs could remain fixed, or could increase. We have experienced product shipment delays and difficulties in achieving acceptable yields on both new and older products, and delays and poor yields have adversely affected our operating results. We may experience similar problems in the future and we cannot predict when they may occur or their severity. In particular, many of our manufacturing processes are new and are still being refined, which can result in lower yields.

If there is deliberate sabotage of our products making them unfit for use by our customers, our products would be rejected, resulting in compensation costs paid to our customers, and possible disqualification. This could lead to revenue loss and market share loss.

If we do not successfully develop new products to respond to rapidly changing customer requirements, our ability to generate revenue, obtain new customers, and retain existing customers may suffer.

Our success depends on our ability to offer new products and product features that incorporate leading technology and respond to technological advances. In addition, our new products must meet customer needs and compete effectively on quality, price and performance. The life cycles of our products are difficult to predict because the markets for our products are characterized by rapid technological change, changing customer needs and evolving industry standards. If our competitors introduce products employing new technologies or performance characteristics, our existing products could become obsolete and unmarketable. During the past three years, we have seen our competitors selling more substrates manufactured using a crystal growth technology similar to ours, which has eroded our technological differentiation. Other companies, including Triquent, are actively developing substrate materials that could

be used to manufacture devices that could provide the same high-performance, low-power capabilities as GaAs- and InP-based devices at competitive prices. If these substrate materials or VGF-derived products are successfully developed and semiconductor device manufacturers adopt them, demand for our GaAs substrates could decline and our revenue could suffer.

The development of new products can be a highly complex process, and we may experience delays in developing and introducing new products. Any significant delays could cause us to fail to timely introduce and gain market acceptance of new products. Further, the costs involved in researching, developing and engineering new products could be greater than anticipated. If we fail to offer new products or product enhancements or fail to achieve higher quality products, we may not generate sufficient revenue to offset our development costs and other expenses or meet our customers requirements.

Intense competition in the markets for our products could prevent us from increasing revenue and sustaining profitability.

The markets for our products are intensely competitive. We face competition for our substrate products from other manufacturers of substrates, such as Freiberger Compound Materials, Hitachi Cable and Sumitomo Electric, from semiconductor device manufacturers that produce substrates for their own use, and from companies, such as Triquent, that are actively developing alternative materials to GaAs and marketing semiconductor devices using these alternative materials. We believe that at least two of our major competitors are shipping high volumes of GaAs substrates manufactured using a technique similar to our VGF technique. Other competitors may develop and begin using similar technology. If we are unable to compete effectively, our revenue may not increase and we may be unable to become profitable. We face many competitors that have a number of significant advantages over us, including:

- greater experience in the business;
- more manufacturing experience;
- extensive intellectual property;
- broader name recognition; and
- significantly greater financial, technical and marketing resources.

Our competitors could develop new or enhanced products that are more effective than our products are.

The level and intensity of competition has increased over the past year and we expect competition to continue to increase in the future. Competitive pressures caused by the current economic conditions have resulted in reductions in the prices of our products, and continued or increased competition could reduce our market share, require us to further reduce the prices of our products, affect our ability to recover costs and result in reduced gross margins.

In addition, new competitors have and may continue to emerge, such as a small crystal growing company established by a former employee of ours in China that is supplying ingots to the market. While new competitors such as this company currently do not appear to be fully competitive, competition from sources such as this could increase, particularly if these competitors are able to obtain large capital investments.

Demand for our products may decrease if our customers experience difficulty manufacturing, marketing or selling their products.

Our products are used as components in our customers products. Accordingly, demand for our products is subject to factors affecting the ability of our customers to introduce and market their products successfully, including:

- the competition our customers face in their particular industries;
- the technical, manufacturing, sales and marketing and management capabilities of our customers;
- the financial and other resources of our customers; and
- the inability of our customers to sell their products if they infringe third-party intellectual property rights.

If demand for the end-user applications for which our products are used decreases, or our customers are unable to develop, market and sell their products, demand for our products will decrease.

The financial condition of our customers may affect their ability to pay amounts owed to us.

Many of our customers are facing business downturns that have reduced their cash balances and their prospects. We frequently allow our customers to pay for products we ship to them within 30 to 120 days after delivery. Subsequent to our shipping a product, some customers have been unable to make payments as due, reducing our cash balances and causing us to incur charges to allow for a possibility that some accounts might not be paid. Customers may also be forced to file for bankruptcy. If our customers do not pay their accounts when due, we will be required to incur charges that would reduce our earnings.

We purchase critical raw materials and parts for our equipment from single or limited sources, and could lose sales if these sources fail to fill our needs.

We depend on a limited number of suppliers for certain raw materials, components and equipment used in manufacturing our products, including key materials such as quartz tubing, polishing solutions and paralytic boron nitride. Although several of these raw materials are purchased from suppliers in which we hold an ownership interest, we generally purchase these materials through standard purchase orders and not pursuant to long-term supply contracts and no supplier guarantees supply of raw materials or equipment to us. If we lose any of our key suppliers, our manufacturing efforts could be significantly hampered and we could be prevented from timely producing and delivering products to our customers. Prior to investing in our raw material joint ventures, we sometimes experienced delays obtaining critical raw materials and spare parts, including gallium, due to shortages of these materials and could experience such delays again in the future due to shortages of materials and may be unable to obtain an adequate supply of materials. These shortages and delays could result in higher materials costs and cause us to delay or reduce production of our products. If we have to delay or reduce production, we could fail to meet customer delivery schedules and our revenue and operating results could suffer.

We have made and may continue to make strategic investments in raw materials suppliers, which may not be successful and may result in the loss of all or part of our investment.

We have made investments through our five joint ventures in raw material suppliers in China, which provide us with opportunities to gain supplies of key raw materials that are important to our substrate business. These affiliates each have a market beyond that provided by us. We do not have influence over all of these companies, each of which is located in China, and in some we have made only a strategic, minority investment. We may not be successful in achieving the financial, technological or commercial

advantage upon which any given investment is premised, and we could end up losing all or part of our investment.

Our substrate products have a long qualification cycle that makes it difficult to plan our expenses and forecast our results.

Customers typically place orders with us for our substrate products three months to a year or more after our initial contact with them. The sale of our products may be subject to delays due to our customers lengthy internal budgeting, approval and evaluation processes. During this time, we may incur substantial expenses and expend sales, marketing and management efforts while the customers evaluate our products. These expenditures may not result in sales of our products. If we do not achieve anticipated sales in a period as expected, we may experience an unplanned shortfall in our revenue. As a result, we may not be able to cover expenses, causing our operating results to vary. In addition, if a customer decides not to incorporate our products into its initial design, we may not have another opportunity to sell products to this customer for many months or even years. In the current competitive and economic climate, the average sales cycle for our products has lengthened even further and is expected to continue to make it difficult to forecast our future sales accurately. We anticipate that sales of any future substrate products will also have lengthy sales cycles and will, therefore, be subject to risks substantially similar to those inherent in the lengthy sales cycles of our current substrate products.

Risks Related to International Aspects of Our Business

Changes in tariffs, import restrictions, export restrictions or other trade barriers may reduce gross margins.

We may incur increases in costs due to changes in tariffs, import or export restrictions, or other trade barriers, or unexpected changes in regulatory requirements, any of which could reduce our gross margins. For example, in September 2006 and November 2006, tax authorities in the People s Republic of China (PRC) changed the treatment of refunds of value-added taxes that companies pay when they purchase certain raw materials, including gallium and arsenic. The cumulative effect is that our PRC joint venture companies no longer receive a refund of value-added tax for exports of gallium or arsenic, including certain shipments to our wholly-owned PRC subsidiary that are treated as exports under PRC tax regulations. However, our PRC joint venture companies sell only a portion of their gallium in transactions that are considered exports, and none of those PRC joint venture companies currently exports arsenic. Therefore, after having conducted further analysis on our consolidated financial results, which include a portion of the financial impact of these tax releases on our PRC joint venture companies, we believe that our consolidated financial results will not be materially affected. However, given the relatively fluid regulatory environment in the PRC, there could be additional tax or other regulatory changes in the future. Any such changes could directly and materially adversely impact our financial results and general business condition.

Our operating results depend in large part on continued customer acceptance of our substrate products manufactured in China and continued improvements in product quality.

We manufacture all of our products in China, and source most of our raw materials in China. Accordingly, we continue to seek customer qualification of our China-manufactured products. In addition, we have in the past experienced quality problems with our China-manufactured products. Our previous quality problems caused us to lose market share to our competitors, as some customers reduced their orders from us until our surface quality was as good and consistent as that offered by competitors and customers allocated their requirements for compound semiconductor substrates across more competitors. If we are unable to continue to achieve customer qualifications for our products, or if we again experience quality problems, customers may not increase purchases of our products, our China facility will become underutilized, and we will be unable to achieve expected revenue growth. We may again lose sales of our

products to competitors and experience loss of market share. If we are unable to recover and retain our market share, we may be unable to grow our business.

Problems incurred by our joint ventures or venture partners could result in a material adverse impact on our financial condition or results of operations

We have invested in five joint venture operations in China that produce products including 99.99% pure gallium (4N Ga), high purity gallium, arsenic, germanium, germanium dioxide, paralytic boron nitride (pBN) crucibles and boron oxide. We purchase a portion of the materials produced by these ventures for our use and sell the remainder of their production to third parties. Our ownership interest in these entities ranges from 25% to 83%. We consolidate the three ventures in which we own a majority or controlling financial interest and employ equity accounting for the two joint ventures in which we have a 25% interest. Several of these ventures occupy space within larger facilities owned and/or operated by one of the other venture partners. Several of these venture partners are engaged in other manufacturing activities at or near the same facility. In some facilities, we share access to certain functions, including water, hazardous waste treatment or air quality treatment. If any of our joint venture partners in any of these five ventures experiences problems with its operations, disruptions of our joint venture operations could result, having a material adverse effect on the financial condition and results of operation of our joint ventures, and correspondingly on our financial condition or results of operations.

In addition, if any of our joint ventures or venture partners with which our joint ventures share facilities is deemed to have violated applicable laws, rules or regulations governing the use, storage, discharge or disposal of hazardous chemicals during manufacturing, research and development, or sales demonstrations, the operations of our joint ventures could be adversely affected and we could be subject to substantial liability for clean-up efforts, personal injury and fines or suspension or cessation of our joint venture operations as a result of the actions of the joint ventures or other venture partners. Employees working for our joint ventures or any of the other venture partners could bring litigation against us as a result of actions taken at the joint venture or venture partner facilities, even though we are not directly controlling the operations, including actions for exposure to chemicals or other hazardous materials at the facilities of our joint ventures or the facilities of any venture partner that are shared by our joint ventures. If litigation is brought against us, litigation is inherently uncertain and, while we would expect to defend ourselves vigorously, it is possible that our business, financial condition, results of operations or cash flows could be affected in any particular period by any litigation if brought against us, particularly if litigation with us, as a non-Chinese company, is deemed advantageous. Even if we are not deemed responsible for the actions of the joint ventures or venture partners, litigation could be costly, time consuming to defend and divert management attention; in addition, pursuit of us could occur if we are deemed to be the most financially viable of the partners.

Going forward, we believe that investing in additional joint ventures will be important to remaining competitive in our marketplace and ensuring a supply of critical raw materials. However, we may not be able to identify complementary joint venture opportunities or, even once opportunities are identified, we may not be able to reach agreement on the terms of the venture with the other venture partners. Additional joint ventures could cause us to incur contingent liabilities or other expenses, any of which could adversely affect our financial condition and operating results.

Since all of our joint venture activity is expected to occur in China, these activities could subject us to a number of risks associated with conducting operations internationally, including:

- difficulties in managing geographically disparate operations;
- difficulties in enforcing agreements through non-U.S. legal systems;

- unexpected changes in regulatory requirements that may limit our ability to export the venture products or sell into particular jurisdictions or impose multiple conflicting tax laws and regulations;

- political and economic instability, civil unrest or war;

- terrorist activities that impact international commerce;

- difficulties in protecting our intellectual property rights, particularly in countries where the laws and practices do not protect proprietary rights to as great an extent as do the laws and practices of the United States;

- changing laws and policies affecting economic liberalization, foreign investment, currency convertibility or exchange rates, taxation or employment; and

- nationalization of foreign-owned assets, including intellectual property.

The impact of changes in global economic conditions on our customers may cause us to fail to meet expectations, which would negatively impact the price of our stock.

Our operating results can vary significantly based upon the impact of changes in global economic conditions on our customers. The revenue growth and profitability of our business depends on the overall demand for our substrates, and we are particularly dependent on the market conditions for the wireless, solid-state illumination, fiber optics and telecommunications industries. Because our sales are primarily to major corporate customers whose businesses fluctuate with general economic and business conditions, a softening of demand for products that use our substrates, caused by a weakening economy, may result in decreased revenue. Customers may find themselves facing excess inventory from earlier purchases, and may defer or reconsider purchasing products due to the downturn in their business and in the general economy.

We derive a significant portion of our revenue from international sales, and our ability to sustain and increase our international sales involves significant risks.

Our revenue growth depends in part on the expansion of our international sales and operations. International sales represented 71%, 81% and 79% of our total revenue for the years ended December 31, 2006, 2005 and 2004, respectively. We expect that sales to customers outside the U.S., particularly sales to customers in Asia, will continue to represent a significant portion of our revenue.

