

GSI GROUP INC
Form 424B3
October 23, 2008
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Filed Pursuant to Rule 424(b)(3)
Registration No. 333-154157

PROSPECTUS

GSI GROUP INC.

5,882,520 Common Shares

The selling stockholders named in this prospectus on page 19 below are offering to sell up to an aggregate of 5,882,520 common shares, no par value, of GSI Group Inc. We issued these common shares to the selling stockholders upon the automatic exercise of warrants to purchase our common shares for \$0.01 per share, which may be on a cashless basis, concurrently with the effective time of the registration statement of which this prospectus is a part. On August 20, 2008, we issued these warrants to the selling stockholders in a private placement and agreed to register the common shares issuable upon exercise of these warrants for resale under the Securities Act of 1933, as amended, pursuant to the registration statement of which this prospectus is a part. We will not receive any proceeds from the sale of the common shares that may be sold by the selling stockholders.

The selling stockholders may sell all or a portion of the common shares beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the common shares are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The common shares may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. We provide more information about how the selling stockholders may sell their common shares in the section entitled "Plan of Distribution" beginning on page 22 of this prospectus. We have agreed to pay all expenses in connection with the registration of these common shares.

Our common shares are traded on the NASDAQ Global Select Market under the symbol "GSIG". On October 22, 2008, the NASDAQ official closing price of our common shares was \$2.25 per share.

Investing in our common shares involves a high degree of risk. See "Risk Factors" beginning on page 4 of this prospectus to read about factors you should consider before buying our common shares.

Neither the Securities and Exchange Commission, also referred to herein as the "SEC" or "Commission", nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

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The date of this prospectus is October 23, 2008.

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ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus and any accompanying prospectus supplement. We have not, and the selling stockholders have not, authorized any dealer, salesperson or other person to provide you with information different from that contained in this prospectus. The selling stockholders are offering to sell, and seeking offers to buy, our common shares only in jurisdictions where it is lawful to do so. The information in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common shares. Our business, financial condition, results of operations and prospects may have changed since that date.

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PROSPECTUS SUMMARY

*This summary highlights information contained elsewhere or incorporated by reference into this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our common shares. You should read this entire prospectus carefully, including the section entitled *Risk Factors* and the documents that we incorporate by reference into this prospectus, before making an investment decision. As used in this prospectus, unless otherwise specified or the context requires otherwise, the terms *GSI*, *the Company*, *we* or *us* refer to GSI Group Inc. and its subsidiaries. References to *selling stockholders* refer to the holders listed herein under *Selling Stockholders* beginning on page 19, who may sell shares from time to time as described in this prospectus.*

GSI GROUP INC.

Overview

GSI Group Inc. designs, develops, manufactures and sells lasers, laser systems, electro-optical and precision motion control components, air bearings, printers, color calibration devices and specialty optics. Our customers incorporate our technology into their products or manufacturing processes, for a wide range of applications in the industrial, electronics, semiconductor, biomedical, medical and aerospace markets. Our products allow customers to make advances in materials and processing technology and to meet extremely precise manufacturing specifications, including device complexity and miniaturization.

GSI Group Inc., founded in 1968 as General Scanning, Inc., was incorporated in Massachusetts. General Scanning developed, manufactured and sold components and subsystems for high-speed micro positioning of laser beams. In 1999, General Scanning merged with Lumonics Inc., a Canadian company that developed, manufactured and sold lasers and laser-based, advanced manufacturing systems for electronics, semiconductor, and general industrial applications. GSI Lumonics Inc., the post-merger entity, incorporated under the laws of New Brunswick, Canada. In 2005, the Company renamed itself GSI Group Inc. GSI has manufacturing operations in North America, the United Kingdom and China, and sales and service offices in various locations around the world. GSI also has contractual relationships with various domestic and foreign distributors and resellers. As set forth more fully below, in August 2008, GSI acquired Excel Technology, Inc., a manufacturer of lasers, laser-based systems and precision motion devices.

Recent Transactions

Excel Technology, Inc. (*Excel*) develops, manufactures and sells lasers, laser-based systems and precision motion devices. Excel manufactures its products in plants located in the United States and sells its products to customers worldwide, both directly and indirectly through resellers and distributors. On June 30, 2008, the Company formed Eagle Acquisition Corporation (*EAC*), a Delaware corporation and an indirect wholly owned subsidiary. On July 9, 2008, the Company and EAC entered into a merger agreement with Excel. On July 23, 2008, the Company commenced a tender offer to have EAC acquire all of Excel's outstanding common stock for \$32 per share, and thereafter to merge with and into Excel, with Excel surviving the merger and becoming an indirect wholly owned subsidiary of the Company. On August 29, 2008, the Company completed the Excel acquisition for approximately \$360 million, exclusive of transaction costs.

On July 9, 2008, the Company and GSI Group Corporation, a wholly owned subsidiary, entered into a securities purchase agreement with the selling stockholders pursuant to which: (1) the Company issued and sold warrants to purchase up to an aggregate of 5,882,520 of GSI common shares at an exercise price of \$0.01 per share,

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payable in cash or by withholding of a certain number of common shares; and (2) GSI Group Corporation issued and sold \$210,000,000 aggregate principal amount of 11.0% Senior Notes due 2013. The financing transaction closed on August 20, 2008, and the net proceeds were used to partially fund the Excel cash tender offer. The warrants were issued to the selling stockholders pursuant to a warrant agreement dated August 20, 2008. The Company intends to issue the common shares to the selling stockholders upon the automatic exercise of their warrants, which is expected to happen concurrently with the effective time of the registration statement of which this prospectus forms a part.

On August 20, 2008, the Company also entered into a registration rights agreement with the selling stockholders. The registration rights agreement requires the Company to file a registration statement of which this prospectus is a part and to use reasonable best efforts to cause the registration statement to become or be declared effective by October 28, 2008, or, if the SEC elects to review this registration statement, by November 12, 2008.

The merger agreement, the securities purchase agreement, the notes, the warrants, the warrant agreement and the registration rights agreement are more fully described in the Company's Current Reports on Form 8-K filed with the SEC on July 11, 2008 and August 21, 2008. The foregoing description of the merger agreement, the securities purchase agreement, the notes, the warrants, the warrant agreement and the registration rights agreement is qualified in its entirety by reference to the actual agreements, each of which was included as an exhibit to the Company's Current Report on Form 8-K filed with the SEC on July 11, 2008 and/or August 21, 2008, as applicable.

Company Information

Our principal executive offices are located at 125 Middlesex Turnpike, Bedford, Massachusetts 01730 and our main telephone number is (781) 266-5700. Our website address is www.gsig.com. We do not incorporate by reference into this prospectus the information on our website, and you should not consider it as part of this prospectus.

