

TRADEMARK ASSIGNMENT

Electronic Version v1.1

Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	SECURITY INTEREST		
CONVEYING PARTY DATA			
Name	Formerly	Execution Date	Entity Type
GT Solar Incorporated		04/20/2007	CORPORATION: DELAWARE
RECEIVING PARTY DATA			
Name:	Citizens Bank New Hampshire		
Street Address:	875 Elm Street		
City:	Manchester		
State/Country:	NEW HAMPSHIRE		
Postal Code:	03101		
Entity Type:	Banking institution: NEW HAMPSHIRE		
PROPERTY NUMBERS Total: 1			
Property Type	Number	Word Mark	
Serial Number:	78036356	GT SOLAR	
CORRESPONDENCE DATA			
Fax Number:	(617)345-3299		
<i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i>			
Phone:	617-345-3000		
Email:	trademarks@burnslev.com		
Correspondent Name:	Anne Pareti		
Address Line 1:	125 Summer Street		
Address Line 2:	Burns & Levinson LLP		
Address Line 4:	Boston, MASSACHUSETTS 02110		
ATTORNEY DOCKET NUMBER:	22149.26/CITIZENS/ACP		
NAME OF SUBMITTER:	Anne Pareti		
Signature:	/Anne Pareti/		
Date:	04/27/2007		

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TRADEMARK
REEL: 003530 FRAME: 0907

Total Attachments: 12

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PATENT AND TRADEMARK SECURITY AGREEMENT

This Agreement, dated as of April 20, 2007, is made by and between GT SOLAR INCORPORATED, a Delaware corporation (f/k/a GT Equipment Technologies, Inc.) (the "Debtor"), and CITIZENS BANK NEW HAMPSHIRE, a New Hampshire banking institution having an office 875 Elm Street, Manchester, New Hampshire 03101 (the "Secured Party").

Recitals

The Debtor and the Secured Party are parties to a Loan and Security Agreement of even date herewith (as the same may hereafter be amended, supplemented or restated from time to time, the "Loan Agreement") setting forth the terms on which the Secured Party may now or hereafter extend credit to or for the account of the Debtor.

As a condition to extending credit to or for the account of the Debtor, the Secured Party has required the execution and delivery of this Agreement by the Debtor.

ACCORDINGLY, in consideration of the mutual covenants contained in the Loan Documents and herein, the parties hereby agree as follows:

1. Definitions. All terms defined in the Recitals hereto or in the Loan Agreement that are not otherwise defined herein shall have the meanings given to them therein. In addition, the following terms have the meanings set forth below:

"Patents" means all of the Debtor's right, title and interest in and to patents or applications for patents, fees or royalties with respect to each, and including without limitation the right to sue for past infringement and damages therefor, and licenses thereunder, all as presently existing or hereafter arising or acquired, including without limitation the patents listed on Exhibit A.

"Security Interest" has the meaning given in Section 2.

"Trademarks" means all of the Debtor's right, title and interest in and to: (i) trademarks, service marks, collective membership marks, registrations and applications for registration for each, and the respective goodwill associated with each, (ii) licenses, fees or royalties with respect to each, (iii) the right to sue for past, present and future infringement, dilution and damages therefor, (iv) and licenses thereunder, all as presently existing or hereafter arising or acquired, including, without limitation, the marks listed on Exhibit B.

2. Security Interest. The Debtor hereby pledges and grants the Secured Party a security interest (the "Security Interest") with power of sale to the extent permitted by law, in the Patents and in the Trademarks to secure payment of the Obligations. As set forth in the Loan Agreement, the Security Interest is coupled with a security interest in

substantially all of the personal property of the Debtor. This Agreement grants only the Security Interest herein described, is not intended to and does not effect any present transfer of title of any trademark registration or application and makes no assignment and grants no (i) right to assign, (ii) security interest (iii) other right with respect to any intent to use trademark application, unless and until an amendment to allege use or statement of use has been filed under 15 U.S.C. §1051 and has been accepted by the United States Patent and Trademark Office for such intent to use trademark application, or (iv) license, contracts or agreements which, by their nature, are not immediately assignable without additional documentation, such as governmental contracts and licenses containing non-assignment language, but only during such time and for such licenses, contracts or agreements (a) prior to the time the Debtor obtains consents to such collateral assignment; or (b) for which any such collateral assignment to the Secured Party would cause such license, contract or agreement to be void.

3. Representations, Warranties and Agreements. The Debtor represents, warrants and agrees as follows:

(a) **Existence; Authority.** The Debtor is a corporation duly organized, validly existing and in good standing under the laws of its state of incorporation, and this Agreement has been duly and validly authorized by all necessary corporate action on the part of the Debtor.