Currently, an increasing percentage of our sales is to customers headquartered in Asia. All of our manufacturing facilities and some of our suppliers are also located outside the U.S. Managing our overseas operations presents challenges, including periodic regional economic downturns, trade balance issues, varying business conditions and demands, political instability, variations in enforcement of intellectual property and contract rights in different jurisdictions, differences in the ability to develop relationships with suppliers and other local businesses, changes in U.S. and international laws and regulations including U.S. export restrictions, fluctuations in interest and currency exchange rates, the ability to provide sufficient levels of technical support in different locations, cultural differences, shipping delays and terrorist acts or acts of war, among other risks. Many of these challenges are present in China, which represents a large potential market for semiconductor devices and where we anticipate significant opportunity for growth. Global uncertainties with respect to: (i) economic growth rates in various countries; (ii) sustainability of demand for electronics products; (iii) capital spending by semiconductor manufacturers; (iv) price weakness for certain semiconductor devices; and (v) political instability in regions where we have operations may also affect our business, financial condition and results of operations.

Our dependence on international sales involves a number of risks, including:

- changes in tariffs, import restrictions, export restrictions, or other trade barriers;
- unexpected changes in regulatory requirements;
- longer periods to collect accounts receivable;
- changes in export license requirements;
- political and economic instability;
- unexpected changes in diplomatic and trade relationships; and
- foreign exchange rate fluctuations.

Our sales are denominated in U.S. dollars, except for sales to our Japanese and some Taiwanese customers, which are denominated in Japanese yen. Thus, increases in the value of the U.S. dollar could increase the price of our products in non-U.S. markets and make our products more expensive than competitors products in these markets.

Also, denominating some sales in Japanese yen subjects us to fluctuations in the exchange rates between the U.S. dollar and the Japanese yen. The functional currency of our Chinese subsidiary and joint ventures is the local currency. We incur transaction gains or losses resulting from consolidation of expenses incurred in local currencies for these entities, as well as in translation of the assets and liabilities of their assets at each balance sheet date. If we do not effectively manage the risks associated with international sales, our revenue, cash flows and financial condition could be adversely affected.

Because of power shortages in the PRC, we may have to temporarily close our China operations, which would adversely impact our ability to manufacture our products and meet customer orders, and would result in reduced revenue.

The Chinese government faced a power shortage over the summer of 2004 and reported that power demand in 24 provinces outstripped supply in peak periods during January to April of 2004. Instability in electrical supply caused sporadic outages among residential and commercial consumers. As a result, the Chinese government implemented tough measures in 2004 to ease the energy shortage. Provinces imposed power brownouts during 2004 to reduce electricity demand, and some companies in Beijing were ordered to give their employees a week off to ease the pressure on power supply. Plants, most of which are state-owned, were closed and reopened on a staggered schedule to reduce power consumption during the capital s hottest months during 2004. As a result, we closed most of our operations for a week in late July 2004 in conformance with this policy.

In 2006 we were able to switch the electrical supply for our manufacturing facility onto the same power grid as that used by vital PRC government services such as hospitals and police. However, if even despite this switch we are required to make temporary closures of our subsidiary and joint venture operations, we may be unable to manufacture our products, and would then be unable to meet customer orders except from inventory on hand. As a result, our revenue could be adversely impacted, and our relationships with our customers could suffer, impacting our ability to generate future revenue. In addition, if power is shut off at our Beijing subsidiary at any time, either voluntarily or as a result of unplanned brownouts, during certain phases of our manufacturing process including our crystal growth phase, the work in process may be ruined and rendered unusable, causing us to incur expense that will not be covered by revenue, and negatively impacting our cost of revenue and gross margins.

Changes in China s political, social and economic environment may affect our financial performance.

Our financial performance may be affected by changes in China s political, social and economic environment. The role of the Chinese central and local governments in the Chinese economy is significant. Chinese policies toward economic liberalization, and laws and policies affecting technology companies, foreign investment, currency exchange rates and other matters could change, resulting in greater restrictions on our ability to do business and operate our manufacturing facilities in China. Any imposition of surcharges or any increase in Chinese tax rates could hurt our operating results. The Chinese government could revoke, terminate or suspend our license for national security and similar reasons without compensation to us. If the government of China were to take any of these actions, we would be prevented from conducting all or part of our business. Any failure on our part to comply with governmental regulations could result in the loss of our ability to manufacture our products in China.

China from time to time has experienced instances of civil unrest and hostilities. Confrontations have occurred between the military and civilians. Events of this nature could influence the Chinese economy, result in nationalization of foreign-owned operations such as ours, and negatively affect our ability to operate our facilities in China.

We may face additional risks as a result of the revaluation of the Chinese currency.

In July 2005, China agreed to a shift in Chinese currency policy. It established a 2% revaluation of the renminbi and referenced the renminbi to a basket of currencies, with a daily trading band of +/-0.3%. Depending on market conditions and the state of the Chinese economy, it is possible that China will make more adjustments in the future. Over the next five to ten years, China may move to a managed float system, with opportunistic interventions. This reserve diversification may negatively impact the United States dollar and U.S. interest rates, which, in turn, could negatively impact our operating results and financial condition. The functional currency of our Chinese subsidiary, including our joint ventures, is the local currency; since most of our operations are conducted in China, most of our costs are incurred in Chinese currency, which subjects us to fluctuations in the exchange rates between the U.S. dollar and the Chinese renminbi. We incur transaction gains or losses resulting from consolidation of expenses incurred in local currencies for these subsidiaries, as well as in translation of the assets and liabilities of these assets at each balance sheet date. These risks may be increased by the fluctuation and revaluation of the Chinese renminbi. If we do not effectively manage the risks associated with this currency risk, our revenue, cash flows and financial condition could be adversely affected.

A reoccurrence of Severe Acute Respiratory Syndrome (SARS) or the outbreak of a different contagious disease such as the Avian Flu may adversely impact our manufacturing operations and some of our key suppliers and customers.

All of our substrate manufacturing activities are conducted in China. In addition, we acquire key raw materials, including gallium, from our joint ventures and other suppliers in China. The 2003 SARS outbreak was most notable in China and a small number of cases were reported in 2004. One employee at our LED production facility in China contracted SARS in late April 2003 prompting us to close the facility for ten days. There was no significant impact to our ability to fill customer orders. If there were to be another outbreak of SARS or a different contagious disease, such as Avian Flu, and if our employees contracted the disease, we might be required to temporarily close our manufacturing operations. Similarly, if one of our key suppliers is required to close for an extended period, we might not have enough raw material inventory to continue manufacturing operations. In addition, while we possess management skills among our China staff that enable us to maintain our manufacturing operations with minimal on-site supervision from our US-based staff, our business could also be harmed if travel to or from Asia and the United States is restricted or inadvisable, as it was during parts of 2003. None of our substrate competitors is as dependent on manufacturing facilities in China as we are. If our manufacturing operations were

closed for a significant period, we could lose revenue and market share during that period, which would depress our financial performance and could be difficult to recapture. Finally, if one of our key customers is required to close for an extended period, we might not be able to ship product to them, our revenue would decline and our financial performance would suffer.

Risks Related to Our Financial Results and Capital Structure

The compound semiconductor industry is cyclical and has experienced a downturn which has adversely impacted our operating results.

Our continuing business depends in significant part upon manufacturers of electronic and opto-electronic compound semiconductor devices, as well as the current and anticipated market demand for these devices and products using these devices. As a supplier to the compound semiconductor industry, we are subject to the business cycles that characterize the industry. The timing, length and volatility of these cycles are difficult to predict. The compound semiconductor industry has historically been cyclical because of sudden changes in demand, the amount of manufacturing capacity and changes in the technology employed in compound semiconductors. The rate of changes in demand, including end demand, is high, and the effect of these changes upon us occurs quickly, exacerbating the volatility of these cycles. These changes have affected the timing and amounts of customers purchases and investments in new technology. These industry cycles create pressure on our revenue, gross margin and net income (loss).

The industry has in the past experienced periods of oversupply that result in significantly reduced demand and prices for compound semiconductor devices and components, including our products, both as a result of general economic changes and overcapacity. When these periods occur and our operating results and financial condition are adversely affected, oversupply creates pressure on our revenue, gross margins and net income (loss). Inventory buildups in telecommunications products and slower than expected sales of computer equipment resulted in overcapacity and led to reduced sales by our customers, and therefore reduced purchases of our products. During periods of weak demand such as those experienced historically, customers typically reduce purchases, delay delivery of products and/or cancel orders of component parts such as our products. Increased price competition has resulted, causing pressure on our net sales, gross margin and net income (loss). We experienced cancellations, price reductions, delays and push-outs of orders, which have resulted in reduced revenue. If the economic downturn occurred again, further order cancellations, reductions in order size or delays in orders could occur and would materially adversely affect our business and results of operations. Actions to reduce our costs, such as those we have recently taken, may be insufficient to align our structure with prevailing business conditions. We may be required to undertake additional cost-cutting measures, and may be unable to invest in marketing, research and development and engineering at the levels we believe are necessary to maintain our competitive position. Our failure to make these investments could seriously harm our business.

During periods of increasing demand for compound semiconductor devices, we must have sufficient manufacturing capacity and inventory to meet customer demand, and must be able to attract, hire, train and retain qualified employees to meet demand. If we are unable to effectively manage our resources and production capacity during an industry upturn, there could be a material adverse effect on our business, financial condition and results of operations.

If we fail to manage periodic contractions, we may utilize our cash balances and our existing cash and cash equivalents and investment balances could decline.

We anticipate that our existing cash resources will fund any anticipated operating losses and purchases of capital equipment, as well as provide adequate working capital for the next twelve months. However, our liquidity is affected by many factors including, among others, the extent to which we pursue additional

capital expenditures, the level of our production, and other factors related to the uncertainties of the industry and global economies. If we fail to manage our contractions successfully we may draw down our cash reserves, which would adversely affect our operating results and financial condition, reduce our value and possibly impinge our ability to raise debt and equity funding in the future, at a time when we might be required to raise additional cash. Accordingly, there can be no assurance that events in the future will not require us to seek additional capital or, if required, that such capital would be available on terms acceptable to us, if at all. As part of our effort to reduce costs, we may lose key staff, production resources and technology that we will need to grow when end markets recover. These events could reduce our ability to grow profitably as markets recover.

Unpredictable fluctuations in our operating results could disappoint analysts or our investors, which could cause our stock price to decline.

We have not been able to sustain growth for any significant period in the last five years, and may not be able to return to historic growth levels in the current economic environment. Our net loss in 2002 was the largest in our history and our losses continued during 2003, 2004, 2005, and the first two quarters of 2006. We recorded net income in the third and fourth quarters of 2006.

We have experienced and may continue to experience significant fluctuations in our revenue and earnings. Our quarterly and annual revenue and operating results have varied significantly in the past and may vary significantly in the future due to a number of factors, including:

- our ability to develop, manufacture and deliver high quality products in a timely and cost-effective manner;
- decline in general economic conditions or downturns in the industry in which we compete;
- fluctuations in demand for our products;
- expansion of our manufacturing capacity;
- expansion of our operations in China;
- limited availability and increased cost of raw materials;
- the volume and timing of orders from our customers, and cancellations, push-outs and delays of customer orders once made;
- fluctuation of our manufacturing yields;
- decreases in the prices of our or our competitors products;
- costs incurred in connection with any future acquisitions of businesses or technologies; and
- increases in our expenses, including expenses for research and development.

Due to these factors, we believe that period-to-period comparisons of our operating results may not be meaningful indicators of our future performance.

A substantial percentage of our operating expenses is fixed in the short term, and we may be unable to adjust spending to compensate for an unexpected shortfall in revenue. As a result, any delay in generating revenue could cause our operating results to be below the expectations of market analysts or investors, which could also cause our stock price to fall.

Our stock price has been and may continue to be volatile.

Our stock price has fluctuated significantly since we began trading on the NASDAQ Global Market. For the year ended December 31, 2006, the high and low closing sales prices of our common stock were

$5.37 and $1.98, respectively. A number of factors could cause the price of our common stock to continue to fluctuate substantially, including:

actual or anticipated fluctuations in our quarterly or annual operating results;

changes in expectations about our future financial performance or changes in financial estimates of securities analysts;

announcements of technological innovations by us or our competitors;

new product introduction by us or our competitors;

large customer orders or order cancellations; and

the operating and stock price performance of comparable companies.

In addition, the stock market in general has experienced extreme volatility that often has been unrelated to the operating performance of particular companies. These broad market and industry fluctuations may adversely affect the trading price of our common stock, regardless of our actual operating performance.

We have adopted certain anti-takeover measures that may make it more difficult for a third party to acquire us.

Our board of directors has the authority to issue up to 2,000,000 shares of preferred stock and to determine the price, rights, preferences and privileges of those shares without any further vote or action by the stockholders. The rights of the holders of common stock will be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of shares of preferred stock could have the effect of making it more difficult for a third party to acquire a majority of our outstanding voting stock. We have no present intention to issue additional shares of preferred stock.

We have adopted a preferred stock purchase rights plan intended to guard against certain takeover tactics. The adoption of this plan was not in response to any proposal to acquire us, and the board is not aware of any such effort. The existence of this plan could also have the effect of making it more difficult for a third party to acquire a majority of our outstanding voting stock. In addition, certain provisions of our certificate of incorporation may have the effect of delaying or preventing a change of control, which could adversely affect the market price of our common stock.

In addition, provisions in our amended and restated certificate of incorporation and amended and restated bylaws may have the effect of delaying or preventing a merger, acquisition or change of control of us, or changes in our management, including:

- the division of our board of directors into three separate classes, each with three-year terms;
- the right of our board to elect a director to fill a space created by a board vacancy or the expansion of the board;
- the ability of our board to alter our amended and restated bylaws; and
- the requirement that only our board or the holders of at least 10% of our outstanding shares may call a special meeting of our stockholders.

Furthermore, because we are incorporated in Delaware, we are subject to the provisions of Section 203 of the Delaware General Corporation Law. These provisions prohibit large stockholders, in particular those owning 15% or more of the outstanding voting stock, from consummating a merger or combination with a corporation unless:

- 66⅔% of the shares of voting stock not owned by these large stockholders approve the merger or combination, or

- the board of directors approves the merger or combination or the transaction which resulted in the large stockholder owning 15% or more of our outstanding voting stock.