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THE OFFERING

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|---|--|
| Securities Offered | Up to 5,882,520 common shares by the selling stockholders. |
| Common Shares Outstanding as of October 6, 2008 | 41,709,379 shares. |
| Common Shares Outstanding After the Offering | 47,591,899 shares. |
| Use of Proceeds | We will not receive any of the proceeds from the selling stockholders' sale of the common shares covered by this prospectus. |
| Risk Factors | Investing in our common shares involves a high degree of risk. See Risk Factors beginning on page 4 of this prospectus. |
| NASDAQ Global Select Market Symbol | GSIG. |

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RISK FACTORS

Investing in our common shares involves a high degree of risk. You should consider carefully the risk factors described below, and all other information contained in or incorporated by reference in this prospectus, before deciding to invest in our common shares. If any of the following risks actually occur, the market price of our common shares could decline, and you could lose all or part of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations and could result in a complete loss of your investment.

Risks Related to GSI Group

Merger with Excel

Our failure to successfully integrate Excel into our business may cause us to fail to realize the expected synergies and other benefits of the acquisition, which could adversely affect our future results.

The integration of Excel into our business presents significant challenges and risks to our businesses, including:

distraction of management from regular business concerns;

assimilation and retention of employees and customers of both GSI and Excel;

integration of technologies, services and products; and

achievement of appropriate internal control over financial reporting.

We may fail to successfully complete the integration of Excel into our business and, as a result, may fail to realize the synergies, cost savings and other benefits expected from the acquisition. We may fail to grow and build revenues and profits in Excel's business lines or achieve sufficient cost savings through the integration of customers or administrative and other operational activities. Furthermore, we must achieve these objectives without adversely affecting our revenues. If we are not able to successfully achieve these objectives, the anticipated benefits of the acquisition may not be realized fully or at all, or it may take longer to realize them than expected, and our results of operations could be materially adversely affected.

Excel's performance may not be in accordance with our expectations.

Despite our due diligence efforts, our assessment of the prospects for Excel's business are subject to the risk associated with those businesses as described in Excel's filings with the SEC, many of which are similar to the risks we face in our businesses and which are described below. Also, our ability to maintain and increase profitability of Excel's business lines will depend on our ability to manage and control operating expenses and to generate and sustain increased levels of revenue. Our expectations to achieve more consistent and predictable levels of revenue and to increase Excel's profitability may not be realized, and such revenues and profitability may decline as we integrate Excel's operations into our business. If Excel's revenues grow more slowly than we anticipate, or if its operating expenses are higher than we expect, we may not be able to sustain or increase its profitability, in which case our financial condition will suffer and our stock price could decline.

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Our substantial indebtedness could adversely affect our business and limit our ability to plan for or respond to changes in our business or in the competitive landscape.

As of September 26, 2008, the Company had consolidated indebtedness of approximately \$210 million, all of which represents the debt incurred by GSI Group Corporation in connection with the Excel transaction. The Company's consolidated debt could have important and potentially materially adverse consequences on the Company's business, including the following:

increasing our vulnerability to general adverse economic and industry conditions;

requiring us to dedicate a substantial portion or, depending on our operating results, virtually all, of our cash flow from operations to payments on our indebtedness, thereby reducing or eliminating the availability of our cash flow for other purposes, and possibly requiring us to dispose of assets to obtain cash for other uses to the extent permitted under the terms of the indenture pursuant to which the notes were issued;

limiting our flexibility in planning for, or reacting to, changes in our business and the industry in which we operate, thereby placing us at a competitive disadvantage compared to our competitors that may have less debt;

limiting, by the financial and other restrictive covenants in the trust indenture under which the notes were issued, our ability to borrow additional funds; and

if we are unable to pay interest or principal amounts when due or we fail to comply with the covenants in the trust indenture under which the notes were issued, that failure could result in an event of default which, if not cured or waived, could make the Excel acquisition debt immediately due and payable, which would materially and adversely affect our business and financial condition.

Market Volatility

Our business depends significantly upon capital expenditures which are subject to cyclical market fluctuations.

The semiconductor and electronics materials processing industries are cyclical and have historically experienced periods of oversupply, resulting in downturns in demand for capital equipment, including the products that we manufacture. The timing, length and severity of these cycles, and their impact on our business, are difficult to predict. Further, our order levels or results of operations for a given period may not be indicative of order levels or results of operations for subsequent periods. We can not assure investors that demand for our products will increase or that demand will not decrease. For the foreseeable future, our operations will continue to depend upon industries that are subject to market cycles, which, in turn, could adversely affect the market for the Company's products.

Cyclical variations may have the most pronounced effect on our semiconductor systems segment, which has a concentration in the semiconductor and electronics industries.

There is no assurance that we will not be impacted from a slowdown as we have experienced in previous cyclical fluctuations or that the impact will be more or less significant compared to historical fluctuations.

Our business success depends upon our ability to respond to fluctuations in product demand.

If business declines, we may be required to reduce costs while at the same time maintaining the ability to motivate and retain key employees. We must also continually invest in research and development which may inhibit our ability to reduce costs in a down cycle. Additionally, long product lead-times create a risk that we may purchase or manufacture inventories of products that we are unable to sell. While we practice inventory management, we can offer no assurances that our efforts to mitigate this risk will be successful.

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During a period of increasing demand and rapid growth, we must be able to increase manufacturing capacity quickly.

Our inability to quickly increase production in response to a surge in demand could harm our reputation and prompt customers to look for alternative sources of supply.

New Product Introduction

The success of our business requires that we continually innovate.

Technology requirements in our markets are consistently advancing. We must continually introduce new products that meet evolving customer needs. Our ability to grow depends on the successful development, introduction and market acceptance of new or enhanced products that address our customer's requirements. Developing new technology is a complex and uncertain process requiring us to accurately anticipate technological and market trends and meet those trends with responsive products. Additionally, this requires that we manage the transition from older products to minimize disruption in customer ordering patterns, avoid excess inventory and ensure adequate supplies of new products. Failed market acceptance of new products or problems associated with new product transitions could harm our business.

Delays in delivery of new products could have a negative impact on our business.

Our research and development efforts may not lead to the successful introduction of products within the time period our customers demand. Additionally, our competitors may introduce new or improved products, processes or technologies that make our current or proposed products obsolete or less competitive.

In addition, we may encounter delays or problems in connection with our research and development efforts. Product development delays may result from numerous factors, including:

changing product specifications and customer requirements;

the inability to manufacture products cost effectively;

difficulties in reallocating engineering resources and overcoming resource limitations;

changing market or competitive product requirements; and

unanticipated engineering complexities.

New products often take longer to develop, have fewer features than originally considered desirable and achieve higher cost targets than initially estimated. There may be delays in starting volume production of new products and/or new products may not be commercially successful.

Financial Matters

There may be a failure to properly identify when revenue should be recognized, leading to a material adverse effect on financial results.

The Company has multiple locations, in various countries, where orders are entered. Entry, shipment and invoicing of an order that is premature may result in revenue being recognized earlier than required by generally accepted accounting principles. To mitigate this risk, the Company reviews large systems orders for revenue recognition issues before they are booked. Additionally, the Company is putting in place more stringent processes to identify revenue recognition treatment on all orders.

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Failure of internal controls or inability to identify or manage a key internal control could have a material adverse effect on our operating results.