(b) **Patents.** Exhibit A accurately lists all applications and letters patent pertaining to the Patents owned or controlled by the Debtor as of the date hereof, or to which the Debtor has a right as of the date hereof to have assigned to it, and accurately reflects the existence and status of applications and letters patent pertaining to the Patents as of the date hereof. If after the date hereof, the Debtor owns, controls or has a right to have assigned to it any Patents not listed on Exhibit A, or if Exhibit A ceases to accurately reflect the existence and status of applications and letters patent pertaining to the Patents, then the Debtor shall within 60 days provide written notice to the Secured Party with a replacement Exhibit A, which upon acceptance by the Secured Party shall become part of this Agreement.

(c) **Trademarks.** Exhibit B accurately lists all registered, applied for, or material unregistered Trademarks owned or controlled by the Debtor as of the date hereof. If after the date hereof, the Debtor owns or controls any Trademarks not listed on Exhibit B (other than common law marks which are not material to the Debtor's or any Affiliate's business(es)), or if Exhibit B ceases to accurately reflect the existence and status of applications and registrations pertaining to the Trademarks, then the Debtor shall within 60 days provide written notice to the Secured Party with a replacement Exhibit B, which upon acceptance by the Secured Party shall become part of this Agreement.

(d) **Affiliates.** As of the date hereof, no Affiliate owns, controls, or has a right to have assigned to it any items that would, if such item were owned by the Debtor, constitute Patents or Trademarks. If after the date hereof any Affiliate owns, controls, or has a right to have assigned to it any such items, then the Debtor shall reasonably promptly either: (i) use all commercially reasonable efforts to cause such Affiliate to assign all of its rights in such item(s) to the Debtor; or (ii) notify the Secured Party of such item(s) and use all commercially reasonable efforts to cause such Affiliate to execute and deliver to the Secured Party a patent and trademark security agreement substantially in the form of this Agreement.

(e) **Title.** The Debtor has absolute title to each Patent and each Trademark listed on Exhibits A and B, free and clear of all Liens except Liens permitted in accordance with the terms of the Loan Agreement. The Debtor (i) will have, at the time the Debtor acquires any rights in Patents or Trademarks hereafter arising, absolute title to each such Patent or Trademark free and clear of all Liens except Liens permitted in accordance with the terms of the Loan Agreement, and (ii) will keep all Patents and Trademarks free and clear of all Liens except Liens permitted in accordance with the terms of the Loan Agreement.

(f) **No Sale.** Except as permitted in the Loan Agreement or pursuant to licenses or sublicenses granted by Debtor to third persons in the ordinary course of business, the Debtor will not assign, transfer, encumber or otherwise dispose of the Patents or Trademarks, or any interest therein, without the Secured Party's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed.

(g) **Defense.** The Debtor, in its commercially reasonable business discretion, will at its own expense and using commercially reasonable efforts, protect and defend the Patents and Trademarks against all claims or demands of all Persons except with respect to Liens permitted in accordance with the terms of the Loan Agreement.

(h) **Maintenance.** The Debtor will at its own expense maintain the issued, registered or applied for Patents and the Trademarks to the extent reasonably advisable in its business judgment including, but not limited to, filing all applications to obtain letters patent or trademark registrations and all affidavits, maintenance fees, annuities, and renewals possible with respect to letters patent, trademark registrations and applications therefor. The Debtor covenants that it will not abandon nor fail to pay any maintenance fee or annuity due and payable on any material issued, registered, or applied for Patent or Trademark, nor fail to file any required affidavit or renewal in support thereof, without first providing the Secured Party: (i) sufficient written notice, of at least 30 days, to allow the Secured Party to timely pay any such

maintenance fees or annuities which may become due on any Patents or Trademarks, or to file any affidavit or renewal with respect thereto, and (ii) a separate written power of attorney or other authorization to pay such maintenance fees or annuities, or to file such affidavit or renewal, should such be necessary or desirable.

(i) **Secured Party's Right to Take Action.** If the Debtor fails to perform or observe any of its covenants or agreements set forth in this Section 3 which could reasonably be expected to result in a Material Adverse Effect, and if such failure continues for a period of thirty (30) calendar days after the Secured Party gives the Debtor written notice thereof (or, in the case of the agreements contained in subsection (h), immediately upon the occurrence of such failure, without notice or lapse of time), or if the Debtor notifies the Secured Party that it intends to abandon a material issued, registered or applied for Patent or Trademark, the Secured Party may (but need not) perform or observe such covenant or agreement or take steps to prevent such intended abandonment on behalf and in the name, place and stead of the Debtor (or, at the Secured Party's option, in the Secured Party's own name) and may (but need not) take any and all other actions which the Secured Party may reasonably deem necessary to cure or correct such failure or prevent such intended abandonment.