Risks Related to Our Intellectual Property

Intellectual property infringement claims may be costly to resolve and could divert management attention.

Other companies may hold or obtain patents on inventions or may otherwise claim proprietary rights to technology necessary to our business. The markets in which we compete are comprised of competitors that in some cases hold substantial patent portfolios covering aspects of products that could be similar to ours. We could become subject to claims that we are infringing patent, trademark, copyright or other proprietary rights of others. For example, we have previously been involved in two separate lawsuits alleging patent infringement, and could in the future be involved in similar litigation.

If we are unable to protect our intellectual property, we may lose valuable assets or incur costly litigation.

We rely on a combination of patents, copyrights, trademark and trade secret laws, non-disclosure agreements and other intellectual property protection methods to protect our proprietary technology. However, we believe that, due to the rapid pace of technological innovation in the markets for our products, our ability to establish and maintain a position of technology leadership also depends on the skills of our development personnel. Despite our efforts to protect our intellectual property, third parties can develop products or processes similar to ours. Our means of protecting our proprietary rights may not be adequate, and our competitors may independently develop similar technology, duplicate our products or design around our patents. We believe that at least two of our competitors have begun to ship GaAs substrates produced using a process similar to our VGF technique. Our competitors may also develop and patent improvements to the VGF technology upon which we rely, and thus may limit any exclusivity we enjoy by virtue of our patents or trade secrets.

It is possible that pending or future United States or foreign patent applications made by us will not be approved, that our issued patents will not protect our intellectual property, or that third parties will challenge the ownership rights or the validity of our patents. In addition, the laws of some foreign countries may not protect our proprietary rights to as great an extent as do the laws of the United States and it may be more difficult to monitor the use of our intellectual property. Our competitors may be able to legitimately ascertain non-patented proprietary technology embedded in our systems. If this occurs, we may not be able to prevent the development of technology substantially similar to ours.

We may have to resort to costly litigation to enforce our intellectual property rights, to protect our trade secrets or know-how or to determine their scope, validity or enforceability. Enforcing or defending our proprietary technology is expensive, could cause us to divert resources and may not prove successful. Our protective measures may prove inadequate to protect our proprietary rights, and if we fail to enforce or protect our rights, we could lose valuable assets.

For example, in the past we have been involved in litigation with Sumitomo Electric Industries, Ltd. (SEI) in Japan as well as interference actions in the United States. We and SEI approved a settlement of this litigation during the fourth quarter of 2004 and the litigation was withdrawn and we abandoned the interference proceeding. We made an initial payment of approximately $1.4 million and will have to pay ongoing royalties to SEI on certain of our products.

Risks Related to Compliance and Other Legal Matters

We need to continue to improve or implement our systems, procedures and controls and may not receive a favorable attestation report on our internal control systems by our independent registered public accounting firm.

The requirements adopted by the Securities and Exchange Commission, or SEC, in response to the passage of the Sarbanes-Oxley Act of 2002, will require annual review and evaluation of our internal control systems, and an attestation of these systems by our independent registered public accounting firm beginning with our fiscal year ending December 31, 2007. We are currently reviewing our internal control procedures and considering further documentation of these procedures that may be necessary. We are currently evaluating the extent to which any of our joint ventures may also be required to comply, if at all. We can give no assurances that our systems will satisfy these requirements of the SEC or, if required, that any of the systems of our joint ventures will meet these requirements, or that we will receive a favorable review and attestation by our independent registered public accounting firm.

In addition, the shift of our manufacturing operations to China has placed and continues to place a significant strain on our operations and management resources. We have upgraded our inventory control systems and may implement additional systems relating to consolidation of our financial results, but continue to rely on certain manual processes in our operations and in connection with consolidation of our financial results. If we fail to manage these changes effectively, our operations may be disrupted.

To manage our business effectively, we may need to implement additional and improved management information systems, further develop our operating, administrative, financial and accounting systems and controls, add experienced senior level managers, and maintain close coordination among our executive, engineering, accounting, marketing, sales and operations organizations.

If we fail to comply with environmental and safety regulations, we may be subject to significant fines or forced to cease our operations; in addition, we could be subject to suits for personal injuries caused by hazardous materials.

We are subject to federal, state and local environmental and safety laws and regulations in all of our operating locations, including laws and regulations of China, such as laws and regulations related to the development, manufacture and use of our products, the operation of our facilities, and the use of our real property. These laws and regulations govern the use, storage, discharge and disposal of hazardous chemicals during manufacturing, research and development, and sales demonstrations. If we fail to comply with applicable regulations, we could be subject to substantial liability for clean-up efforts, personal injury and fines or suspension or be forced to cease our operations, and/or suspend or terminate the development, manufacture or use of certain of our products, the use of our facilities, or the use of our real property, each of which could have a material adverse effect on our business, financial condition and results of operations.

In March 2001, we settled a claim made by the California Occupational Safety and Health Administration, or Cal-OSHA, in an investigation primarily regarding impermissible levels of potentially hazardous materials in certain areas of our manufacturing facility in Fremont, California for $200,415, and during 2004 we were the target of press allegations and correspondence purportedly on behalf of current and/or former employees concerning our environmental compliance programs and exposure of our

employees to hazardous materials. In June 2005, a complaint was filed against us and a current and former officer, alleging personal injury, general negligence, intentional tort, wage loss and other damages, including punitive damages, as a result of exposure of plaintiffs, who are former employees of AXT, including a minor child in utero, to high levels of gallium arsenide in gallium arsenide wafers, and methanol. There is a possibility that other current and/or former employees may bring additional litigation against us. Although we have put in place engineering, administrative and personnel protective equipment programs to address these issues, our ability to expand or continue to operate our present locations could be restricted or we could be required to acquire costly remediation equipment or incur other significant expenses. Existing or future changes in laws or regulations in the United States and China may require us to incur significant expenditures or liabilities, or may restrict our operations. In addition, our employees could be exposed to chemicals or other hazardous materials at our facilities and we may be subject to lawsuits seeking damages for wrongful death or personal injuries allegedly caused by exposure to chemicals or hazardous materials at our facilities.

Litigation is inherently uncertain and while we would expect to defend ourselves vigorously, it is possible that our business, financial condition, results of operations or cash flows could be affected in any particular period by litigation pending and any additional litigation brought against us.

Existing or future litigation could result in significant judgments against us, or cause us to incur costly settlements.

In June 2005, a complaint was filed against us and a current and former officer, alleging personal injury, general negligence, intentional tort, wage loss and other damages, including punitive damages, as a result of exposure of plaintiffs, who are former employees of AXT, including a minor child in utero, to high levels of gallium arsenide in gallium arsenide wafers, and methanol. In addition, we are defendants in an ongoing securities litigation matter. Litigation is inherently uncertain and while we would expect to defend ourselves vigorously, it is possible that our business, financial condition, results of operations or cash flows could be affected in any particular period by litigation now pending and any additional litigation brought against us. In addition, response to this litigation could divert management s attention from our business and operations, causing our business and financial results to suffer. We could incur defense or settlement costs in excess of the insurance covering these litigation matters, or that could result in significant judgments against us or cause us to incur costly settlements, in excess of our insurance limits.

Legislative actions, higher insurance costs and potential new accounting pronouncements are likely to cause our general and administrative expenses to increase and impact our future financial position and results of operations.

In order to comply with rules and regulations adopted pursuant to the Sarbanes-Oxley Act of 2002 by the SEC, as well as changes to listing standards adopted by the NASDAQ Stock Market, and accounting changes adopted affecting accounting for stock-based compensation, we may be required to increase our internal controls and hire additional personnel and outside legal, accounting and advisory services, all of which will cause our general and administrative costs to increase. Insurers may increase premiums as a result of the high claims rates they incurred over the past year. Changes in accounting rules, including legislative and other rules to account for employee stock options as a compensation expense among others, could materially increase the expense that we report under generally accepted accounting principles and adversely affect our operating results.

The effect of terrorist threats and actions on the general economy could decrease our revenue.

The United States continues to be on alert for terrorist activity. The potential near- and long-term impact terrorist activities may have in regards to our suppliers, customers and markets for our products and the U.S. economy is uncertain. There may be embargos of ports or products, or destruction of

shipments or our facilities, or attacks that affect our personnel. There may be other potentially adverse effects on our operating results due to a significant event that we cannot foresee. Since we perform all of our manufacturing operations in China, and a significant portion of our customers are located outside of the Untied States, terrorist activity or threats against US-owned enterprise are a particular concern to us.

If any of our facilities is damaged by occurrences such as fire, explosion, or natural disaster, we might not be able to manufacture our products.

The ongoing operation of our manufacturing and production facilities in China is critical to our ability to meet demand for our products. If we are not able to use all or a significant portion of our facilities for prolonged periods for any reason, we would not be able to manufacture products for our customers. For example, a fire or explosion caused by our use of combustible chemicals and high temperatures during our manufacturing processes could render some or all of our facilities inoperable for an indefinite period of time. Actions outside of our control, such as earthquakes or other natural disasters, could also damage our facilities, rendering them inoperable. If we are unable to operate our facilities and manufacture our products, we would lose customers and revenue and our business would be harmed.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

Our principal properties as of February 21, 2007 are as follows:

Location	Square Feet	Principal Use	Ownership
Fremont, CA	80,000	Vacant	Owned
Fremont, CA	55,000	Production and Administration	Operating lease, expires March 2013
Beijing, China	31,000	Production and Administration	Owned
Beijing, China	31,000	Production	Owned
Beijing, China	32,000	Production	Owned
Beijing, China	16,000	Housing	Owned
Beijing, China	34,000	Production	Owned
Beijing, China	48,000	Production	Owned
Beijing, China	22,000	Production and Administration	Owned
Beijing, China	53,000	Production	Owned
Xianxi, China	56,500	Production	Owned by Beijing Ji Ya Semiconductor Material, Co., Ltd.*
Xianxi, China	7,500	Administration	Owned by Beijing Ji Ya Semiconductor Material, Co., Ltd.*
Xianxi, China	1,000	Administration	Owned by Beijing Ji Ya Semiconductor Material, Co., Ltd.*
Nanjing, China	22,000	Production	Owned by Nanjing Jin Mei Gallium Co., Ltd.*
Nanjing, China	5,700	R&D and Administration	Owned by Nanjing Jin Mei Gallium Co., Ltd.*
Nanjing, China	3,900	Production	Owned by Nanjing Jin Mei Gallium Co., Ltd.*
Beijing, China	7,600	Production and Administration	Owned by Beijing BoYu Semiconductor Vessel Craftwork Technology Co., Ltd.*

* Joint ventures in which we hold an interest. We hold a 46% interest in Beijing Ji Ya Semiconductor Material Co., Ltd., a 83% interest in Nanjing Jin Mei Gallium Co., Ltd., and a 70% interest in Beijing BoYu Semiconductor Vessel Craftwork Technology Co., Ltd (BoYu).

We consider each facility to be in good operating condition and adequate for its present use, and believe that each facility has sufficient plant capacity to meet its current and anticipated operating requirements.

Item 3. *Legal Proceedings*

From time to time we may be involved in judicial or administrative proceedings concerning matters arising in the ordinary course of business. We do not expect that any of these matters, individually or in the aggregate, will have a material adverse effect on our business, financial condition, cash flows or results of operation.

On October 15, 2004, a purported securities class action lawsuit was filed in the United States Court for the Northern District of California, City of Harper Woods Employees Retirement System v. AXT, Inc. et al., No. C 04 4362 MJJ. The Court consolidated the case with a subsequent related case and appointed a lead plaintiff. On April 5, 2005, the lead plaintiff filed a consolidated complaint, captioned as Morgan v. AXT, Inc. et al., No. C 04 4362 MJJ. The lawsuit complaint names AXT, Inc. and our former chief technology officer as defendants, and is brought on behalf of a class of all purchasers of our securities from February 6, 2001 through April 27, 2004. The complaint alleges that we announced financial results during this period that were false and misleading. No specific amount of damages is claimed. On September 23, 2005, the Court granted our motion to dismiss the complaint, with leave to amend. The lead plaintiff filed an amended complaint, which we have moved to dismiss. We believe that there are meritorious defenses against this litigation and intend to vigorously defend it. Due to the inherent uncertainties of litigation, we cannot accurately predict the ultimate outcome of the litigation. Any unfavorable outcome of the litigation could have an adverse impact on our business, financial condition and results of operations.

On June 1, 2005, a lawsuit was filed in the Superior Court of California, County of Alameda, Zhao et al. v. American Xtal Technology, et al., No. R 605215713. The lawsuit complaint names as defendants AXT, Inc., our former chief technology officer and one of our suppliers. The lawsuit is brought on behalf of two former employees and their minor child. The complaint alleges personal injury, general negligence, intentional tort, wage loss and other damages, including punitive damages, as a result of exposure of the child while in utero to high levels of gallium arsenide and methanol used in the production of gallium arsenide wafers. We believe that there are meritorious defenses against this litigation and intend to vigorously defend it. Our commercial general liability insurance carrier has agreed to fund our defense of the case, but has reserved the right to deny coverage, in whole or in part, in the future under selected policy provisions and applicable law. The plaintiffs have made an initial settlement demand within our insurance limits. Due to the inherent uncertainties of litigation, we cannot accurately predict the ultimate outcome of the litigation. Any unfavorable outcome of the litigation could have an adverse impact on our business, financial condition and results of operations.

Item 4. *Submission of Matters to a Vote of Security Holders*

None.

PART II

Item 5. *Market for Registrant s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

Our common stock has been trading publicly on the NASDAQ Global Market, (NASDAQ) under the symbol AXTI since May 20, 1998, the date we consummated our initial public offering. The following table sets forth the range of high and low sales prices of the common stock for the periods indicated, as reported by NASDAQ. Such quotations represent inter-dealer prices without retail markup, markdown or commission and may not necessarily represent actual transactions.