We mitigate this risk by employing internal auditors to document and test our internal control procedures pursuant to Section 404 of the Sarbanes-Oxley Act. If we fail to achieve and maintain the adequacy of our internal controls, we may not be able to conclude that we have effective internal controls over financial reporting in accordance with Section 404. Effective internal controls, particularly those related to revenue recognition, are necessary for us to produce reliable financial reports and are important to prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, as investors could lose confidence in our reported financial information.

Our effective tax rates are subject to fluctuation, which could impact our financial position, and our estimates of tax liabilities may be subject to audit, which could result in additional tax assessments.

Our effective tax rates are subject to fluctuation as the income tax rates for each year are a function of taxable income levels in numerous tax jurisdictions, our ability to utilize recorded deferred tax assets, taxes or penalties resulting from tax audits and credits and deductions as a percentage of total taxable income. Further, tax law changes may cause our effective tax rates to fluctuate between periods.

Customer order timing and other factors beyond our control may lead to an inability to meet our financial forecasts.

Changes in customer order timing and the existence of certain other factors beyond our control may lead to our inability to meet financial forecasts. Such factors include:

fluctuations in our customers' businesses;

timing and recognition of revenues from customer orders;

timing and market acceptance of new products or enhancements introduced by us or our competitors;

availability of parts from our suppliers and the manufacturing capacity of our subcontractors;

timing and level of expenditures for sales, marketing and product development;

changes in the prices of our products or of our competitors' products; and

fluctuations in exchange rates for foreign currency.

A large percentage of our sales come from products with high selling prices and significant lead times. We may receive several large orders in one quarter from a customer and then receive no orders from that customer in the next quarter. As a result, the timing and recognition of sales from customer orders can cause significant fluctuations in our operating results from quarter to quarter.

A delay in a shipment or failure to meet our revenue recognition criteria near the end of a reporting period due, for example, to rescheduling or cancellations by customers or to unexpected difficulties experienced by us, may cause sales in the period to fall significantly below expectations and may have materially adverse effects on our operations for that period. Our inability to adjust quickly enough could magnify the adverse effects of that revenue shortfall on our results of operations.

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As a result of these factors, our results of operations for any quarter are not necessarily indicative of results to be expected in future periods. We believe that fluctuations in quarterly results may cause the market prices of our common shares traded on the NASDAQ Global Select Stock Market to fluctuate, perhaps substantially.

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GSIG maintains cash balances and foreign exchange contracts where significant changes in interest rates, credit ratings or foreign currency rates could result in materially adverse effects to income.

The Company has cash, cash equivalents and foreign exchange contracts that total in the millions of dollars. These balances create financial exposure to changing interest and currency rates. The Company has attempted to mitigate these risks by both purchasing foreign exchange contracts and investing in government issued treasury bills. However, if long term interest rates or foreign currency rates were to change rapidly, the Company could incur material losses. Further, if management chooses to invest in less risk adverse investment vehicles, the risk of losing principle and/or interest could increase. Additionally, Excel owns certain auction rate securities for which there is no current market. Until such time as the auction rate securities market reopens, there is no assurance that these investments can become liquid.

International Operations

Our operations in foreign countries subject us to risks not faced by companies operating exclusively in the United States.

During the year ended December 31, 2007, approximately 68% of our revenue was derived from operations outside North America. International operations are an expanding part of our business both from a sales focus and an operating base.

Because of the scope of our international operations, we are subject to risks, which could materially impact our results of operations, including:

foreign exchange rate fluctuations;

social unrest in countries where we operate;

climatic or other natural disasters in regions where we operate;

increases in shipping costs or increases in fuel costs;

longer payment cycles;

acts of terrorism;

greater difficulty in collecting accounts receivable;

use of incompatible systems and equipment;

problems staffing and managing foreign operations in diverse cultures;

protective tariffs;

trade barriers and export/import controls;

transportation delays and interruptions;

reduced protection for intellectual property rights in some countries; and

the impact of recessionary foreign economies.

We cannot predict whether the United States or any other country will impose new quotas, tariffs, taxes or other trade barriers upon the importation of our products or supplies or gauge the effect that new barriers would have on our financial position or results of operations.

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There are inherent risks as we increase our focus on overseas operations.

GSI currently manufactures certain of its products in plants in the United Kingdom and China. Manufacturing in overseas locations creates risks to the Company, including that we may not be able to produce products to the quality standards or deliver products on time as our customers have come to expect. This possibility may come about due to an inability to find qualified personnel overseas. It is also possible that after an overseas transition, we may find that we have been producing products with latent defects that come to light only after a long period of operation. Transitioning a business to an overseas location has many additional risks such as developing solid financial, enterprise resource planning (ERP) and customer relationship management (CRM) systems.

Economic, political or trade problems with foreign countries could negatively impact our business.

We are increasingly outsourcing the manufacture of sub assemblies to suppliers based in China and elsewhere overseas. Economic, political or trade problems with foreign countries could substantially impact our ability to obtain critical parts needed in the timely manufacture of our products.

Customs rules are complex and vary within legal jurisdictions in which we operate. Failure to comply with local customs regulations could be found during a foreign government customs audit that may produce a substantial penalty.

Customs rules are complex and vary within legal jurisdictions in which we operate and there can be no assurance that there will be no control failure around customs enforcement despite the precautions we take. A failure with local customs regulations could be found during a foreign government customs audit and could result in a substantial penalty and a material impact on our financial results. We seek to mitigate this risk by maintaining export control systems and an internal customs staff charged with the responsibility of strictly complying with all applicable import/export laws. Further, we maintain arms length transactions with our foreign subsidiaries and their customers.

Economic Conditions

A halt in economic growth or a slowdown will put pressure on our ability to meet anticipated revenue levels.

A large portion of our sales is dependent on the need for increased capacity or replacement of inefficient manufacturing processes, because of the capital-intensive nature of our customers' businesses. These sales also tend to lag behind in an economic recovery longer than other businesses. If a down turn lasts longer than expected, if a recovery does not begin or if a general economic slowdown commences, we may not be able to meet anticipated revenue levels on a quarterly or annual basis.

Debt Service

If the Company is unable to retire debt early, it may affect strategic options.

In connection with the acquisition of Excel, GSI borrowed \$210 million, the proceeds of which were used to partially fund the Excel transaction. The loan agreement pursuant to which such funds were borrowed requires GSI to make twice annual debt service payments, and to retire the debt fully after five years. While GSI hopes to retire the debt in advance of that date, it is possible that this will not happen, and that GSI will be required to continue making substantial debt service payments throughout the term of the loan, affecting the Company's business and strategic options.

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Sustainable Profitability

If the Company is not able to grow, the business will be at greater risk to operate independently.

As a publicly traded company, GSIG is competing for capital and investment against larger companies. As a company with a relatively low level of stock capitalization, GSIG is at a disadvantage. Its cost of capital is higher than larger companies and it has less of a base to spread the operating costs that all public companies face. Examples of these costs include Sarbanes-Oxley and audit costs. If GSIG can not grow its revenues and spread these costs across a larger revenue base, it will be at a competitive disadvantage and potentially subject to a takeover bid from a larger company. We can not assure investors such a situation would be in stockholders' best interests.