(j) **Costs and Expenses.** Except to the extent that the effect of such payment would be to render any loan or forbearance of money usurious or otherwise illegal under any applicable law, the Debtor shall pay the Secured Party on written demand the reasonable actual out-of-pocket expenses (including reasonable attorneys' fees and disbursements) incurred by the Secured Party in connection with or as a result of the Secured Party's taking action under subsection (i) or exercising its rights under Section 6, together with interest thereon from the date expended or incurred by the Secured Party at the default rate of interest set forth in the Loan Agreement.

(k) **Power of Attorney.** To facilitate the Secured Party's taking action under subsection (i) and exercising its rights under Section 6, the Debtor hereby irrevocably appoints (which appointment is coupled with an interest) the Secured Party, or its delegate, as the attorney-in-fact of the Debtor with the right (but not the duty) from time to time to create, prepare, complete, execute, deliver, endorse or file, in the name and on behalf of the Debtor, any and all instruments, documents, applications, financing statements, and other agreements and writings required to be obtained, executed, delivered or endorsed by the Debtor under this Section 3, or, necessary for the Secured Party, after an Event of Default, to enforce or use the Patents or Trademarks or to grant or issue any exclusive or non-exclusive license under the Patents or Trademarks to any third party, provided however, that such license is granted pursuant to an obligation of a high level of quality control in connection with the goods and services offered under the Trademarks, at least at the level of quality control exercised by Debtor as of the date of this Agreement, or to

sell, assign, transfer, pledge, encumber or otherwise transfer title in or dispose of the Patents or Trademarks to any third party. The Debtor hereby ratifies all that such attorney shall lawfully do or cause to be done by virtue hereof. The power of attorney granted herein shall terminate upon the termination of the Loan Agreement as provided therein and the payment and performance of all Obligations.

4. Debtor's Use of the Patents and Trademarks. The Debtor shall be permitted to control and manage the Patents and Trademarks, including the right to exclude others from making, using or selling items covered by the Patents and Trademarks and any licenses thereunder, in the same manner and with the same effect as if this Agreement had not been entered into, so long as no Event of Default occurs and remains uncured.

5. Events of Default. The occurrence of an Event of Default, as defined in the Loan Agreement, shall constitute an event of default under this Agreement (herein called "Event of Default").

6. Remedies. Upon the occurrence and during the continuance of an Event of Default, the Secured Party may, at its option, take any or all of the following actions:

(a) The Secured Party may exercise any or all remedies available under the Loan Agreement.

(b) The Secured Party may sell, assign, transfer, pledge, encumber or otherwise dispose of the Patents and Trademarks.

(c) The Secured Party may enforce the Patents and Trademarks and any licenses thereunder, and if Secured Party shall commence any suit for such enforcement, the Debtor shall, at the reasonable request of Secured Party, do any and all lawful acts and execute any and all proper documents required by Secured Party in aid of such enforcement.

7. Miscellaneous. This Agreement can be waived, modified, amended, terminated or discharged, and the Security Interest can be released, only explicitly in a writing signed by the Secured Party. A waiver signed by the Secured Party shall be effective only in the specific instance and for the specific purpose given. Mere delay or failure to act shall not preclude the exercise or enforcement of any of the Secured Party's rights or remedies. All rights and remedies of the Secured Party shall be cumulative and may be exercised singularly or concurrently, at the Secured Party's option, and the exercise or enforcement of any one such right or remedy shall neither be a condition to nor bar the exercise or enforcement of any other. All notices to be given to Debtor under this Agreement shall be given in the manner and with the effect provided in the Loan Agreement. Unless required by applicable law, the Secured Party shall not be obligated to preserve any rights the Debtor may have against prior parties, to realize on the Patents and Trademarks at all or in

any particular manner or order, or to apply any cash proceeds of Patents and Trademarks in any particular order of application. This Agreement shall be binding upon and inure to the benefit of the Debtor and the Secured Party and their respective participants, permitted successors and assigns and shall take effect when signed by the Debtor and o the Secured Party. The Secured Party may execute this Agreement if appropriate for the purpose of filing, but to the extent allowed by applicable law, the failure of the Secured Party to execute this Agreement shall not affect or impair the validity or effectiveness of this Agreement. A carbon, photographic or other reproduction of this Agreement or of any financing statement signed by the Debtor shall have the same force and effect as the original for all purposes of a financing statement. This Agreement shall be governed by the internal law of the State of New Hampshire without regard to conflicts of law provisions. If any provision or application of this Agreement is held unlawful or unenforceable in any respect, such illegality or unenforceability shall not affect other provisions or applications which can be given effect and this Agreement shall be construed as if the unlawful or unenforceable provision or application had never been contained herein or prescribed hereby.