	High	Low
2006		
First Quarter	$ 3.87	$ 1.98
Second Quarter	$ 4.47	$ 2.84
Third Quarter	$ 4.26	$ 2.84
Fourth Quarter	$ 5.37	$ 4.19
2005		
First Quarter	$ 1.57	$ 1.10
Second Quarter	$ 1.42	$ 1.08
Third Quarter	$ 1.65	$ 1.14
Fourth Quarter	$ 2.47	$ 1.21

As of December 31, 2006, there were 91 holders of record of our common stock. Because many shares of AXT s common stock are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders.

We have never paid or declared any cash dividends on our common stock and do not anticipate paying cash dividends in the foreseeable future. Dividends accrue on our outstanding Series A preferred stock at the rate of $0.20 per annum per share of Series A preferred stock.

Issuer Purchases of Equity Securities

During the year ended December 31, 2006, we did not repurchase any shares of our common stock. During the year ended December 31, 2005, we repurchased the following shares of our common stock:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of a Publicly Announced Plan or Program(1)	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plan or Program
Jan. 1, 2005 through Mar. 31, 2005	23,383	$ 1.23	23,383	$ 1,971,313
Apr. 1, 2005 through Jun. 30, 2005	134,700	1.22	134,700	1,807,145
Jul 1, 2005 through Sep. 30, 2005	43,433	1.22	43,433	1,754,160
Oct 1, 2005 through Dec. 31, 2005				1,754,160
Total	201,516	$ 1.22	201,516	$ 1,754,160

(1) Pursuant to a Plan publicly announced on August 25, 2004 and extended in July, 2005, in accordance with Rule 10b5-1 of the Securities Exchange Act of 1934 to provide for the repurchase of up to $2 million of the Company s common stock. Repurchases were made from time to time in the open market during the twelve-month period ended July 31, 2006, at prevailing market prices. Repurchases were made under the program using the Company s own cash resources. As of December 31, 2005, we had 22,977,301 shares of common stock outstanding and 201,516 were repurchased in 2005 under this program. No repurchases were made during 2006.

Use of Proceeds

In December 2006, we received net proceeds of $24.1 million from the public offering of 5,750,000 shares of our common stock we sold. The net proceeds will be used for corporate and joint venture capacity expansion, research and development, working capital requirements, and potential acquisitions of complementary products, technologies or businesses.

Comparison of Stockholder Return

Set forth below is a line graph comparing the annual percentage change in the cumulative total return to the stockholders of the Company on our common stock with the CRSP Total Return Index for the Nasdaq Stock Market (U.S. Companies) and the Nasdaq Electronic Components Index for the period commencing December 31, 2001, and ending December 31, 2006.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*
Among AXT, Inc., The NASDAQ Composite Index
And The NASDAQ Electronic Components Index

* $100 invested on 12/31/01 in stock or index-including reinvestment of dividends. Fiscal year ending December 31.

Other consolidated financial statements and supplementary data required by this item are set forth at the pages indicated at Item 15(a).

Item 6. *Selected Consolidated Financial Data*

The following selected consolidated financial data is derived from and should be read in conjunction with our consolidated financial statements and related notes set forth in Item 8 below, and in our previously filed reports on Form 10-K. See also Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations for further information relating to items reflecting our results of operations and financial condition.

	Years Ended December 31,				
	2006	2005	2004	2003	2002
	(in thousands, except per share data)				
Statements of Operations					
Revenue	$ 44,445	$ 26,536	$ 35,454	$ 34,713	$ 44,865
Cost of revenue	31,709	24,337	35,705	32,478	53,758
Gross profit (loss)	12,736	2,199	(251)	2,235	(8,893)
Operating expenses:					
Selling, general, and administrative	12,650	12,955	11,561	10,475	13,860
Research and development	2,351	1,723	1,479	1,337	2,339
Impairment charges	1,417		210		14,632
Restructuring charge (benefit)	(2)	836	1,308		
Total operating expenses	16,416	15,514	14,558	11,812	30,831
Loss from continuing operations	(3,680)	(13,315)	(14,809)	(9,577)	(39,724)
Interest income, net	443	516	262	172	2,746
Other income (expense), net	2,709	(910)	94	(1,688)	(15,886)
Loss from continuing operations before provision (benefit) for income taxes	(528)	(13,709)	(14,453)	(11,093)	(52,864)
Provision (benefit) for income taxes	(1,454)	(950)	71		2,119
Income (loss) from continuing operations	926	(12,759)	(14,524)	(11,093)	(54,983)
Discontinued operations:					
Gain (loss) from discontinued operations, net of tax	18	(59)	472	(6,163)	(34,625)
Gain (loss) from disposal, net of tax		603	419	(9,475)	
Benefit for income taxes					(8,427)
Gain (loss) from discontinued operations	18	544	891	(15,638)	(26,198)
Net income (loss)	$ 944	$ (12,215)	$ (13,633)	$ (26,731)	$ (81,181)
Basic income (loss) per share:					
Income (loss) from continuing operations	$ 0.03	$ (0.56)	$ (0.64)	$ (0.49)	$ (2.46)
Gain (loss) from discontinued operations, net of tax		0.02	0.04	(0.69)	(1.17)
Net loss	$ 0.03	$ (0.54)	$ (0.60)	$ (1.18)	$ (3.63)
Diluted income (loss) per share:					
Income (loss) from continuing operations	$ 0.03	$ (0.56)	$ (0.64)	$ (0.49)	$ (2.46)
Gain (loss) from discontinued operations, net of tax		0.02	0.04	(0.69)	(1.17)
Net income (loss)	$ 0.03	$ (0.54)	$ (0.60)	$ (1.18)	$ (3.63)
Shares used in per share calculations:					
Basic	23,303	23,047	23,063	22,781	22,433
Diluted	24,600	23,047	23,063	22,781	22,433

	Years Ended December 31,				
	2006	2005	2004	2003	2002
	(in thousands)				
Balance Sheet Data:					
Cash and cash equivalents	$ 16,116	$ 17,472	$ 12,117	$ 24,339	$ 13,797
Short-term investments	19,428	5,555	20,062	14,669	8,205
Working capital	66,359	36,347	46,141	57,335	65,375
Restricted deposits	7,150	7,450	8,215	9,302	11,150
Long-term investments					3,657
Total assets	98,332	74,798	87,540	107,023	145,667
Long-term capital lease, net of current portion					4,847
Long-term debt, net of current portion	6,839	7,420	7,880	8,842	13,289
Stockholders equity	81,200	55,618	68,017	82,298	105,657

All periods have been restated to reflect the accounting for discontinued operations. As a result, the discontinued opto-electronics and consumer products divisions have been eliminated from continuing operations in the statements of operations.

Item 7. ***Management s Discussion and Analysis of Financial Condition and Results of Operations***

In addition to historical information, the following discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results may differ substantially from those referred to herein due to a number of factors, including but not limited to risks described in the section entitled Item 1A. Risk Factors and elsewhere in this Annual Report. This discussion should be read in conjunction with Item 6. Selected Consolidated Financial Data and our consolidated financial statements and related notes included elsewhere in this Form 10-K.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the United States of America. Accordingly, we make estimates, assumptions and judgments that affect the amounts reported on our consolidated financial statements. These estimates, assumptions and judgments about future events and their effects on our results cannot be determined with certainty, and are made based upon our historical experience and on other assumptions that are believed to be reasonable under the circumstances. These estimates may change as new events occur or additional information is obtained, and we may periodically be faced with uncertainties, the outcomes of which are not within our control and may not be known for a prolonged period of time.

We have identified the policies below as critical to our business operations and understanding of our financial condition and results of operations. A critical accounting policy is one that is both material to the presentation of our consolidated financial statements and requires us to make difficult, subjective or complex judgments that could have a material impact on our consolidated financial statements. Different estimates that we could have used, or changes in the estimates that are reasonably likely to occur, may have a material impact on our financial condition or results of operations. We also refer you to our The Company and Summary of Significant Accounting Policies discussed in the accompanying notes to our consolidated financial statements included elsewhere in this Form 10-K.

Revenue Recognition

We manufacture and sell high-performance compound semiconductor substrates and sell certain raw materials including gallium, germanium dioxide, and pBN crucibles. After we ship our products, there are no remaining obligations or customer acceptance requirements that would preclude revenue recognition. Our products are typically sold pursuant to a purchase order placed by our customers, and our terms and conditions of sale do not require customer acceptance. We recognize revenue upon shipment and transfer of title of products to our customers, which is either upon shipment from our dock, receipt at the customer s dock, or removal from consignment inventory at the customer s location, provided that we have received a signed purchase order, the price is fixed or determinable, title and risk of ownership have transferred, collection of resulting receivables is probable, and product returns are reasonably estimable. We do not provide training, installation or commissioning services. Additionally, we do not provide discounts or other incentives to customers except for one customer with whom we agreed in the fourth quarter of 2004 to provide a certain amount of cumulative discounts on future product purchases from us. We recognize these discounts as a reduction in revenue as products are sold to this customer.

We provide for future returns based on historical experience, current economic trends and changes in customer demand at the time revenue is recognized. In the first quarter of 2004, we recorded a reserve for sales returns of $0.7 million related to our failure to follow certain testing requirements and provision of testing data and information to certain customers. This reserve was based on discussions with some of the affected customers and review of specific shipments. As of December 31, 2006, this reserve was zero since approximately $0.5 million had been utilized and approximately $0.2 million had been reversed to revenue as we favorably resolved an outstanding matter with a customer.

Allowance for Doubtful Accounts

We periodically review the likelihood of collection on our accounts receivable balances and provide an allowance for doubtful accounts receivable primarily based upon the age of these accounts. We provide a 100% allowance for U.S. receivables in excess of 90 days and for foreign receivables in excess of 120 days. We assess the probability of collection based on a number of factors, including the length of time a receivable balance has been outstanding, our past history with the customer and their credit worthiness.

From our allowance for doubtful accounts of $4.0 million at December 31, 2003, we wrote off $3.5 million of fully reserved accounts receivable resulting in the allowance for doubtful accounts of $0.5 million at December 31, 2004. From our allowance for doubtful accounts of $0.5 million at December 31, 2004, we wrote off $0.1 million of fully reserved accounts receivable for a Korean customer and decreased the allowance by $0.3 million due to improved collections mainly from a Japanese customer, while increasing the allowance for a large customer in China of $0.4 million, resulting in the allowance for doubtful accounts of $0.5 million at December 31, 2005. During 2006, we increased our collection efforts and collected the entire amount from this large customer in China requiring us to reverse this $0.4 million allowance resulting in the allowance for doubtful accounts of $0.1 million at December 31, 2006. As of December 31, 2006, our accounts receivable balance was $9.7 million, which was net of an allowance for doubtful accounts of $0.1 million. As of December 31, 2005, our accounts receivable balance was $5.2 million, which was net of an allowance for doubtful accounts of $0.5 million. If actual uncollectible accounts differ substantially from our estimates, revisions to the estimated allowance for doubtful accounts would be required, which could have a material impact on our financial results for the period.

The allowance for sales returns is also deducted from gross accounts receivable. From our allowance for sales returns of $0.5 million as of December 31, 2003, we increased the reserve for sales returns resulting in the allowance for sales returns of $0.6 million as of December 31, 2004. From our allowance for sales returns of $0.6 million as of December 31, 2004, we utilized $0.5 million for investigation related returns, resulting in the allowance for sales returns of $0.1 million as of December 31, 2005. During 2006, the allowance for sales returns remained at approximately $0.1 million. The total allowances deducted from gross accounts receivable as of December 31, 2006 is $0.1 million, compared to $0.6 million as of December 31, 2005.

Warranty Reserve

We maintain a warranty reserve based upon our claims experience during the prior twelve months. Warranty costs are accrued at the time revenue is recognized. As of December 31, 2006 and 2005, accrued product warranties totaled $0.5 million and $0.1 million, respectively. If actual warranty costs differ substantially from our estimates, revisions to the estimated warranty liability would be required, which could have a material impact on our financial condition and results of operations.

Inventory Valuation

Inventories are stated at the lower of cost or market. Cost is determined using the weighted average cost method. Our inventory consists of raw materials as well as finished goods and work-in-process that include material, labor and manufacturing overhead costs. Given the nature of our substrate products, and the materials used in the manufacturing process, the wafers and ingots comprising work-in-process may be held in inventory for up to two years and three years, respectively, as the risk of obsolescence for these materials is low. We routinely evaluate the levels of our inventory in light of current market conditions in order to identify excess and obsolete inventory and provide a valuation allowance for certain inventories based upon the age and quality of the product and the projections for sale of the completed products. If actual demand for our products were to be substantially lower than estimated, additional inventory

adjustments for excess or obsolete inventory might be required, which could have a material impact on our business, financial condition and results of operations.

Impairment of Investments

We classify our investments in debt and equity securities as available-for-sale securities as prescribed by Statement of Financial Accounting Standards (SFAS) No. 115, *Accounting for Certain Investments in Debt and Equity Securities.* All available-for-sale securities with a quoted market value below cost (or adjusted cost) are reviewed in order to determine whether the decline is other-than-temporary. Factors considered in determining whether a loss is temporary include the magnitude of the decline in market value, the length of time the market value has been below cost (or adjusted cost), credit quality, and our ability and intent to hold the securities for a period of time sufficient to allow for any anticipated recovery in market value.