GSIG has a history of operating losses. The Company may not be able to sustain or grow the current level of profitability.

Since the second half of 2003, we have generated profits from operations. However, we incurred operating losses on an annual basis from 1998 through 2003. No assurances can be given that we will sustain or increase the level of profitability in the future based on extrinsic market forces, and the market price of our common shares may decline as a result.

We could lose some or all of the benefit of our deferred tax assets if our future profitability comes into question.

In determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our net deferred tax assets require subjective judgment and analysis. We consistently evaluate our current deferred tax assets based on profitability in 2008 and beyond. Our ability to maintain our deferred tax assets depends upon our ability to continue to generate future profits in the United States, Canada, Germany, Japan and United Kingdom tax jurisdictions. If actual results differ from our plans or we do not achieve the desired level of profitability in a given jurisdiction, we may be required to increase the valuation allowance on our tax assets by taking a charge to the Statement of Operations, which could have a material negative result on our financial results.

Business Partnerships

Our reliance upon third party distribution channels subjects us to credit, inventory, business concentration and business failure risks beyond our control.

We sell products through resellers, distributors, original equipment manufacturers (OEMs) and system integrators. Excel sells certain of its lasers through a 50% owned Indian joint venture. Selling products through third parties can subject the Company to credit and business risks. Our sales also depend upon the ability of our OEM customers to develop and sell systems that incorporate our products. Adverse economic conditions, large inventory positions, limited marketing resources and other factors influencing these OEM customers could have a substantial impact upon our financial results. We can not assure investors that our OEM customers will not experience financial or other difficulties that could adversely affect their operations and, in turn, our financial condition or results of operations.

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Intellectual Property

We are exposed to the risks that others may violate our intellectual property rights.

Our future success depends in part upon our intellectual property rights, including trade secrets, know-how and continuing technological innovation. There can be no assurance that the steps we take to protect our intellectual property rights will be adequate to prevent misappropriation, or that others will not develop competitive technologies or products outside of our patented property. There can be no assurance that other companies are not investigating or developing other technologies that are similar to ours, that any patents will issue from any application filed by us or that, if patents do issue, the claims allowed will be sufficiently broad to deter or prohibit others from marketing similar products. In addition, there can be no assurance that any patents issued to us will not be challenged, invalidated or circumvented in a legal or administrative proceeding, or that our patents and know how will provide a competitive advantage to us.

Our intellectual property rights may not be protected in foreign countries.

Our efforts to protect our intellectual property rights may not be effective in some foreign countries where we operate or sell. Many U.S. companies have encountered substantial problems in protecting their property rights against infringement in foreign countries. If we fail to adequately protect our intellectual property in these countries, it could be easier for our competitors to sell competing products in foreign countries.

Our success depends upon our ability to protect our intellectual property and to successfully defend against claims of infringement by third parties.

We have received in the past, and could receive in the future, notices from third parties alleging that our products infringe patent or other proprietary rights. We believe that our products are non-infringing or that we have the patents and/or licenses to allow us to lawfully sell our products throughout the world. However, we may be sued for infringement. In the event any third party makes a valid claim against us or our customers for which a license was not available to us on commercially reasonable terms, we would be adversely affected. Adverse consequences may also apply to our failure to avoid litigation for infringement or misappropriation of proprietary rights of third parties.

Competition

We operate in highly competitive industries, and if we lose competitive advantages, our business would suffer adverse consequences.

Some of our competition comes from established competitors, some of which have greater financial, engineering, manufacturing and marketing resources than we do. Our competitors will continue to improve the design and performance of their products and introduce new products. It is possible that we may not successfully differentiate our current and proposed products from the products of our competitors, or that the marketplace will not consider our products to be superior to competing products. To remain competitive, we will be required to invest heavily in research and development, marketing and customer service and support. It is also possible that we may not be able to make the technological advances necessary to maintain our competitive position, or our products will not receive market acceptance. We may not be able to compete successfully in the future, and increased competition may result in price reductions, reduced profit margins, loss of market share and an inability to generate cash flows that are sufficient to maintain or expand our development of new products.

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Mergers and Acquisitions

Our business strategy includes finding and making strategic acquisitions and divestitures. There can be no assurance that we will be able to continue to make acquisitions that provide business benefit.

In 2007, we acquired an optics business in the United Kingdom. We acquired Excel in August 2008 and sold a U.S. optics business in September 2008. We expect to continue to evaluate potential acquisitions and divestitures as part of our long-term strategic plan. Our identification of suitable acquisition candidates involves risks inherent in assessing the values, strengths, weaknesses, risks, synergy and profitability of acquisition candidates, including the effects of the possible acquisition on our business, diversion of management's attention from our core businesses and risks associated with unanticipated problems or liabilities. We cannot assure investors our efforts will be sufficient, or that acquisition candidates will be receptive to our advances or that any acquisition we may make would be accretive to earnings. We also cannot assure investors that we will find suitable purchasers in the event that we identify a potential divestiture candidate in the future.

Integrating an acquisition could have significant disruptive consequences on our existing operations.

As with any acquisition, those persons selling have an advantage in better understanding the specific markets and their associated direction. They also better know the strengths and weaknesses of the business they are selling. We attempt to mitigate these risks by focusing our attention on the acquisition of businesses, technologies and products that have current relevancy to our existing lines of business and that are complementary to our existing product lines. However, we may not be successful in addressing these risks, or the risks associated with the potential entrance into markets in which we have limited or no prior experience. We could lose key employees, particularly those of the acquired business, in connection with an acquisition.

Key Personnel

GSI is undergoing a leadership transition.

Subsequent to the Excel transaction, GSI has been reviewing its management structure, and has reviewed, and may continue to review, its business and organizational structure. There are risks associated with changes in strategy and management at the executive and/or director level, and changes in product or operational focus. There can be no assurance that prospective management changes will not have a material effect on the Company.

Our operations could be negatively affected if we lose key executives or employees or are unable to attract and retain skilled executives and employees as needed.

Our business and future operating results depend in part upon our ability to attract, groom and retain qualified management, technical, sales and support personnel for our operations on a worldwide basis. The loss of key personnel could negatively impact our operations. Competition for qualified personnel is intense and we cannot guarantee that we will be able to continue to attract, train and retain qualified personnel.

Our reputation and our ability to do business may be impaired by improper conduct by any of our employees, agents or business partners.

We cannot provide assurance that our internal controls will always protect us from reckless or criminal acts committed by our employees, agents or business partners that would violate US and/or non-US laws, including the laws governing payments to government officials, competition, money laundering and data privacy. Any such improper actions could subject us to civil or criminal investigations in the US and in other jurisdictions, and could lead to substantial civil or criminal, monetary and non monetary penalties against us or our subsidiaries.

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Operations

We expect to be consolidating some of our operations for greater efficiency.

There is execution risk in these plans. We can not assure investors that economies of scale will or can be realized as a result of any planned consolidation. This move will take time and will include substantial operational risks, including the possible disruption of manufacturing lines. We can not assure investors that any moves would not disrupt business operations or have a material impact on results.

