Registration No. 333-139885

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

AMENDMENT NO. 3 TO FORM S-1

REGISTRATION STATEMENT Under THE SECURITIES ACT OF 1933

GSI TECHNOLOGY, INC.

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

3674

(Primary Standard Industrial Classification Code number)

77-0398779 (I.R.S. Employer Identification No.)

2360 Owen Street Santa Clara, California 95054 (408) 980-8388

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

LEE-LEAN SHU
President and Chief Executive Officer
GSI TECHNOLOGY, INC.
2360 Owen Street
Santa Clara, California 95054
(408) 980-8388

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

DENNIS C. SULLIVAN, ESQ. DLA Piper US LLP 2000 University Avenue East Palo Alto, California 94303-2248 (650) 833-2000 DONNA M. PETKANICS, ESQ. Wilson Sonsini Goodrich & Rosati, P.C. 650 Page Mill Road Palo Alto, California 94304-9300 (650) 493-9300

Approximate date of commencement of proposed sale to the public:

As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this form are being offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. o

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. o

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box. o

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

| is Amendment No. 3 to the Registration Statement on Form S-1, File No. 333-13985, is being filed for the sole purpose of updating the amount filing fee and filing a revised opinion of DLA Piper US LLP, which is attached as Exhibit 5.1 hereto. | | | | | |
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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

The following table sets forth all costs and expenses, other than the underwriting discount payable by the registrant in connection with the sale and distribution of the common stock being registered hereby, including the shares offered by the selling stockholders. All amounts shown are estimates except for the Securities and Exchange Commission registration fee, the NASD filing fee and the Nasdaq Global Market application fee.

| Securities and Exchange Commission registration fee | \$ 6,648 |
|-----------------------------------------------------|--------------|
| NASD filing fee | 7,860 |
| Nasdaq Global Market application fee | 105,000 |
| Blue sky qualification fees and expenses | 10,000 |
| Printing and engraving expenses | 145,000 |
| Legal fees and expenses | 500,000 |
| Accounting fees and expenses | 400,000 |
| Transfer agent and registrar fees | 2,000 |
| Miscellaneous expenses | 3,492 |
| | |
| Total | \$ 1,180,000 |
| | |

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Section 145 of the Delaware General Corporation Law permits indemnification of officers, directors and other corporate agents under certain circumstances and subject to certain limitations. The registrant's Certificate of Incorporation and Bylaws provide that the Registrant shall indemnify its directors, officers, employees and agents to the full extent permitted by Delaware General Corporation Law, including in circumstances in which indemnification is otherwise discretionary under Delaware law. In addition, the registrant intends to enter into separate indemnification agreements (Exhibit 10.1) with its directors and officers which would require the registrant, among other things, to indemnify them against certain liabilities which may arise by reason of their status or service (other than liabilities arising from willful misconduct of a culpable nature). The registrant also intends to maintain director and officer liability insurance, if available on reasonable terms. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of the Registrant's officers and directors for liabilities (including reimbursement of expenses incurred) arising under the Securities Act.

The Underwriting Agreement (Exhibit 1.1) provides for indemnification by the Underwriters of the registrant and its officers and directors for certain liabilities arising under the Securities Act, or otherwise.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

In the three years prior to the filing of this Registration Statement, the registrant issued and sold an aggregate of 543,175 shares of common stock to its employees, directors and consultants upon exercise of options granted by the registrant under its 1997 Stock Plan. In calendar years 2006, 2005 and 2004, the registrant issued 129,500, 24,250 and 389,425 shares, respectively, pursuant to the exercise of options granted under the registrant's 1997 Stock Plan. Option exercise prices ranged from \$0.15 to \$2.00 per share, with a weighted average exercise price of \$0.16 per share, in calendar 2006, \$0.15 to \$2.00 per share, with a weighted average exercise price of \$1.39 per share, in calendar 2005 and \$0.04

to \$2.00 per share, with a weighted average exercise price of \$0.22 per share, in calendar 2004. The aggregate proceeds to the registrant from the sale of these shares of its common stock was \$138,849.

In the three years prior to the filing of this Registration Statement, the registrant issued and sold an aggregate of 16,561 shares of common stock to its employees, directors and consultants upon exercise of options granted by the registrant under its 2000 Stock Option Plan. In calendar years 2006, 2005 and 2004, the registrant issued 3,875, 7,686 and 5,000 shares, respectively, pursuant to the exercise of options granted under the registrant's 2000 Stock Option Plan. Option exercise prices ranged from \$2.10 to \$5.40 per share, with a weighted average exercise price of \$5.08 per share, in calendar 2006, \$2.10 to \$3.50 per share, with a weighted average exercise price of \$2.24 per share, in calendar 2005 and \$2.10 in calendar 2004. The aggregate proceeds to the registrant from the sale of these shares of its common stock was \$47,422.