We invest in equity instruments of privately-held companies for business and strategic purposes. These investments are classified as other assets and are accounted for under the cost method as we do not have the ability to exercise significant influence over their operations. We monitor our investments for impairment and record reductions in carrying value when events or changes in circumstances indicate that the carrying value may not be recoverable. Determination of impairment is highly subjective and is based on a number of factors, including an assessment of the strength of investee s management, the length of time and extent to which the fair value has been less than our cost basis, the financial condition and near-term prospects of the investee, fundamental changes to the business prospects of the investee, share prices of subsequent offerings, and our intent and ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in our carrying value. In the third quarter of 2004, we recorded an impairment charge of $0.2 million to write down the value of our investment in a private company. We made the decision to write down the investment as a result of the declining financial position of the investee, evidenced by an audit opinion with a going concern explanatory paragraph received by the investee. The $0.2 million was the remaining balance of this investment. No further write-downs were recorded in 2006 or 2005.

Impairment of Long-Lived Assets

We evaluate the recoverability of property, plant and equipment, and intangible assets in accordance with SFAS No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets.* When events and circumstances indicate that long-lived assets may be impaired, we compare the carrying value of the long-lived assets to the projection of future undiscounted cash flows attributable to such assets. In the event that the carrying value exceeds the future undiscounted cash flows, we record an impairment charge against income equal to the excess of the carrying value over the asset s fair value. Fair value is generally determined by calculating the discounted future cash flows using a discount rate based upon our weighted average cost of capital, and specific appraisal in certain instances. Significant judgments and assumptions are required in the forecast of future operating results used in the preparation of the estimated future cash flows, including long-term forecasts of the amounts and timing of overall market growth and our percentage of that market, groupings of assets, discount rate and terminal growth rates. Changes in these estimates could have a material adverse effect on the assessment of long-lived assets, thereby requiring us to write down the assets. In the third quarter of 2006, we incurred an impairment charge of $1.4 million to write down our U.S. property in Fremont, California, which has been decontaminated and is being prepared for sale. This property has been classified as Assets held for sale in the amount of $4.7 million on the consolidated balance sheet as of December 31, 2006.

Stock Based Compensation

We grant options to substantially all management employees and believe that this program helps us to attract, motivate and retain high quality employees, to the ultimate benefit of our stockholders. Effective January 1, 2006, we adopted the provisions of SFAS No. 123 (revised 2004), Share-Based Payment, (SFAS No. 123(R)) using the modified prospective transition method. Under this transition method, stock compensation expense for fiscal 2006 includes compensation expense for all stock-based compensation awards granted prior to, but not yet vested as of January 1, 2006, based on the grant date fair value estimated in accordance with the original provision of SFAS No. 123, Accounting for Stock-Based Compensation (SFAS No. 123). Stock compensation expense for all stock-based compensation awards granted after January 1, 2006 is based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). We recognize these compensation costs net of an estimated forfeiture rate over the requisite service period of the award, which is generally the vesting term of four years for stock options.

In March 2005, the SEC issued Staff Accounting Bulletin No. 107 (SAB 107) regarding the SEC s interpretation of SFAS No. 123(R) and the valuation of share-based payments for public companies. We have applied the provisions of SAB 107 in the adoption of SFAS No. 123(R). Stock compensation expense recorded in cost of revenue, research and development, and selling, general and administrative expenses is the amortization of the fair value of share-based payments made to employees and members of our board of directors, primarily in the form of stock options as we adopted the provision of SFAS No. 123(R) on January 1, 2006 (see Note 1 Summary of Significant Accounting Policies Stock-Based Compensation). All of our stock compensation is accounted for as an equity instrument.

We account for stock compensation costs in accordance with SFAS No. 123(R)and apply the provisions of SAB 107. We utilize the Black-Scholes option pricing model to estimate the grant date fair value of employee stock compensation awards, which requires the input of highly subjective assumptions, including expected volatility and expected life. Historical and implied volatility were used in estimating the fair value of our stock compensation awards, while the expected life for our options was estimated based on historical trends. Further, as required under SFAS No. 123(R), we now estimate forfeitures for stock compensation awards that are not expected to vest. Changes in these inputs and assumptions can materially affect the measure of estimated fair value of our stock compensation. We charge the estimated fair value to earnings on a straight-line basis over the vesting period of the underlying awards, which is generally four years for our stock option awards.

The Black-Scholes option pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. As our stock option awards have characteristics that differ significantly from traded options, and as changes in the subjective assumptions can materially affect the estimated value, our estimate of fair value may not accurately represent the value assigned by a third party in an arms-length transaction. There currently is no market-based mechanism to verify the reliability and accuracy of the estimates derived from the Black-Scholes option pricing model or other allowable valuation models, nor is there a means to compare and adjust the estimates to actual values. While our estimate of fair value and the associated charge to earnings materially affects our results of operations, it has no impact on our cash position.

The guidance in SFAS No. 123(R) and SAB 107 is relatively new and the application of these principles may be subject to further interpretation and guidance. There are significant variations among allowable valuation models, and there is a possibility that we may adopt a different valuation model or refine the inputs and assumptions under our current valuation model in the future resulting in a lack of consistency in future periods. Our current or future valuation model and the inputs and assumptions we make may also lack comparability to other companies that use different models, inputs, or assumptions, and the resulting differences in comparability could be material.

Prior to the adoption of SFAS No. 123(R), we measured compensation expense for stock compensation made to our employee and members of our board of directors, primarily in the form of stock options and purchases under the employee stock purchase plan, using the intrinsic value method provided by Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees . We applied the disclosure provisions of SFAS No. 123, as amended by SFAS No. 148, Accounting for Stock-Based Compensation Transition and Disclosures as if the fair-value-based method had been applied in measuring compensation expense. We recorded employee stock compensation expense prior to fiscal 2006 for options granted to employees with an exercise price less than the market value of the underlying common stock on the date of grant.

On November 10, 2005, the Financial Accounting Standards Board (FASB) issued FASB Staff Accounting Position No. FAS 123 (R)-3 *TransitionElection Related to Accounting for Tax Effects of Share-Based Payment Awards.* We have elected to adopt the alternative transition method provided in the FASB Staff Position for calculating the tax effects of stock-based compensation pursuant to SFAS No. 123(R). The alternative transition method includes simplified methods to establish the beginning balance of the additional paid-in capital pool (APIC pool) related to the tax effects of employee stock-based compensation, and to determine the subsequent impact on the APIC pool and consolidated statements of cash flows of the tax effects of the employee stock-based compensation awards that are outstanding upon adoption of SFAS No. 123(R).

Income Taxes

We account for income taxes in accordance with SFAS No. 109 (SFAS 109), *Accounting for Income Taxes,* which requires that deferred tax assets and liabilities be recognized using enacted tax rates for the effect of temporary differences between the book and tax bases of recorded assets and liabilities. SFAS 109 also requires that deferred tax assets be reduced by a valuation allowance if it is more likely than not that a portion of the deferred tax asset will not be realized.

We provide for income taxes based upon the geographic composition of worldwide earnings and tax regulations governing each region, particularly China. The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of complex tax laws, particularly in foreign countries such as China.

Results of Operations

Overview

We were founded in 1986 to commercialize and enhance our proprietary vertical gradient freeze (VGF) technique for producing high-performance compound semiconductor substrates. We have one operating segment: our substrate business, with limited additional raw materials sales. We recorded our first substrate sales in 1990 and our substrate division currently sells gallium arsenide (GaAs) and indium phosphide (InP) substrates to manufacturers of semiconductor devices for use in applications such as fiber optic and wireless telecommunications, light emitting diodes (LEDs) and lasers. We also sell raw materials including gallium and germanium through our participation in majority- and minority-owned joint ventures. We had the capability to manufacture germanium substrates for use in satellite solar cells but withdrew from this business during 2000 so that we could more profitably use our then constrained capacity. We are now trying to qualify our germanium substrates with the few existing satellite solar cell system manufacturers.

Continuing Operations

Our sales of substrate products is dependant on the semiconductor industry, which is highly cyclical and has historically experienced downturns both as a result of economic changes and overcapacity.

In March 2004, we learned of certain failures to comply with requirements for product testing and the provision of testing data and information relating to requirements of certain customers. Specifically, we determined that in some cases we had not provided accurate data to customers confirming that products shipped were compliant with all specifications provided by the customer, or had been manufactured at the location specified by the customer. As a result of our conclusions, we reorganized our production and quality control procedures, established quality control and assurance as a direct reporting group to the chief executive officer, and implemented measures, including additional employee training, statistical sampling of product shipments during the quarter, and review of our satisfaction of customer specifications each quarter, to ensure adherence to operational controls. We also implemented certain executive management changes.

As a result of the weaknesses identified, in the first quarter of 2004 we increased our sales return reserve by $0.7 million, based on our best estimate of future returns related to this matter. Approximately $0.5 million of the $0.7 million sales returns reserve had been utilized and approximately $0.2 million has been reversed to revenue as of December 31, 2005 as we favorably resolved an outstanding matter with a customer. This reserve was based, in part, on discussion with affected customers. The amount of the reserve was determined in part based upon the amount of our historical product returns, payment history of prior period receivables, discussions with customers concerning the non-compliant product and testing data, and estimated levels of our product maintained by customers, and likelihood that products previously shipped would be returned to us.

During the second quarter of 2004, we announced plans to cease all production activities in the United States and to manufacture our products only in China.

In 2005, we made a number of important changes to our management team. Philip C.S. Yin, Ph.D., joined the company in March 2005 as chief executive officer and restructured the organization from the top down. In June 2005, two new positions were created: chief operating officer and chief technology officer. Also, the former president of AXT s China operations became president of joint venture operations. In September 2005, our new vice president of global sales and marketing joined the company. This new structure enabled us to maximize the expertise and skill sets of our team while placing enhanced emphasis on manufacturing, production and quality, and quality systems improvement.

With the new management team in place, quality, quality systems and revenue began to improve beginning the third quarter of 2005. In December 2005, we continued to execute our workforce reduction in our Fremont, California facility and accordingly we eliminated approximately 15 positions in California. See further discussion under Restructuring Charges below.

During 2006 we sold all of our shares of common stock of Finisar Corporation generating net proceeds of $4.4 million and recording a gain of $3.3 million. In December 2006, we received net proceeds of $24.1 million from the public offering of 5,750,000 shares of our common stock. During the fourth quarter of 2006 we completed an increase in our production capacity for 6 inch diameter GaAs substrates by fifty percent and are currently in the process of an additional forty percent increase by the middle of 2007.

Discontinued Opto-Electronics Business

In June 2003, we announced the discontinuation of our opto-electronics division, which we had established as part of our acquisition of Lyte Optronics, Inc. in May 1999. The discontinued opto-electronics division manufactured blue, cyan, and green high-brightness light emitting diodes (HBLEDs) for the illumination markets, including full-color displays, wireless handset backlighting and traffic signals, and also manufactured vertical cavity surface emitting lasers (VCSELs) and laser diodes for fiber optic communications and storage area networks. Accordingly, the results of operations of the opto-electronics division have been segregated from continuing operations and are reported separately as

discontinued operations in our consolidated statements of operations for all periods presented. See Note 2 to our consolidated financial statements for details regarding the accounting for discontinued operations.

In September 2003, we completed the sale of substantially all of the assets of our opto-electronics business to Lumei Optoelectronics Corp. (Lumei) and Dalian Luming Science and Technology Group, Co., Ltd. for the Chinese Renminbi (RMB) equivalent of $9.6 million. A portion of the purchase price equal to $1.0 million was held in escrow to satisfy any claims that the purchasers might make for breaches of representations or warranties by us. Of this total escrow, $0.8 million could be released after the one year anniversary of the sale of the opto-electronics business and the remainder could be released after the second anniversary of the sale. To date, we have resolved all claims made against the $1.0 million that was held in escrow. For the year ended December 31, 2005 we recorded $0.6 million gains from escrow, $0.1 million in property tax refunds and interest.

In June 2005, we completed the sale of a building located in Monterey Park, California. This asset had been classified as assets held for sale in the amount of $1.25 million on the consolidated balance sheet as of December 31, 2004. We received net proceeds on the sale of the property of approximately $1.3 million and accordingly recorded a gain on disposal of approximately $0.1 million.

Revenue

($ in thousands)	Year Ended Dec. 31, 2006	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
GaAs	$ 36,511	$ 20,831	$ 27,272	$ 15,680	75.3 %	$ (6,441)	(23.6)%
InP	1,705	906	1,588	799	88.2	(682)	(42.9)
Ge	909	42	100	867	2,064.3	(58)	(58.0)
Raw Materials	5,293	4,752	6,399	541	11.4	(1,647)	(25.7)
Other	27	5	95	22	440.0	(90)	(94.7)
Total revenue	$ 44,445	$ 26,536	$ 35,454	$ 17,909	67.5 %	$ (8,918)	(25.2)%

Revenue increased $17.9 million or 67.5%, to $44.4 million in 2006 from $26.5 million in 2005. Total GaAs substrate revenue increased $15.7 million, or 75.3%, to $36.5 million in 2006 from $20.8 million in 2005. Sales of 5 inch and 6 inch diameter GaAs substrates were $16.7 million in 2006 compared with $4.8 million in 2005. The increase in larger diameter substrate revenue was due to the fact that, while the GaAs device market grew in strength for both cellular and the WLAN (Wide Local Area Network) markets, the compound semiconductor industry has been experiencing capacity constraints; with our excess capacity and our ability to increase capacity in a timely and cost efficient manner, we were able to benefit from the overflow business from our competition.

Sales of 2 inch, 3 inch and 4 inch diameter GaAs substrates were $19.7 million in 2006 compared with $15.9 million in 2005. The increase in revenue from smaller diameter substrates was generally due to the continued market growth of LED laser diodes and commercial epitaxy.

InP substrate revenue increased $0.8 million, or 88.2%, to $1.7 million in 2006 from $0.9 million in 2005. While overall demand for InP has increased over the past year, the higher than expected increase in InP substrate revenue was due to the receipt of one large customer order for a government contract, which is not expected to repeat. While we are beginning to see evidence of renewed growth in the optical networking industry, which uses InP to manufacture telecom lasers and may result in growth in InP substrate sales, we have not yet seen a large movement in this direction.