In addition, any decision to limit investment in, dispose of or otherwise exit business activities may result in the recording of special charges, such as technology write-offs, workforce reduction costs, or charges relating to consolidation of excess facilities. Our estimates with respect to the useful life or ultimate recoverability of our carrying basis of assets, including intangible assets, could change as a result of such decisions. Further, our estimates related to the liabilities for excess facilities are affected by changes in real estate market conditions. Additionally, we are required to perform goodwill impairment tests on an annual basis and during the year in certain circumstances. There can be no assurance that future goodwill impairment tests will not result in a change to earnings.

We have recently undergone a significant restructuring and we will continue to change our management structure.

Our ability to reduce operating expenses is dependent upon the nature of the actions we take to reduce expense and subsequent ability to implement those actions and realize expected cost savings. In the past year, management took significant actions to expand our operations in China and to reduce expenses, particularly within GSI's U.S.-based organization and in the United Kingdom. There can be no assurance that these actions will provide economic benefit to the Company. Further, there is a risk that these actions may ultimately prove detrimental to operations and sales, or to our intellectual property protections.

Product defects or problems with integrating our products with other vendors' products may seriously harm our business and reputation.

Complex products that we produce can contain latent errors or performance problems. There have been instances where we have found errors immediately after launch of new products, and there have been instances where we have also found latent errors in our products. We cannot always resolve all errors that we believe would be considered serious by our customers before implementation, thus our products are not error-free. These errors or performance problems could be detrimental to our business and reputation. In addition, customers frequently integrate our products with other vendors' products. When problems occur in a combined environment, it may be difficult to identify the source of the problem. These problems may cause us to incur significant warranty and repair costs, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems. To date, defects in our products or those of other vendors' products with which our products are used by our customers have not had a material negative effect on our business. However, we cannot be certain that a material negative impact will not occur in the future.

We depend on limited source suppliers that could cause substantial manufacturing delays if supply disruption occurs.

Many of our products are manufactured with components that are designed by an outside supplier to our specifications. While we attempt to mitigate risks associated with our reliance on single suppliers by actively managing our supply chain, we still source some components from single vendors. We also rely on a limited number of independent contractors to manufacture subassemblies for some of our products, particularly in our Semiconductor Systems. There can be no assurance that our current or alternative sources will be able to continue to meet all of our demands on a timely basis. If suppliers or subcontractors experience difficulties, or fail to meet any

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of our manufacturing requirements, our business would be harmed until we are able to secure alternative sources, if any, on commercially reasonable terms.

We also depend on suppliers that provide high precision parts.

Any of these parts that have latent or known defects, may materially impact relations with our customers if they cause us to miss our scheduled shipment deadlines. If latent defects are incorporated into our products and discovered later, there could be a material impact on our revenues. We seek to reduce the risk of defects by selecting and qualifying alternative suppliers for key parts, and by monitoring the quality of products coming from key suppliers.

Production difficulties and product delivery delays could materially adversely affect our business.

We assemble our products at our facilities in the United States, the United Kingdom and China. If use of any of our manufacturing facilities was interrupted by a natural disaster or otherwise, our operations could be negatively impacted until we could establish alternative production and service operations. In addition, we may experience production difficulties and product delivery delays in the future as a result of:

mistakes made while transferring manufacturing processes between locations;

changing process technologies;

ramping production;

installing new equipment at our manufacturing facilities; and

shortage of key components.

Governance

Certain provisions of our articles of incorporation may delay or prevent a change in control of our company.

Our corporate documents and our existence as a corporation under the laws of New Brunswick subject us to provisions of Canadian law that may enable our board of directors to resist a change in control of our company. These provisions include:

limitations on persons authorized to call a special meeting of stockholders;

advance notice procedures required for stockholders to nominate candidates for election as directors or to bring matters before an annual meeting of stockholders; and

a shareholder rights plan.

These anti-takeover defenses could discourage, delay or prevent a transaction involving a change in control of our company. These provisions could also discourage proxy contests and make it more difficult for stockholders to elect directors of their choosing and cause us to take other corporate actions that stockholders desire.

Compliance with changing regulation of corporate governance and public disclosure may result in additional expenses.

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Changing laws, regulations and standards relating to corporate governance and public disclosure, including the Sarbanes-Oxley Act of 2002, new regulations promulgated by the SEC and the rules of the NASDAQ Global Select Market, are resulting in increased general and administrative expenses for companies such as ours. These new or changed laws, regulations and standards are subject to varying interpretations in many cases, and as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies,

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which could result in higher costs necessitated by ongoing revisions to disclosure and governance practices. We are committed to maintaining high standards of corporate governance and public disclosure. As a result, we intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities. If our efforts to comply with new or changed laws, regulations and standards differ from the activities intended by regulatory or governing bodies, our business may be harmed.

Regulation

Increased governmental regulation of our business could materially adversely affect our business.

We are subject to many governmental regulations, including but not limited to the laser radiation safety regulations of the Radiation Control for Health and Safety Act administered by the National Center for Devices and Radiological Health, a branch of the United States Food and Drug Administration, and certain health regulations related to the manufacture of products using beryllium, an element used in some of our structures and mirrors. Among other things, these regulations require us to file annual reports, to maintain quality control and sales records, to perform product testing, to distribute appropriate operating manuals, to incorporate design and operating features in products sold to end-users and to certify and label our products. Various warning labels must be affixed and certain protective devices installed depending on the class of product. We are subject to regulatory oversight, including comparable enforcement remedies, in the markets we serve.

Changes in governmental regulations may reduce demand for our products or increase our expenses.

We compete in many markets in which we and our customers must comply with federal, state, local and international regulations, such as environmental, health and safety and food and drug regulations. We develop, configure and market our products to meet customer needs created by those regulations. Any significant change in regulations could reduce demand for our products, which in turn could materially adversely affect our business, operating results and financial condition.

Risks Relating to Ownership of Our Common Shares

Holders of our common shares are subject to the risk of additional and substantial dilution to their interests as a result of future issuances of common shares.

Upon the effectiveness of the registration statement of which this prospectus forms a part, warrants to purchase up to an aggregate of 5,882,520 of our common shares for \$0.01 per share will be automatically exercised and 5,882,520 of the Company's common shares will be issued as a result. This issuance will be dilutive to existing stockholders.

In the future, we may issue additional equity securities to raise capital and our stock option holders may exercise all or some of the options that are outstanding or may be outstanding. These additional issuances would also dilute existing share ownership.

The market price of our common shares has been and may continue to be subject to wide fluctuations, and this may make it difficult for you to resell the common shares when you want or at prices you find attractive.

Our stock price historically has been, and may continue to be, volatile. Various factors contribute to the volatility of the stock price, including:

announcements of quarterly operating results and revenue and earnings forecasts by us, our competitors or our customers;

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failure to achieve financial forecasts, either because expected sales do not occur or because they occur at lower prices or on terms that are less favorable to us;

rumors, announcements or press articles regarding changes in our management, organization, operations or prior financial statements;

changes in revenue and earnings estimates by securities analysts;

announcements of planned acquisitions by us or by our competitors;

announcements of new or planned products by us, our competitors or our customers;

gain or loss of a significant customer;

inquiries by the SEC, NASDAQ, law enforcement or other regulatory bodies; and

acts of terrorism, the threat of war and economic slowdowns in general.