The sales and issuances of these securities were deemed to be exempt from registration under the Securities Act by virtue of Rule 701 promulgated under Section 3(b) of the Securities Act as transactions pursuant to compensation benefits plans and contracts relating to compensation. All of the foregoing securities are deemed restricted securities for purposes of the Securities Act.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES.

(a) EXHIBITS.

| Exhibit Number | Name of Document |
|-------------------|----------------------------------------------------------------------------------------------|
| †1.1 | Form of Underwriting Agreement |
| †3.1 | Restated Certificate of Incorporation of Registrant |
| †3.2 | Bylaws of Registrant |
| †3.3 | Form of Amended and Restated Certificate of Incorporation to be filed prior to the offering |
| †3.4 | Form of Amended and Restated Bylaws to be effective prior to the offering |
| †4.1 | Specimen certificate representing the common stock |
| 5.1 | Opinion of DLA Piper US LLP |
| †10.1 | Form of Indemnification Agreement between Registrant and Registrant's directors and officers |
| †10.2 | 1997 Stock Plan and form of Stock Option Agreement |
| †10.3 | 2000 Stock Option Plan and form of Stock Option Agreement |
| †10.4 | 2007 Equity Incentive Plan |
| †10.5 | 2007 Employee Stock Purchase Plan and form of Subscription Agreement |
| †10.6 | Building Office Lease for 2360 Owen Street, Santa Clara, California 95054, as amended |
| †10.7 | Building Office Lease for No. 1, 6th Floor, 30 Taiyuan Street, Chupei City, Taiwan |
| †21.1 | List of Subsidiaries |
| †23.1 | Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm |
| 23.2 | Consent of DLA Piper US LLP (included in Exhibit 5.1) |
| †23.3 | Consent of Duff & Phelps, LLC |
| †24.1 | Power of Attorney |

† Previously filed.

(b) FINANCIAL STATEMENT SCHEDULES.

The following schedule is filed hereunder on page S-1:

Schedule II—Valuation and Qualifying Accounts.

Other financial statement schedules have been omitted because they are not applicable or the required information is shown in the financial statements or the notes thereto.

ITEM 17. UNDERTAKINGS.

- (1) The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.
- (2) Insofar as indemnification by the registrant for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act, and is therefore unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer, or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered hereunder, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.
 - (3) The undersigned registrant hereby undertakes that:
 - (a) For purposes of determining any liability under the Securities Act, the information omitted from the form of Prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in the form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective; and
 - (b) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of Prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at the time shall be deemed to be the initial bona fide offering thereof.
 - (4) The undersigned registrant hereby undertakes:
 - (a) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
 - (b) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in

a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this Amendment No. 3 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Santa Clara, State of California, on March 28, 2007.

GSI TECHNOLOGY, INC.

| By: | /s/ DOUGLAS M. SCHIRLE | | |
|-----|-----------------------------------------------|--|--|
| | Douglas M. Schirle Chief Financial Officer | | |

Pursuant to the requirements of the Securities Act, this Amendment No. 3 to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

| Signature | | Title | Date |
|------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------|----------------|
| | /s/ LEE-LEAN SHU* Lee-Lean Shu | President, Chief Executive Officer and Chairman (Principal Executive Officer) | March 28, 2007 |
| | /s/ DOUGLAS M. SCHIRLE | Chief Financial Officer —— (Principal Financial and Accounting Officer) | March 28, 2007 |
| Douglas M. Schirle /s/ ROBERT YAU* | | Vice President, Engineering, Secretary and Director | March 28, 2007 |
| | Robert Yau /s/ HSIANG-WEN CHEN* | Director | March 28, 2007 |
| | Hsiang-Wen Chen | Director | March 28, 2007 |
| | Ruey L. Lu | | |
| | /s/ JING RONG TANG* Jing Rong Tang | Director | March 28, 2007 |
| *By: | /s/ DOUGLAS M. SCHIRLE | | |
| | Douglas M. Schirle <i>Attorney-in-fact</i> March 28, 2007 | | |
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EXHIBIT INDEX

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QuickLinks

EXPLANATORY NOTE

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION.

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES.

ITEM 16. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES. ITEM 17. UNDERTAKINGS.