Ge substrate revenue increased $0.9 million, or 2,064.3%, to $0.9 million in 2006 from $42,000 in 2005. The increase in Ge substrate revenue was due to an increase in customers in the PRC that have now qualified our product, as demand for photovoltaic applications is strong in the PRC.

Raw materials revenue increased $0.5 million, or 11.4%, to $5.3 million in 2006 from $4.8 million in 2005. The increase in raw materials revenue was primarily due to sales of germanium dioxide to a new customer, and increased sales of gallium to existing customers. The new customer for germanium dioxide is located in North America, and has been purchasing consistently in 2006. We expect this trend to continue. Our raw materials business is increasingly becoming an important part of our business, both in terms of providing us protection against raw materials pricing increases and supply constraints, and in opportunities for sales of raw materials. Accordingly, we expect to continue to expand our raw materials sales efforts and explore new and additional investment opportunities.

Revenue decreased $8.9 million or 25.2%, to $26.5 million in 2005 from $35.5 million in 2004. Total GaAs substrate revenue decreased $6.4 million, or 23.6%, to $20.8 million in 2005 from $27.3 million in 2004. Overall sales of smaller diameter GaAs substrates decreased $7.2 million due to the earlier quality issues, the continuing pricing pressures causing prices to decline, overall lower demand from our wireless application customers and a decline in orders from customers who were qualifying our China-grown products. On the other hand, sales of larger diameter GaAs substrates, which were used exclusively to manufacture electronic devices, increased $1.4 million compared to 2004 due to an increase in orders from customers who have qualified our China-grown products. InP substrate revenue decreased $0.7 million, or 42.9%, to $0.9 million in 2005 from $1.6 million in 2004. InP substrates were used almost exclusively for telecommunications applications. The decrease in GaAs and InP substrate revenue was due to the pricing pressures causing prices to decline and overall lesser demand from our telecommunications and wireless application customers. Raw material sales decreased $1.7 million, or 25.7%, to $4.8 million in 2005 from $6.4 million in 2004. The decrease in raw material sales was due to customers lower demand, particularly for raw gallium and germanium dioxide.

Only one customer represented greater than 10% revenue, totaling 12.8% for the year ended December 31, 2006. Two customers represented greater than 10% of revenue, totaling 20.7% for the year ended December 31, 2005, while no customer represented greater than 10% of revenue for the year ended December 31, 2004. Our top five customers represented 40.0%, 37.5%, and 30.1% of revenue for the years ended December 31, 2006, 2005, and 2004, respectively.

Revenue by Geographic Region

	Years Ended Dec. 31, 2006 ($ in thousands)	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
North America*	$ 13,029	$ 5,168	$ 7,514	$ 7,861	152.1 %	$ (2,346)	(31.2)%
% of total revenue	*29 %*	*19 %*	*21 %*				
Europe	8,365	6,186	6,840	2,179	35.2	(654)	(9.6)
% of total revenue	*19 %*	*23 %*	*19 %*				
Japan	3,347	2,854	5,156	493	17.3	(2,302)	(44.6)
% of total revenue	*8 %*	*11 %*	*15 %*				
Taiwan	7,647	3,843	8,397	3,804	99.0	(4,554)	(54.2)
% of total revenue	*17 %*	*15 %*	*24 %*				
Asia Pacific (excluding Japan and Taiwan)	12,057	8,485	7,547	3,572	42.1	938	12.4
% of total revenue	*27 %*	*32 %*	*21 %*				
Total revenue	$ 44,445	$ 26,536	$ 35,454	$ 17,909	67.5 %	$ (8,918)	(25.2)%

* Primarily the United States.

Sales to customers outside of North America represented approximately 71%, 81%, and 79% of our revenue during 2006, 2005 and 2004, respectively.

North America revenue increased by $7.9 million, or 152.1%, to $13.0 million in 2006 from $5.2 million in 2005. We believe our quality has improved as shown by customers that have qualified our products manufactured in the PRC as sales to existing customers for larger diameter wafers increased by $4.7 million, while sales to existing customers for smaller diameter wafers increased by $1.9 million. Raw material sales increased by $1.3 million.

Revenue from customers in Europe increased by $2.2 million, or 35.2%, to $8.4 million in 2006 from $6.2 million in 2005. This increase resulted from $1.9 million increased sales to customers in France, mainly in larger diameter wafers, $0.4 million increased sales to customers in Germany, mainly in smaller diameter wafers, partially offset by a $0.1 million decrease in sales to customers in Switzerland, mainly in smaller diameter wafers.

Japan revenue increased by $0.5 million, or 17.3%, to $3.3 million in 2006 from $2.9 million in 2005. Increased sales to existing customers accounted for $0.4 million, mainly in larger diameter wafers, while sales to new customers accounted for $0.1 million.

Taiwan revenue increased by $3.8 million, or 99.0%, to $7.7 million in 2006 from $3.8 million in 2005. The increase was due to sales to existing customers of $3.8 million mainly in large diameter wafers.

Asia Pacific (excluding Japan and Taiwan) revenue increased by $3.6 million, or 42.1%, to $12.1 million in 2006 from $8.5 million in 2005. Of this increase, sales to customers in Malaysia and Singapore accounted for $2.1 million of the increase, mainly in larger diameter wafers, while sales to customers in the PRC increased by $1.0 million, and sales to customers in Korea increased by $0.5 million.

Asia Pacific (excluding Japan and Taiwan) revenue increased to 32% of total revenue in 2005 compared with 21% of total revenue in 2004. The increase was primarily due to increased sales of GaAs substrates to customers in China and Singapore, which products are being used in opto-electronics applications. The Taiwan revenue decreased by $4.6 million or 54.2%, to $3.8 million in 2005 from $8.4 million in 2004. The decrease in Taiwan and other geographic areas for our GaAs substrates was due to continuing pricing pressures causing average sales prices to decline, overall lower demand from our wireless application customers, and delays in orders from customers who had not yet qualified our China-grown products.

Gross Margin

	Years Ended Dec. 31,			2005 to 2006 Increase		2004 to 2005 Increase	
	2006	2005	2004	(Decrease)	% Change	(Decrease)	% Change
	($ in thousands)						
Gross profit (loss)	$ 12,736	$ 2,199	$ (251)	$ 10,537	479.2 %	$ 2,450	976 %
Gross Margin %	*28.7 %*	*8.3 %*	*(0.7)%*				

Gross margin increased to 28.7% of total revenue in 2006 from 8.3% of total revenue in 2005. Gross margin in 2006 was positively impacted by sales of approximately $2.9 million of GaAs wafers that were previously fully reserved, and by approximately $0.1 million as a result of a reversal of a sales return reserve established in 2004 as we favorably resolved an outstanding matter with a customer. In addition, we sold a greater amount of InP substrates and larger diameter GaAs wafers in 2006, which contributed higher gross margins. In December 2005, we reduced the workforce at our Fremont, California facility to eliminate positions that we no longer required to support production, and this reduction accounted for approximately 1.5 percentage points to gross margin in 2006. In addition, we had manufacturing equipment that became fully depreciated in 2006, and the absence of depreciation expense for this

equipment contributed approximately 1.5 percentage points to gross margin in 2006. Finally, higher substrates gross margins were also achieved through better slicing techniques, longer length ingot growth, shorter runtimes, and higher production volumes, partially offset by higher prices of raw materials for gallium and arsenic.

Gross margin increased to 8.3% of total revenue in 2005 from negative 0.7% of total revenue in 2004. In 2004, our gross margin was negatively impacted by the following factors: (i) a $2.1 million charge for excess and obsolete inventory in the third quarter of 2004, (ii) an approximately $1.4 million charge incurred in connection with our settlement of our patent dispute with Sumitomo Electric Industries, Ltd. in the third quarter of 2004, and (iii) the establishment of a sales return reserve of $0.7 million in the first quarter of 2004 related to our failure to follow certain testing requirements, which reduced revenues without affecting costs of revenues. The improvement in gross margin in 2005 was due to the increased sales in the larger diameter wafers as demand increased, and the sales of fully reserved wafers which accounted for revenue of approximately $2.1 million in 2005.

Selling, General and Administrative Expenses

	Years Ended Dec. 31, 2006 ($ in thousands)	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
Selling, general and administrative expenses	$ 12,650	$ 12,955	$ 11,561	$ (305)	(2.4)%	$ 1,394	12.1 %
% of total revenue	*28.5 %*	*48.8 %*	*32.6 %*				

Selling, general and administrative expenses decreased $0.3 million to $12.7 million for 2006 compared to $13.0 million for 2005. The decrease was primarily due to decreases of $1.3 million for decontamination expenses as we prepare our U.S. property in Fremont, California for sale, $0.8 million for bad debt expenses as we collected on past due accounts and improved aging, $0.3 million for legal fees reimbursed by our insurance company for fees incurred in connection with ongoing litigation as described in Note 18 of the consolidated financial statements, $0.2 million for legal and professional fees,and $0.1 million for recruiting fees, partially offset by increases of $0.5 million for compensation related payments, $0.5 million for stock-based compensation expense, $0.4 million for consulting fees for compliance with the Sarbanes-Oxley Act of 2002, $0.3 million for customer compensation costs, $0.3 million for sales commissions and other miscellaneous expenses, $0.2 million for consulting fees for corporate design and human resources, and $0.2 million for joint venture labor related costs.

Selling, general and administrative expenses increased $1.4 million to $13.0 million for 2005 compared with $11.6 million for 2004. The increase in absolute dollars and as a percentage of revenue was primarily due to $2.0 million of decontamination expenses for our Fremont, California facilities, higher travel expenses of $0.3 million as operations have moved resulting in more travel to China, higher recruiting expenses of $0.1 million mainly in recruiting our new chief executive officer, partially offset by $0.6 million lower insurance costs as operations have moved to China where rates are lower, $0.2 million in decreased Delaware franchise taxes, $0.1 million lower sales commissions due to lower sales and lower rates, and $0.1 million lower bad debt expenses as collections and aging improved.

Research and Development Expenses

	Years Ended Dec. 31, 2006	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
	($ in thousands)						
Research and development expenses	$ 2,351	$ 1,723	$ 1,479	$ 628	36.4 %	$ 244	16.5 %
% of total revenue	*5.3 %*	*6.5 %*	*4.2 %*				

Research and development expenses increased $0.6 million, or 36.4%, to $2.4 million for 2006, from $1.7 million for 2005. During 2006, we incurred $0.4 million in severance payments to Dr. Morris Young, our chief technology officer who retired on December 31, 2006. We also incurred $0.2 million for stock-based compensation expense.

Research and development expenses increased $0.2 million, or 16.5%, to $1.7 million for 2005, from $1.5 million for 2004. The increase was due to the transition of Dr. Morris Young as our chief technology officer from his former position, and by severance payments to employees that had been performing research and development activities.

We believe that continued investment in product development is critical to attaining our strategic objectives of maintaining and enhancing our technology leadership. As a result, we expect research and development expenses to remain at the levels of recent quarters, excluding severance payments.

Impairment and Restructuring Charges

	Years Ended Dec. 31, 2006	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
	($ in thousands)						
Impairment charge	$ 1,417	$	$ 210	$ 1,417	NM	$ 210	NM
% of total revenue	*3.2 %*	*%*	*0.6 %*				
Restructuring charge (benefit)	$ (2)	$ 836	$ 1,308	$ (838)	(100.2)%	$ (472)	(36.1)%
% of total revenue	*0.0 %*	*3.2 %*	*3.7 %*				

NM: percentage not meaningful

Impairment Charges

In the third quarter of 2006, we incurred an impairment charge of $1.4 million to write down our U.S. property in Fremont, California, which has been decontaminated and is being prepared for sale. This property has been classified as Assets held for sale in the amount of $4.7 million on the consolidated balance sheet as of December 31, 2006.

In the third quarter of 2004, we recorded an impairment charge of $0.2 million to write down the value of our investment in a private company. We made the decision to write down the investment as a result of the declining financial position of the investee, evidenced by an audit opinion with a going concern explanatory paragraph received by the investee. The $0.2 million was the remaining balance of this investment. No further write-downs were recorded in 2006 or 2005.

Restructuring Charges

In 2006, we recognized a $2,000 benefit related to an adjustment to a prior accrual.

In March 2005, we announced that we would be reducing the workforce at our Beijing, China manufacturing facility by approximately 100 positions or approximately 15%. This measure was taken as part of our ongoing effort to reduce our cost structure and bring capacity in line with current market demand. Accordingly, we recorded a restructuring charge of $56,000 in March 2005 relating to the reduction in work force, which we completed in June 2005. We saved approximately $0.3 million in payroll and related expense relating to this reduction in force.

In April 2005, we closed our Japan office as part of our ongoing effort to reduce our cost structure. Accordingly, we recorded restructuring charges of $98,000 and $9,000, in the second and third quarters of 2005, respectively, relating to the closure of our Japan office. We saved approximately $0.3 million in payroll and related expense.

In December 2005, we further reduced the workforce at our Fremont, California facility by approximately 15 positions that were longer required to support production and operations, or approximately 29 percent. This measure was being taken as part of our ongoing effort to downsize our Fremont, California facility headcount. Accordingly, we recorded a restructuring charge of approximately $0.3 million in December 2005 related to the reduction in force for severance-related expenses from the reduction in force, all of which will be cash expenditures. The cash outflow from this charge was incurred over the first two quarters of 2006. We saved approximately $0.9 million annually in payroll and related expenses. Also in December 2005, we recorded an additional restructuring charge of approximately $0.2 million, primarily related to the final liquidation procedures of AXT s Japan office so as to eliminate the remaining assets. There was no further cash outflow from this charge.

Overall for the year ended December 31, 2005, we recorded restructuring charges of $0.2 million relating to lease costs associated with facilities located in California that are no longer required to support production. The remaining restructuring accrual for future lease payments related to abandoned U.S. facilities of $0.3 million was paid out through 2006, and was included on the accompanying consolidated balance sheet as accrued restructuring. Refer to Note 8 to our consolidated financial statements.