While we cannot predict the individual effect that these factors may have on the market price of our common shares, these factors, either individually or in the aggregate, could result in significant volatility in our stock price during any given period of time. Additionally, the stock market has recently experienced extreme price volatility, which has adversely affected and may continue to adversely affect the market price of our common shares for reasons unrelated to our business or operating results.

Future sales of a substantial number of our common shares in the public market, including the shares offered pursuant to this prospectus, could adversely affect the trading price of our shares and impair our ability to raise funds in future stock offerings.

Future sales of a substantial number of our common shares in the public market, including the shares to be offered pursuant to this prospectus and other resale prospectuses and shares available for resale under Rule 144 under the Securities Act, or the perception that such sales could occur, could adversely affect the prevailing market price of our common shares and could make it more difficult for us to raise additional capital through the sale of equity securities.

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FORWARD-LOOKING STATEMENTS

This prospectus and the information we incorporate by reference into this prospectus contain certain forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended (the Securities Act) and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). These forward-looking statements may relate to anticipated financial performance, management's plans and objectives for future operations, business prospects, outcome of regulatory proceedings, market conditions, tax issues and other matters. All statements contained or incorporated by reference in this prospectus that do not relate to matters of historical fact should be considered forward-looking statements, and are generally identified by words such as anticipate, believe, estimate, expect, intend, plan, objective and other similar expressions. Investors should not place undue reliance on the forward-looking statements contained or incorporated by reference in this prospectus. Such statements are based on management's beliefs and assumptions and on information currently available to management and are subject to risks, uncertainties and changes in condition, significance, value and effect. Some of the risks and uncertainties that may cause actual results to differ materially from those contained in the statements include the following:

the risk that anticipated synergies and opportunities as a result of the merger with Excel will not be realized;

difficulty or unanticipated expenses in connection with integrating Excel into GSIG;

the risk that the acquisition does not perform as planned, including the risk that GSIG will not achieve revenue projections;

the inability to retain key employees of either company;

the fact that each of the companies' sales have been and are expected to continue to be dependent upon customer capital equipment expenditures, which are, in turn, affected by business cycles in the markets served by those customers;

volatility in the semiconductor and printed circuit board industries;

the risk of order delays and cancellations;

the risk of delays by customers in introducing their new products and market acceptance of products incorporating subsystems supplied by the companies;

risks of currency fluctuations;

risks to the companies of delays in new products;

our ability to continue to reduce costs and capital expenditures;

our ability to focus R&D investment and integrate acquisitions;

changes in applicable accounting standards;

tax regulations or other external regulatory rules and standards; and

other risks detailed in reports and documents filed by the companies with the SEC and by GSIG with securities regulatory authorities in Canada.

Such risks, uncertainties and changes in condition, significance, value and effect, many of which are beyond GSIG's control, could cause the company's actual results and other future events to differ materially from those anticipated. GSIG does not, however, assume any obligation to update these forward-looking statements to reflect actual results, changes in assumptions or changes in other factors affecting such forward-looking statements. The risks and uncertainties under the caption "Risk Factors" contained herein, among other things, should be considered in evaluating our prospects and future financial performance. All forward-looking statements included in this prospectus are made as of the date hereof.

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USE OF PROCEEDS

We will not receive any of the proceeds from the sale of common shares by the selling stockholders pursuant to this prospectus. We will incur all costs associated with this registration statement, which are currently estimated to be approximately \$99,608.01.

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On August 20, 2008, we completed a private placement in which we sold to the selling stockholders warrants to purchase up to an aggregate of 5,882,520 of our common shares for \$0.01 per share. Pursuant to a registration rights agreement that we entered into with the selling stockholders on the same date, we agreed to file the registration statement of which this prospectus is a part with the SEC in order to register the resale by the selling stockholders of the common shares issued upon exercise of these warrants under the Securities Act, and to maintain the effectiveness of this registration statement until the earlier of: (i) 12 months after the date that the registration statement becomes effective; (ii) such time as all such common shares have been sold by the selling stockholders; or (iii) the date upon which all of common shares are eligible to be sold to the public by a non-affiliate of us without restriction pursuant to Rule 144 under the Securities Act.

We are registering a total of 5,882,520 common shares in order to permit the selling stockholders to offer the common shares for resale from time to time. Except for: (1) the ownership of the number of common shares set forth in the following table; and (2) the ownership of a portion of the \$210,000,000 aggregate principal amount of 11% Senior Notes due 2013 issued by our wholly owned subsidiary, GSI Group Corporation, on August 20, 2008, the selling stockholders have not had any material relationship with us or any of our predecessors or affiliates within the past three years.

The table below lists the selling stockholders and other information regarding the beneficial ownership of our common shares by each of the selling stockholders as a result of the automatic exercise of the warrants.

The selling stockholders may sell all, some or none of their common shares in this offering. See **Plan of Distribution** beginning on page 22 of this prospectus for further details. The information in the table below is based on information supplied to us by the selling stockholders named in the table, and we have not sought to verify such information. The first column in the below table lists the selling stockholders. The second column in the below table lists the number of common shares beneficially owned by each selling stockholder as of October 10, 2008 (unless otherwise specified below), assuming the automatic exercise of the warrants to purchase an aggregate of up to 5,882,520 common shares concurrently with the effective time of the registration statement of which this prospectus is a part. The third column in the below table lists the common shares being offered by this prospectus by the selling stockholders. The fourth and fifth columns in the below table reflect the number and percentage of common shares beneficially owned by each of the selling stockholders subsequent to the offering, assuming the sale of all common shares offered by each selling stockholder pursuant to this prospectus. Information concerning the selling stockholders may change from time to time and any changed information will be set forth in prospectus supplements or post-effective amendments, if required by applicable law.

| Name of Selling Stockholder | Number of Common Shares Beneficially Owned Prior to Offering (1) | Maximum Number of Common Shares to be Sold Pursuant to this Prospectus | Number of Common Shares Beneficially Owned After Offering (2) | Percentage of Common Shares Beneficially Owned After Offering (2) |
|--|---|---|--|--|
| Tempo Master Fund LP (3) | 420,180 | 420,180 | | |
| Hale Capital Partners, LP (4) | 140,060 | 140,060 | | |
| Interlachen Convertible Investments Limited (5) | 420,180 | 420,180 | | |
| Special Value Opportunities Fund, LLC (6) | 373,876 | 373,876 | | |
| Special Value Expansion Fund, LLC (7) | 157,764 | 157,764 | | |
| Special Value Continuation Partners, LP (8) | 217,877 | 217,877 | | |
| Tennenbaum Opportunities Partners V, LP (9) | 581,053 | 581,053 | | |
| Silver Oak Capital, L.L.C. (10) | 280,120 | 280,120 | | |
| Highbridge International LLC (11) | 1,330,570 | 1,330,570 | | |
| UBS O Connor LLC F/B/O: O Connor Global Convertible Arbitrage Master Limited (12) | 378,162 | 378,162 | | |
| UBS O Connor LLC F/B/O: O Connor Global Convertible Arbitrage II Master Limited (13) | 42,018 | 42,018 | | |