SIGNATURES

EXHIBIT INDEX

Exhibit 5.1

DLA PIPER US LLP

2000 University Avenue East Palo Alto, CA 94303-2248 www.dlapiper.com

> O] 650-833-2000 F] 650-833-2001

March 28, 2007

GSI Technology, Inc. 2360 Owen Street Santa Clara, CA 95054

Re: Registration Statement (No. 333-139885) on Form S-1

Gentlemen:

We have acted as counsel to GSI Technology, Inc., a Delaware corporation ("GSI"), in connection with the proposed issuance and sale of those certain shares of GSI's newly-issued Common Stock and those certain additional shares of GSI's Common Stock held by certain stockholders of GSI (collectively, the "Shares"), as set forth in GSI's registration statement (No. 333-139885) on Form S-1 filed with the Securities and Exchange Commission (the "SEC") on January 10, 2007 (as it may be amended and supplemented, the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"). The Shares include Shares that are subject to an over-allotment option granted to the underwriters in the offering.

This opinion is being furnished in accordance with the requirements of Item 16(a) of Form S-1 and Item 601(b)(5)(i) of Regulation S-K.

In connection with this opinion, we have reviewed and relied upon the Registration Statement and related prospectus, GSI's charter documents, as amended to date, and records of its corporate proceedings in connection with the issuance and sale of the Shares. We have assumed the authenticity of all records, documents and instruments submitted to us as originals, the genuineness of all signatures, the legal capacity of natural persons and the conformity to the originals of all records, documents and instruments submitted to us as copies. Based on such review, we are of the opinion that the Shares have been duly authorized, and if, as and when issued by GSI in accordance with the related prospectus (as amended and supplemented through the date of issuance) will be validly issued, fully paid and nonassessable.

We consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to this firm under the caption "Legal Matters" in the prospectus which is part of the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Act, the rules and regulations of the SEC promulgated thereunder or Item 509 of Regulation S-K.

Our opinion is expressly limited to the matters set forth above, and we render no opinion, whether by implication or otherwise, as to any other matters relating to GSI, the Shares or the Registration Statement.

Sincerely,

/s/ DLA Piper US LLP

DLA Piper US LLP

QuickLinks

Exhibit 5.1

DLA Piper US LLP 2000 University Avenue East Palo Alto, California 94303-2214 www.dlapiper.com

Dennis C. Sullivan dennis.sullivan@dlapiper.com T 650.833.2243 F 650.687.1200

March 28, 2007

Division of Corporation Finance U.S. Securities and Exchange Commission 100 F Street, N.E. Mail Stop 6010 Washington, DC 20549

Attn: Ms. Peggy A. Fisher and Mr. Tim Buchmiller

Re: GSI Technology, Inc.

Amendment No. 2 to Registration Statement on Form S-1 filed March 12, 2007

File No. 333-139885

Ladies and Gentlemen:

This letter responds to the letter dated March 16, 2007, setting forth the comments of the staff (the "Staff") of the Securities and Exchange Commission (the "Commission") regarding Amendment No. 2 to Registration Statement on Form S-1 (the "Registration Statement") of GSI Technology, Inc. (the "Company"), filed on March 12, 2007. For your convenience, we have repeated the Staff's comment in this letter along with the Company's response. To respond to the Staff's comment, the Company is filing concurrently with this letter Amendment No. 3 to the Registration Statement ("Amendment No. 3"). A marked copy of Amendment No. 3 indicating changes from Amendment No. 2 is enclosed and is also being filed electronically with the Commission.

Part II of Registration Statement

 Please confirm our assumption that the legality opinion will be dated at or after the time that your amended and restated certificate of incorporation and bylaws are in effect.

Response: An amended opinion of DLA Piper US LLP has been filed as Exhibit 5.1 to Amendment No. 3 in response to the Staff's comment. This amended opinion is dated March 28, 2007, after the effective date of the Company's amended and restated certificate of incorporation and bylaws.

We and the Company appreciate the Staff's attention to the review of the Registration Statement and Amendments No. 1, No. 2 and No. 3. Please do not hesitate to contact the undersigned at (650) 833-2243, or Benjamin Griebe of this office at (650) 833-2209, if you have any questions regarding this letter or Amendment No. 3.

Sincerely,

DLA Piper US LLP

By: /s/ DENNIS C. SULLIVAN

Dennis C. Sullivan

cc: Lee-Lean Shu, GSI Technology, Inc.
Douglas M. Schirle, GSI Technology, Inc.

Michael J. Wolf, The Nasdaq Stock Market