In 2004 in the second quarter, we announced plans to cease all production activities in the United States and to manufacture our products only in China. In June 2004, we incurred a restructuring charge of $1.1 million as a result of our decision to close down our remaining manufacturing facilities in the United States. In the third and fourth quarter of 2004, we incurred additional restructuring charges of $0.2 million for a total of $1.3 million in 2004. These charges comprised costs related to the reduction in work force effected in June 2004, and lease costs associated with the facilities located in California that are no longer required to support production. In aggregate, we eliminated 50 positions, 47 of which were production workers. As of December 31, 2004, we saved approximately $0.6 million in annual payroll and related expenses.

Interest Income, Net

	Years Ended Dec. 31,			2005 to 2006 Increase		2004 to 2005 Increase	
	2006	2005	2004	(Decrease)	% Change	(Decrease)	% Change
	($ in thousands)						
Interest income, net	$ 443	$ 516	$ 262	$ (73)	(14.1)%	$ 254	96.9 %
% of total revenue	*1.0 %*	*1.9 %*	*0.7 %*				

Interest income, net decreased $0.1 million to $0.4 million for 2006 from $0.5 million for 2005 as a result of higher interest rates earned on our investments, partially offset by higher interest rates on our debt, which we have continued to pay down. We also had lower cash balances.

Interest income, net increased $0.3 million to $0.5 million for 2005 from $0.3 million for 2004 as a result of our lower debt levels as we continued to pay down our debt.

Other Income and (Expense), Net

	Years Ended Dec. 31, 2006	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
	($ in thousands)						
Other income and (expense), net	$ 2,709	$ (910)	$ 94	$ 3,619	397.7 %	$ (1,004)	(1,068.1)%
% of total revenue	*6.1 %*	*(3.4)%*	*0.3 %*				

Other income and expense, net, was $2.7 million in 2006 compared to other expense, net, of $0.9 million in 2005. Other income, net was $2.7 million for 2006 primarily due to a realized gain of $3.3 million on the sale of all of our shares of common stock of Finisar Corporation, partially offset by minority interests in our joint ventures. Other expense was $0.9 million for 2005 due to $0.7 million for minority interests in our joint ventures, and $0.2 million for foreign exchange losses primarily related to the Japanese yen.

Other expense was $0.9 million for 2005 compared with other income of $0.1 million for 2004. The $1.0 million change from other income to other expense was mainly due to $0.4 million increase in minority interest s share in our joint ventures, $0.3 million increase in foreign exchange losses primarily related to the Japanese yen and to the Chinese renminbi, $0.2 million other income in 2004 received from a customer to terminate a supply guarantee contract, and $0.1 million losses on asset and marketable security disposals.

Minority interest in earnings of consolidated subsidiaries is included in other income and (expense), net and for the years ended December 31, 2006, 2005, and 2004 were ($1.0 million) ($0.7 million), and ($0.3 million), respectively, as the consolidated subsidiaries profitability increased.

Provision (benefit) for Income Taxes

	Years Ended Dec. 31, 2006	2005	2004	2005 to 2006 Increase (Decrease)	% Change	2004 to 2005 Increase (Decrease)	% Change
	($ in thousands)						
Provision (benefit) for income taxes	$ (1,454)	$ (950)	$ 71	$ (504)	(53.1)%	$ (1,021)	(1,438)%
% of total revenue	*3.3 %*	*3.6 %*	*(0.2)%*				

In 2005, the Internal Revenue Service closed its examination of our tax return for the 2002 tax year, including the calculation of our 1999 and 2000 net operating loss carry back. As a result, we reversed approximately $2.1 million and $1.1 million of income tax payable accrued for potential exposures relating to 2006 and 2005, respectively. These amounts are shown as benefits from income taxes in 2006 and 2005. The other amounts in 2006 and 2005 relate to provisions for income taxes related to our foreign subsidiaries. Provision for income taxes for 2004 was $71,000, which was related to our foreign subsidiaries. Due to our continuing operating losses and uncertainty regarding our future profitability, we recorded a full valuation allowance against our net deferred tax assets of $49.9 million in 2006, and $50.9 million in 2005.

Gain or Loss from Discontinued Operations

	Years Ended December 31,			2005 to 2006 Increase		2004 to 2005 Increase	
	2006	2005	2004	(Decrease)	% Change	(Decrease)	% Change
	($ in thousands)						
Gain (loss) from discontinued operations, net of tax	$ 18	$ 544	$ 891	$ (526)	(96.7)%	$ (347)	(38.9)%

In 2006, we recorded $18,000 in interest income on cash balances held in discontinued operations.

In 2005, the $0.5 million gain from discontinued operations was made up of a gain of $0.6 million, which was the remaining portion of the first $0.8 million held in escrow due to us from the sale of our opto-electronics business, and partially offset by $0.1 million in expenses for consulting fees, rent and tax payments.

In 2004, we realized a $0.4 million gain on discontinued opto-electronics operations as a result of the partial release of escrow funds. Also in 2004, we entered into an agreement with a real estate developer for the purchase of our discontinued opto-electronics property held for sale and realized a gain of $0.3 million reflecting an adjustment to the realizable market value of the property. The remaining gain of $0.2 million was a result of our reversal of accrued liabilities of general and administrative expenses no longer required.

Liquidity and Capital Resources

	Years Ended December 31,		
	2006	2005	2004
	($ in thousands)		
Net cash provided by (used in):			
Operating activities	$ (10,263)	$ (7,746)	$ (340)
Investing activities	(15,809)	13,886	(7,846)
Financing activities	24,248	(792)	(4,216)
Effect of exchange rate changes	468	7	180
Net change in cash and cash equivalents	(1,356)	5,355	(12,222)
Cash and cash equivalents beginning period	17,472	12,117	24,339
Cash and cash equivalents end of period	16,116	17,472	12,117
Short-term investments end of period	19,428	5,555	20,062
Total cash, cash equivalents and short-term investments	$ 35,544	$ 23,027	$ 32,179

We consider cash and cash equivalents, and short-term investments as liquid and available for use. Short-term investments are comprised of government bonds and high-grade commercial debt instruments. Also historically included in short-term investments was our investment in common stock of Finisar Corporation, a United States publicly-traded company. During 2006 we sold all of our shares of common stock of Finisar Corporation generating net proceeds of $4.4 million and recording a gain of $3.3 million, which is included in other income and (expense). As of December 31, 2006, our principal sources of liquidity were $35.5 million in cash and cash equivalents and short-term investments, excluding restricted deposits.

Cash and cash equivalents and short-term investments, increased $14.9 million to $35.5 million as of December 31, 2006 from $20.6 million as of December 31, 2005, excluding $2.4 million for our investment in Finisar common stock as of December 31, 2005. The combined increase in cash and cash equivalents and short-term investments was primarily due to the net proceeds of $24.1 million received from the public offering of 5,750,000 shares of our common stock in December 2006, net proceeds of $4.4 million from the sale of all of our shares of common stock of Finisar, partially offset by the purchase of machinery and

equipment of $4.5 million, payments of long-term debt of $0.4 million, and the continual funding of our operations.

Net cash used in operating activities of $10.3 million for 2006 was primarily comprised of our net income of $0.9 million, adjusted for non-cash items of depreciation of $2.6 million, an asset impairment charge of $1.4 million, stock-based compensation of $0.8 million, and a loss on disposal of property, plant and equipment of $0.1 million, partially offset by a realized gain on sale of investments of $3.3 million, and by a net increase of $12.8 million in assets and liabilities. The net increase in assets and liabilities of $12.8 million resulted from a $4.4 million increase in accounts receivable, net, a $4.1 million increase in inventories, net, a $2.2 million increase in prepaid expenses, primarily from foreign taxes prepaid and prepayments to vendors, a $2.3 million decrease in income taxes payable, primarily from the reversal of approximately $2.1 million of income tax payable accrued for potential exposures that have expired, a $0.6 million decrease in accrued liabilities, primarily for restructuring costs and decommissioning expenses, a $0.5 million increase in other assets, and partially offset by a $0.7 million increase in accounts payable and a $0.6 million increase in other long-term liabilities, primarily minority interests. Accounts receivable, net, increased by $4.4 million, or 84.8%, to $9.7 million as of December 31, 2006 from $5.2 million as of December 31, 2005. The increase was primarily a result of our increased sales, as well as decreased accounts receivable allowances of $0.1 million as of December 31, 2006 compared to $0.6 million as of December 31, 2005 reflecting continuous improvements in our collection efforts from customers. Our days sales outstanding was 68 days as of December 31, 2006 compared to 62 days as of December 31, 2005. Inventories, net, increased $4.1 million, or 25.4% to $20.3 million as of December 31, 2006 from $16.2 million as of December 31, 2005, as we increased inventory in raw materials, work in process and finished goods to increase production in anticipation of increased forecast sales.

Net cash used in operating activities increased $7.4 million from $0.3 million in 2004 to $7.7 million in 2005, and was primarily comprised of our net loss of $12.2 million, adjusted for non-cash items of depreciation of $3.7 million, restructuring charge $0.7 million, amortization of marketable securities $0.2 million, stock-based compensation of $0.2 million, a loss on disposal of property, plant and equipment of $0.3 million, and by a net increase of $0.6 million in assets and liabilities.

Net cash used in investing activities of $15.8 million for the year ended December 31, 2006 included net purchases of investment securities totaling $11.8 million, net purchases of property and equipment of $4.3 million, partially offset by a decrease in our restricted deposits of $0.3 million.

Net cash provided by investing activities of $13.9 million for the year ended December 31, 2005 included proceeds from the sale of our Monterey Park, CA property of $1.3 million, net sales of high grade investment securities totaling $14.1 million and a decrease in our restricted deposits of $0.8 million, partially offset by purchases of property and equipment of $2.3 million.

We are currently expanding capacity at our China facilities and we expect to invest up to approximately $4.9 million in capital expansion and other projects in 2007 related to our China facilities. We believe that the expansion will be sufficient to fulfill expected future orders.

Net cash provided by financing activities of $24.2 million for the year ended December 31, 2006 consisted of $24.1 million net proceeds from the issuance of 5,750,000 shares of common stock as a result of our December 2006 follow-on stock offering, $0.6 million from the proceeds from the exercise of employee stock options, partially offset by payments of $0.4 million related to long-term borrowings.

Net cash used in financing activities of $0.8 million for the year ended December 31, 2005 consisted of payments of $0.7 million related to long-term borrowings and $0.2 million for the repurchase of our common stock under our 10b5-1 plan, and partially offset by $0.1 million proceeds from the issuance of common stock under our employee stock purchase plan.

In December 2004, we reached a final settlement of our litigation with Sumitomo Electric Industries, Ltd. (SEI), which includes a global intellectual property cross-licensing agreement. We recorded a charge of approximately $1.4 million in the quarter ended September 30, 2004 in connection with this settlement. Under the terms of the settlement, we made a payment to SEI in the amount of Japanese Yen one hundred and forty-seven million (¥147,000,000) on January 4, 2005, and we will make on-going royalty payments through 2012 on certain products sold by AXT in Japan. Subsequent to that payment, SEI dropped the litigation in Japan and we abandoned the interference proceedings in the U.S.

We believe that we have adequate cash and investments to meet our needs over the next 12 months. If our sales decrease, however, our ability to generate cash from operations will be adversely affected which could adversely affect our future liquidity, require us to use cash at a more rapid rate than expected, and require us to seek additional capital. There can be no assurance that such additional capital will be available or, if available it will be at terms acceptable to us. Cash from operations could be affected by various risks and uncertainties, including, but not limited to those set forth below under Item 1A. Risk Factors above.

Off-Balance Sheet Arrangements

We have never entered into any off-balance sheet financing arrangements and have never established any special purpose entities. We have not entered into any options on non-financial assets.

We had entered into contracts to supply several large customers with GaAs wafers. The contracts guaranteed delivery of a certain number of wafers between January 1, 2001 and December 31, 2004. The contract sales prices were subject to review quarterly and could be adjusted in the event that raw material prices changed. In the event of non-delivery of the determined wafer quantities in any monthly delivery period, we could be subject to non-performance penalties of between 5% and 10% of the value of the delinquent monthly deliveries. We have not received any claims for non-performance penalties due to non-delivery. As of December 31, 2006, we had met all of our current delivery obligations under these contracts and do not show any amount owing. Partial prepayments received for these supply contracts totaling $125,000 was included in customer prepayments in the accompanying consolidated balance sheet as of December 31, 2005.

We indemnify certain customers for attorney fees and damages and costs awarded against these parties in certain circumstances if our products are found to infringe certain patents and they are sued by the patent holder and awarded damages. There are limits on and exceptions to our potential liability for indemnification relating to intellectual patent infringement claims. We cannot estimate the amount of potential future payments, if any, that we might be required to make as a result of these agreements. To date, we have not paid any claim or been required to defend any action related to our indemnification obligations, and accordingly, we have not accrued any amounts for such indemnification obligations. However, we may record charges in the future as a result of these indemnification obligations.

Contractual Obligations

As of December 31, 2006, the credit facility maintained by us with a bank included a letter of credit supporting repayment of our industrial bonds with an outstanding amount of approximately $7.2 million. We have pledged and placed certain investment securities with an affiliate of the bank as additional collateral for this facility. We have also pledged certain investments for a credit facility for our workers compensation insurance policy for portions of 2003. Accordingly, $7.2 million of our cash and short-term investments are restricted.