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| | | |
|---|------------------|------------------|
| Liberty Harbor Master Fund I, L.P. (14) | 1,540,660 | 1,540,660 |
| Total: | 5,882,520 | 5,882,520 |

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- (1) Consists of the number of common shares beneficially owned by the selling stockholder as of October 10, 2008, including common shares that we issued to the selling stockholder as a result of the automatic exercise of warrant to purchase an aggregate of up to 5,882,520 common shares for \$0.01 per share, which may be on a cashless basis, concurrently with the effective time of the registration statement of which this prospectus is a part.
- (2) Assumes the sale of all common shares offered by each selling stockholder pursuant to this prospectus.
- (3) JD Capital Management, LLC is the investment advisor of Tempo Master Fund LP and has voting and investment discretion over securities held by Tempo Master Fund LP. J. David Rogers as the managing partner of JD Capital Management LLC has voting control and investment discretion over securities held by Tempo Master Fund LP.
- (4) Hale Capital Management, L.P. is the investment manager of Hale Capital Partners, L.P. and has voting and investment discretion over securities held by Hale Capital Partners, L.P. Martin M. Hale, Jr. is the managing member of the general partner of Hale Capital Management, L.P. Mr. Hale and Hale Capital Management, L.P. disclaim beneficial ownership of the securities held by Hale Capital Partners L.P except to the extent of their pecuniary interest therein, if any.
- (5) Interlachen Capital Group LP is the trading manager of Interlachen Convertible Investments Limited and has voting and investment discretion over securities held by Interlachen Convertible Investments Limited. Andrew Fraley and Jonathan Havice, as the managing members of the general partner of Interlachen Capital Group LP, have shared voting control and investment discretion over securities held by Interlachen Convertible Investment Limited. Andrew Fraley and Jonathan Havice disclaim beneficial ownership of the securities held by Interlachen Convertible Investments Limited.
- (6) Tennenbaum Capital Partners, LLC is the investment manager of Special Value Opportunities Fund, LLC and has voting and investment discretion over securities held by Special Value Opportunities Fund, LLC. Tennenbaum Capital Partners, LLC disclaims beneficial ownership of the securities held by Special Value Opportunities Fund, LLC.
- (7) Tennenbaum Capital Partners, LLC is the investment manager of Special Value Expansion Fund, LLC and has voting and investment discretion over securities held by Special Value Expansion Fund, LLC. Tennenbaum Capital Partners, LLC disclaims beneficial ownership of the securities held by Special Value Expansion Fund, LLC.
- (8) Tennenbaum Capital Partners, LLC is the investment manager of Special Value Continuation Partners, LP and has voting and investment discretion over securities held by Special Value Continuation Partners, LP. Tennenbaum Capital Partners, LLC disclaims beneficial ownership of the securities held by Special Value Continuation Partners, LP.
- (9) Tennenbaum Capital Partners, LLC is the investment manager of Tennenbaum Opportunities Partners V, LP and has voting and investment discretion over securities held by Tennenbaum Opportunities Partners V, LP. Tennenbaum Capital Partners, LLC disclaims beneficial ownership of the securities held by Tennenbaum Opportunities Partners V, LP.
- (10) Silver Oak Capital, L.L.C. holds the shares as nominee for private investment funds and separately managed accounts managed by Angelo, Gordon & Co., L.P. In such capacity, Angelo Gordon & Co. may be deemed to have voting and dispositive power over the securities held for the account of Silver Oak Capital, L.L.C. Mr. Angelo and Mr. Gordon are controlling members of Silver Oak Capital, L.L.C. and act as managing members of JAMG LLC, the general partner of AG Partners, L.P., the sole general partner of Angelo Gordon & Co. and, in such capacities, may also be deemed to have voting and dispositive power over the securities held for the account of Silver Oak Capital, L.L.C.

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Each of Angelo Gordon & Co., Mr. Angelo, Mr. Gordon, AG Partners, L.P., and JAMB LLC disclaims beneficial ownership of the securities held by Silver Oak Capital, L.L.C.

- (11) Highbridge Capital Management, LLC is the trading manager of Highbridge International LLC and has voting control and investment discretion over the securities held by Highbridge International LLC. Glenn Dubin and Henry Swieca control Highbridge Capital Management, LLC and have voting control and investment discretion over the securities held by Highbridge International LLC. Each of Highbridge Capital Management, LLC, Glenn Dubin and Henry Swieca disclaims beneficial ownership of the securities held by Highbridge International LLC.
- (12) The selling security holder (O Connor Global Convertible Arbitrage Master Limited) is a fund which cedes investment control to UBS O Connor LLC (The Investment Manager). The Investment Manager makes all the investment/voting decisions. UBS O Connor LLC is a wholly owned subsidiary of UBS AG which is listed and traded on the NYSE.

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- (13) The selling security holder (O Connor Global Convertible Arbitrage II Master Limited) is a fund which cedes investment control to UBS O Connor LLC (The Investment Manager). The Investment Manager makes all the investment/voting decisions. UBS O Connor LLC is a wholly owned subsidiary of UBS AG which is listed and traded on the NYSE.
- (14) The information reflected on this table relating to Liberty Harbor Master Fund I, L.P. is based on information as of October 2, 2008. Liberty Harbor Master Fund I, L.P.'s investment manager is GS Investment Strategies, LLC, a wholly owned subsidiary of The Goldman Sachs Group, Inc. In accordance with the SEC Release No. 34-39538 (January 12, 1998)(the Release), this filing reflects the securities beneficially owned by certain operating units (collectively, the Goldman Sachs Reporting Units) of The Goldman Sachs Group, Inc. and its subsidiaries and affiliates (collectively, GSG). This filing does not reflect Company securities, if any, beneficially owned by any operating units of GSG whose ownership of such securities is disaggregated from that of the Goldman Sachs Reporting Units in accordance with the Release. The Goldman Sachs Reporting Units disclaim beneficial ownership of the securities beneficially owned by (i) any client accounts with respect to which the Goldman Sachs Reporting Units or their employees have voting or investment discretion, or both and (ii) certain investment entities of which the Goldman Sachs Reporting Units act as the general partner, managing general partner or other manager, to the extent interests in such entities are held by persons other than the Goldman Sachs Reporting Units.

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PLAN OF DISTRIBUTION

We are registering a total of 5,882,520 common shares which are issuable to the selling stockholders in order to permit the resale of these common shares by the selling stockholders from time to time after the effective date of this prospectus. We will not receive any of the proceeds from the sale by the selling stockholders of these common shares. We will bear all fees and expenses incident to our obligation to register the common shares.

The selling stockholders may sell all or a portion of the common shares beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers or agents. If the common shares are sold through underwriters or broker-dealers, the selling stockholders will be responsible for underwriting discounts or commissions or agent's commissions. The common shares may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions, through:

any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;

the over-the-counter market;

transactions otherwise than on these exchanges or systems or in the over-the-counter market;

the writing of options, whether such options are listed on an options exchange or otherwise;

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

short sales;

sales pursuant to Rule 144;

transactions in which broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;

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a combination of any such methods of sale; and

any other method permitted pursuant to applicable law.

If the selling stockholders sell their common shares to or through underwriters, broker-dealers or agents, such underwriters, broker-dealers or agents may receive commissions in the form of discounts, concessions or commissions from the selling stockholders or commissions from purchasers of the common shares for whom they may act as agent or to whom they may sell as principal (which discounts, concessions or commissions as to particular underwriters, broker-dealers or agents may be in excess of those customary in the types of transactions involved). In connection with sales of the common shares or otherwise, the selling stockholders may enter into hedging transactions with broker-dealers, which may in turn engage in short sales of the common shares in the course of hedging in positions they assume. The selling stockholders may also sell common shares short and deliver common shares covered by this prospectus to close out short positions and to return borrowed shares in connection with such short sales. The selling stockholders may also loan or pledge common shares to broker-dealers that in turn may sell such shares.

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The selling stockholders may pledge or grant a security interest in some or all of the warrants, or common shares owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the common shares from time to time pursuant to this prospectus or any amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act amending, if necessary, the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus. The selling stockholders also may transfer and donate the common shares in other circumstances in which case the transferees, donees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

The selling stockholders and any broker-dealer participating in the distribution of the common shares may be deemed to be underwriters within the meaning of the Securities Act, and any commission paid, or any discounts or concessions allowed to, any such broker-dealer may be deemed to be underwriting commissions or discounts under the Securities Act. At the time a particular offering of the common shares is made, a prospectus supplement, if required, will be distributed which will set forth the aggregate amount of common shares being offered and the terms of the offering, including the name or names of any broker-dealers or agents, any discounts, commissions and other terms constituting compensation from the selling stockholders and any discounts, commissions or concessions allowed or reallocated or paid to broker-dealers.

Under the securities laws of some states, the common shares may be sold in such states only through registered or licensed brokers or dealers. In addition, in some states the common shares may not be sold unless such shares have been registered or qualified for sale in such state or an exemption from registration or qualification is available and is complied with.

There can be no assurance that any selling stockholders will sell any or all of the common shares registered pursuant to the registration statement of which this prospectus forms a part.

The selling stockholders and any other person participating in such distribution will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including, without limitation, Regulation M of the Exchange Act, which may limit the timing of purchases and sales of any of the common shares by the selling stockholders and any other participating person. Regulation M may also restrict the ability of any person engaged in the distribution of the common shares to engage in market-making activities with respect to the common shares. All of the foregoing may affect the marketability of the common shares and the ability of any person or entity to engage in market-making activities with respect to the common shares.

We will pay all expenses of the registration of the common shares pursuant to the registration rights agreement dated as of August 20, 2008, estimated to be \$99,608.01 in total, including, without limitation, SEC filing fees and expenses of compliance with state securities or blue sky laws; provided however, that a selling stockholder will pay all underwriting discounts and selling commissions, if any. We will indemnify the selling stockholders against liabilities, including some liabilities under the Securities Act, in accordance with the registration rights agreement, or the selling stockholders will be entitled to contribution. We may be indemnified by the selling stockholders against civil liabilities, including liabilities under the Securities Act, that may arise from any written information furnished to us by the selling stockholder specifically for use in this prospectus, in accordance with the registration rights agreement referenced above, or we may be entitled to contribution.

Once sold under the registration statement of which this prospectus forms a part, the common shares will be freely tradable in the hands of persons other than our affiliates.

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LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon by Stewart McKelvey, New Brunswick, Canada.

EXPERTS

The consolidated financial statements and schedule of GSI Group Inc. at December 31, 2007 and December 31, 2006, and for each of the three years in the period ended December 31, 2007, appearing in GSI Group Inc.'s Annual Report (Form 10-K) incorporated by reference in this prospectus and registration statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon, and are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

The consolidated financial statements and schedule of Excel Technology, Inc. and subsidiaries as of December 31, 2007 and 2006, and for each of the years in the three-year period ended December 31, 2007, have been incorporated by reference herein in reliance upon the reports of KPMG LLP, independent registered public accounting firm, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

The audit report covering the December 31, 2007 consolidated financial statements refers to the adoption of FASB Interpretation No. 48, Accounting for Uncertainty in Income Taxes – an Interpretation of SFAS No. 109, effective January 1, 2007, and Statement of Financial Accounting Standards No. 123(R), Share-Based Payment, effective January 1, 2006.

WHERE YOU CAN FIND MORE INFORMATION

The SEC allows us to incorporate by reference certain information into this prospectus. This means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information that we incorporate by reference should be considered to be part of this prospectus. Because we are incorporating by reference our future filings with the SEC, this prospectus will be continually updated by those future filings, and those future filings may modify or supersede some or all of the information included or incorporated in this prospectus. This means that you should look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded.

We electronically file with the SEC our annual reports on Form 10-K, quarterly interim reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934. We also make available on or through our website, free of charge, copies of these reports as soon as reasonably practicable after we electronically file or furnish it to the SEC. You can also request copies of such documents free of charge by contacting our Investor Relations Department by phone at (781) 266-5700 or in writing to the attention of Investor Relations, 125 Middlesex Turnpike, Bedford, MA 01730. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the Public Reference Room. The SEC maintains a website that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC, including us. The SEC's website can be found at <http://www.sec.gov>.

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INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

All documents filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the initial filing of the registration statement, whether before or after it is declared effective, and before the end of any offering made under this prospectus will be incorporated by reference into this prospectus and will automatically update and supersede the information in this prospectus and any previously filed document. We incorporate by reference the following information that has been filed with the SEC:

our annual report on Form 10-K for the year ended December 31, 2007, filed with the SEC on March 10, 2008;

the annual report of Excel Technology, Inc. on Form 10-K for the year ended December 31, 2007, filed with the SEC on February 14, 2008;

the information specifically incorporated by reference into our December 31, 2007 Form 10-K from our definitive proxy statement on Schedule 14A, filed with the SEC on April 14, 2008;

our quarterly report on Form 10-Q for the quarterly period ended March 31, 2008, filed with the SEC on May 5, 2008;

our quarterly report on Form 10-Q for the quarterly period ended June 30, 2008, filed with the SEC on July 31, 2008;

our current reports on Form 8-K filed with the SEC on March 20, 2008, April 30, 2008, July 3, 2008, July 11, 2008, July 18, 2008, July 31, 2008, August 21, 2008, August 29, 2008, September 2, 2008, October 9, 2008 and October 10, 2008; and

the description of our common shares, which is contained in the registration statement on Form 8-A filed with the SEC on January 24, 2002.

Any information in any of the foregoing documents will automatically be deemed to be modified or superseded to the extent that information in this prospectus or in a later filed document that is incorporated or deemed to be incorporated herein by reference modifies or replaces such information.