We lease certain office space, manufacturing facilities and property under long-term operating leases expiring at various dates through March 2013. On March 11, 2003, we completed the sale of our property located at 4281 Technology Drive, Fremont, California, for $6.3 million. Net cash proceeds from the sale were $5.2 million. The gain incurred by us on this transaction was less than $15,000. Under the terms of the sale agreement, we have agreed to lease back the property for a ten-year period. Accordingly, on March 11, 2003, we signed an operating lease for this property through March 2013. Total rent expense under these operating leases were approximately $0.9 million, $1.3 million and $1.3 million for years ended December 31, 2006, 2005 and 2004, respectively.

The following table summarizes our contractual obligations as of December 31, 2006 (in thousands):

	Payments due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1-3 years**	**3-5 years**	**More than 5 years**
Long-term debt	$ 7,289	$ 450	$ 1,039	$ 900	$ 4,900
Operating leases	4,577	645	1,446	1,530	956
Total	$ 11,866	$ 1,095	$ 2,485	$ 2,430	$ 5,856

Selected Quarterly Results of Operations

The following table sets forth unaudited quarterly results for the eight quarters ended December 31, 2005. We believe that all necessary adjustments, consisting only of normal recurring adjustments, have been included in the amounts stated below to present fairly such quarterly information. The operating results for any quarter are not necessarily indicative of results for any subsequent period.

	Quarters Ended							
	Dec. 31, 2006	**Sept. 30, 2006**	**June 30, 2006**	**Mar. 31, 2006**	**Dec. 31, 2005**	**Sept. 30, 2005**	**June 30, 2005**	**Mar. 31, 2005**
Revenue	$ 13,072	$ 12,547	$ 10,355	$ 8,471	$ 7,717	$ 6,153	$ 6,032	$ 6,634
Cost of revenue	8,084	9,068	7,596	6,961	7,069	5,008	5,905	6,355
Gross profit	4,988	3,479	2,759	1,510	648	1,145	127	279
Operating expenses:								
Selling, general and administrative	2,926	2,641	3,853	3,230	3,089	2,898	2,716	4,252
Research and development	854	392	571	534	466	472	423	362
Impairment charge		1,417						
Restructuring charge (benefit)				(2)	460	14	237	125
Total operating expenses	3,780	4,450	4,424	3,762	4,015	3,384	3,376	4,739
Income (loss) from continuing operations	1,208	(971)	(1,665)	(2,252)	(3,367)	(2,239)	(3,249)	(4,460)
Interest income, net	101	103	111	128	130	136	131	119
Other income and (expense), net	1,016	641	814	238	416	193	196	105
Income (loss) from continuing operations before provision (benefit) for income taxes	2,325	(227)	(740)	(1,886)	(3,653)	(2,296)	(3,314)	(4,446)
Provision (benefit) for income taxes	(1,048)	(862)	138	318	(1,048)	45	18	35
Income (loss) from continuing operations	3,373	635	(878)	(2,204)	(2,605)	(2,341)	(3,332)	(4,481)
Discontinued operations:								
Gain (loss) from discontinued operations, net of tax	11	4	2	1	(126)	9		58
Gain from disposal, net of tax						250	53	300
Gain (loss) from discontinued operations, net of tax	11	4	2	1	(126)	259	53	358
Net income (loss)	$ 3,384	$ 639	$ (876)	$ (2,203)	$ (2,731)	$ (2,082)	$ (3,279)	$ (4,123)

Recent Accounting Pronouncements

In November 2004, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 151, *Inventory Costs An Amendment of ARB No. 43, Chapter 4* (SFAS 151). SFAS 151 amends the guidance in ARB No. 43, Chapter 4, *Inventory Pricing* , to clarify the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage). Among other provisions, the new rule requires that items such as idle facility expense, excessive spoilage, double freight and re-handling costs must be recognized as current-period charges regardless of whether they meet the criterion of so abnormal as stated in ARB No. 43. Additionally, SFAS 151 requires that the allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. The adoption of SFAS 151, effective January 1, 2006, did not have a material impact on our consolidated financial position, results of operations or cash flows.

In December 2004, the FASB issued SFAS No. 153, *Exchanges of Non-monetary Assets An Amendment of APB Opinion No. 29* (SFAS 153). SFAS 153 eliminates the exception from fair value measurement for non-monetary exchanges of similar productive assets in paragraph 21(b) of APB Opinion No. 29, *Accounting for Non-monetary Transactions*, and replaces it with the exception for exchanges that do not have commercial substance. SFAS 153 specifies that a non-monetary exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. The adoption of SFAS 153, effective January 1, 2006, did not have a material impact on our consolidated financial position, results of operations or cash flows.

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*, (SFAS 123(R)). SFAS 123(R) requires that all share-based payments to employees, including grants of stock options, be recognized in the financial statements based on their fair value. Refer to Note 1 of the notes to consolidated financial statements for further discussion.

In May 2005, the FASB issued SFAS 154, *Accounting Changes and Error Corrections a replacement of APB Opinion No. 20 and FASB Statement No. 3* (SFAS 154). SFAS 154 changes the requirements for the accounting for and reporting of a change in accounting principle, and applies to all voluntary changes in accounting principle. It also applies to changes required by an accounting pronouncement in the unusual instance that the pronouncement does not include specific transition provisions. This statement requires retrospective application to prior periods financial statements of changes in accounting principle, unless it is impracticable to determine either the period-specific effects or the cumulative effect of the change. The adoption of SFAS 154, effective January 1, 2006, did not have a material impact on our consolidated financial position, results of operations or cash flows.

In November 2005, the FASB issued FASB Staff Position FAS 115-1 and FAS 124-1, *The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments* (FSP FAS 115-1), which provides guidance on determining when investments in certain debt and equity securities are considered impaired, whether that impairment is other-than-temporary, and on measuring such impairment loss. FSP FAS 115-1 also includes accounting considerations subsequent to the recognition of an other-than temporary impairment and requires certain disclosures about unrealized losses that have not been recognized as other-than-temporary impairments. The adoption of FSP FAS 115-1, effective January 1, 2006, did not have a material impact on our consolidated financial position, results of operations or cash flows.

In February 2006, the FASB issued SFAS No. 155, *Accounting for Certain Hybrid Instruments an amendment of FASB Statements No. 133 and 140* (SFAS 155). SFAS 155 amends SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities* (SFAS 133) and SFAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities* (SFAS 140). SFAS 155 allows entities the option of applying fair value accounting to certain hybrid financial instruments in their entirety if they contain embedded derivatives that would otherwise require bifurcation under SFAS 133. SFAS 155 will be effective for us as of January 1, 2007. We are currently assessing the impact that the adoption of SFAS 155 may have on our consolidated financial position, results of operations or cash flows.

In March 2006, the FASB issued SFAS No. 156, *Accounting for Servicing of Financial Assets* (SFAS 156). This statement amends SFAS No. 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities* , (SFAS 140) with respect to the accounting for separately recognized servicing assets and servicing liabilities. SFAS 156 will be effective for us as of January 1, 2007. We are currently assessing the impact that the adoption of SFAS 156 may have on our consolidated financial position, results of operations or cash flows.

In June 2006, the FASB issued FASB Interpretation No. 48, *Accounting For Uncertain Tax Positions An Interpretation of FASB Statement No. 109* (FIN 48). FIN 48 clarifies the accounting for

uncertainty in income taxes recognized in an enterprise s financial statements in accordance with FASB Statement No. 109, *Accounting for Income Taxes* . It prescribes a recognition threshold and measurement attribute for the financial statement recognition and measurement of a tax position taken or expected to be taken in a tax return. FIN 48 also provides guidance on derecognition, classification, interest and penalties, accounting in interim periods, disclosure and transition. FIN 48 is effective for fiscal years beginning after Decemeber 15, 2006. We are currently assessing the impact that the adoption of FIN 48 may have on our consolidated financial position, results of operations or cash flows.

In June 2006, the FASB ratified the consensus reached by the Emerging Issues Task Force (EITF) on Issue No. 06-3, *How Taxes Collected from Customers and Remitted to Governmental Authorities Should Be Presented in the Income Statement (That Is, Gross versus Net Presentation)* , (EITF 06-3). EITF 06-3 includes any tax assessed by a governmental authority that is directly imposed on a revenue-producing transaction between a seller and a customer and may include, but is not limited to, sales, use, value added, and some excise taxes. EITF 06-3 concludes that the presentation of taxes on either a gross (included in revenues and costs) or a net (excluded from revenues) basis is an accounting policy decision that should be disclosed. In addition, for any such taxes that are reported on a gross basis, a company should disclose the amounts of those taxes in interim and annual financial statements for each period for which an income statement is presented if those amounts are significant. The provisions of EITF 06-3 should be applied to financial reports for interim and annual reporting periods beginning after December 15, 2006, with earlier adoption permitted. We are currently assessing the impact that the adoption of EITF 06-3 may have on our consolidated financial position, results of operations or cash flows.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* (SFAS 157). SFAS 157 provides a new single authoritative definition of fair value and provides enhanced guidance for measuring the fair value of assets and liabilities and requires additional disclosures related to the extent to which companies measure assets and liabilities at fair value, the information used to measure fair value, and the effect of fair value measurements on earnings. SFAS 157 is effective for us as of January 1, 2008. We are currently assessing the impact that the adoption of SFAS 157 may have on our consolidated financial position, results of operations or cash flows.

In September 2006, the FASB issued SFAS No. 158, *Employers Accounting for Defined Benefit Pension and Other Postretirement Plans an amendment of FASB Statements No. 87, 88, 106, and 132(R)* (SFAS 158). SFAS 158 requires balance sheet recognition of the overfunded or underfunded status of pension and postretirement benefit plans. Under SFAS 158, actuarial gains and losses, prior service costs or credits, and any remaining transition assets or obligations that have not been recognized under previous accounting standards must be recognized as a component of accumulated other comprehensive income (loss) within stockholders equity, net of tax effects, until they are amortized as a component of net periodic benefit cost. In addition, the measurement date and the date at which plan assets and the benefit obligation are measured, are required to be the company s fiscal year-end. SFAS 158 is effective for us as of December 31, 2007, except for the measurement date provisions, which are effective December 31, 2009. We are currently assessing the impact that the adoption of SFAS 158 may have on our consolidated financial position, results of operations or cash flows.

In September 2006, the United States Securitires and Exchange Commission (SEC) released Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements When Quantifying Misstatements in Current Year Financial Statements* (SAB 108). SAB 108 provides interpretative guidance on how public companies quantify financial statement misstatements. There have been two common approaches used to quantify such errors. Under an income statement approach, the roll-over method, the error is quantified as the amount by which the current year income statement is misstated. Alternatively, under a balance sheet approach, the iron curtain method, the error is quantified as the cumulative amount by which the current year balance sheet is misstated. In SAB 108, the SEC established an approach that requires quantification of financial statement misstatements based on the effects of the

misstatements on each of the company s financial statements and the related financial statement disclosures. This model is commonly referred to as a dual approach because it requires quantification of errors under both the roll-over and iron curtain methods. SAB 108 was effective for us as of December 31, 2006. The adoption of SAB 108 did not have a material impact on our consolidated financial position, results of operations or cash flows.

In February 2007, the FASB issued Statement of Financial Accounting Standards No. 159, *The Fair Value Option for Financial Assets and Liabilities* (SFAS 159). SFAS 159 provides entities with the option to report selected financial assets and liabilities at fair value. Business entities adopting SFAS 159 will report unrealized gains and losses in earnings at each subsequent reporting date on items for which fair value option has been elected. SFAS 159 establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. SFAS 159 requires additional information that will help investors and other financial statement users to understand the effect of an entity s choice to use fair value on its earnings. SFAS 159 is effective for fiscal years beginning after November 15, 2007, with earlier adoption permitted. We are currently assessing the impact that the adoption of SFAS 159 may have on our consolidated financial position, results of operations or cash flows.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

Foreign Currency Risk

Since 2004 we no longer use short-term forward exchange contracts for hedging purposes to reduce the effects of adverse foreign exchange rate movements. We had previously purchased foreign exchange contracts to hedge against certain trade accounts receivable denominated in Japanese yen. The change in the fair value of the forward contracts was recognized as part of the related foreign currency transactions as they occur. As of December 31, 2006, and 2005, we had no outstanding commitments with respect to foreign exchange contracts.

Interest Rate Risk

Cash and cash equivalents earning interest and certain variable rate debt instruments are subject to interest rate fluctuations. The following table sets forth the probable impact of a 10% change in interest rates (in thousands):

Instrument	Balance as of December 31, 2006	Current Interest Rate	Projected Annual Interest Income/(Expense)	Proforma 10% Interest Rate Decline Income/(Expense)	Proforma 10% Interest Rate Increase Income/(Expense)
Cash	$ 6,892	0.50 %	$ 34	$ 31	$ 38
Cash equivalents	9,224	5.23	482	434	531
Investment in debt and equity instruments	26,578	4.52	1,201	1,081	1,321
Long-term debt	(7,289)	5.47	(399)	(359)	(439)
			$ 1,318	$ 1,187	$ 1,451

Equity Risk

We maintain minority investments in privately-held companies. These investments are reviewed for other than temporary declines in value on a quarterly basis. These investments are classified as other assets in the consolidated balance sheets and are accounted for under the cost method as we do not have the ability to exercise significant influence over their operations. We monitor our investments for impairment and record reductions in carrying value when events or changes in circumstances indicate that the carrying

value may not be recoverable. Reasons for other than temporary declines in value include whether the related company would have insufficient cash flow to operate for the next twelve months, significant changes in the operating performance and changes in market conditions. As of December 31, 2006 and 2005, the minority investments totaled $0.4 million for both years. In 2004, we recorded a $0.2 million charge related to impairment in one of the U.S. private companies.

Item 8. *Consolidated Financial Statements and Supplementary Data*

The consolidated financial statements, related notes thereto and financial statement schedule required by this item are listed and set forth beginning on page 57, and is incorporated by reference here. Supplementary financial information regarding quarterly financial information required by this item is set forth under the caption Quarterly Results of Operations in Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations, and is incorporated by reference here.

Item