[CONTINUED ON THE FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties have executed this Patent and
Trademark Security Agreement as of the date written above.

WITNESS

Beth Hager

GT SOLAR INCORPORATED

By: Howard F. Smith

Name: Howard F. Smith

Title: Chief Financial Officer

CITIZENS BANK NEW HAMPSHIRE

By: _____

Name: Lori Chandonnais

Title: Vice President

[Signature Page to Patent and Trademark Security Agreement]

IN WITNESS WHEREOF, the parties have executed this Patent and
Trademark Security Agreement as of the date written above.

WITNESS

Beth Hagen

GT SOLAR INCORPORATED

By: [Signature]
Name: Howard P. Smith
Title: Chief Financial Officer

CITIZENS BANK NEW HAMPSHIRE

Anne C. Arisov

By: [Signature]
Name: Lori Chandonnais
Title: Vice President
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Sr

[Signature Page to Patent and Trademark Security Agreement]

EXHIBIT A

GT SOLAR INCORPORATED

PATENTS

Issued Patents

Title	Country	Patent No.	Issue Date	Applic. No.	Filing Date	Owner
Dry conversion of high purity ultrafine silicon powder to densified pellet form for silicon melting applications	U.S.	7,175,685	2/13/2007	10/413,774	4/15/2003	GT Solar Incorporated
Solar cell stringing machine	U.S.	6,841,728	1/11/2005	10/125,329	4/18/2002	GT Solar Incorporated
Apparatus for automatically measuring the resistivity of semiconductor boules by using the method of four probes	U.S.	6,651,014	11/18/2003	10/138,835	5/3/2002	GT Solar Incorporated
Making and connecting bus bars on solar cells	U.S.	6,620,645	9/16/2003	09/993,587	11/16/2001	GT Solar Incorporated
Method of producing shaped bodies of semiconductor materials	U.S.	6,581,415	6/24/2003	09/933,342	8/20/2001	GT Solar Incorporated
Release coating system for crucibles	U.S.	6,491,971	12/10/2002	09/827,540	4/6/2001	GT Solar Incorporated
Protective layer for quartz crucibles used for silicon crystallization	U.S.	6,479,108	11/12/2002	09/944,790	8/31/2001	GT Solar Incorporated
Cold wall reactor and method for chemical vapor deposition of bulk polysilicon	U.S.	6,365,225	4/2/2002	09/642,735	8/17/2000	GT Solar Incorporated
Method and apparatus for chemical vapor deposition of polysilicon	U.S.	6,284,312	9/4/2001	09/507,711	2/18/2000	GT Solar Incorporated

Title	Country	Patent No.	Issue Date	Applic. No.	Filing Date	Owner
Melting pot with silicon protective layers, method for applying said layer and the use thereof	U.S.	6,165,425	12/26/2000	09/355,813	8/4/1999	GT Solar Incorporated
Method and apparatus for synthesis and growth of semiconductor crystals ¹	U.S.	6,019,841	2/1/2000	09/046,917	3/24/1998	GT Solar Incorporated
Melting pot with silicon protective layers, method for applying said layer and the use thereof	Germany	DE 598 01 041.6	7/18/2001	EP 98904116.5	1/22/1998	GT Equipment Technologies, Inc.
Melting pot with silicon protective layers, method for applying said layer and the use thereof	France	EP 963464	7/18/2001	EP 98904116.5	1/22/1998	GT Equipment Technologies, Inc.
Melting pot with silicon protective layers, method for applying said layer and the use thereof	Italy	EP 963464	7/18/2001	EP 98904116.5	1/22/1998	GT Solar Incorporated
Melting pot with silicon protective layers, method for applying said layer and the use thereof	Norway	321946	7/24/2006	963466	7/14/1999	GT Solar Incorporated
Method and apparatus for chemical vapor deposition of polysilicon	European Patent Appl. Belgium Germany France	1257684	1/3/2007	00955754	8/17/2000	GT Solar Incorporated

Patent Applications

Title	Country	Pub. No.	Pub. Date	Applic. No.	Filing Date	Owner
N/A	U.S.	N/A	N/A	11/668,488	1/30/2007	GT Solar Incorporated
N/A	U.S.	N/A	N/A	11/413,425	4/28/2006	GT Solar Incorporated

¹ License to U.S. Air Force dated 3/1/1999

Title	Country	Pub. No.	Pub. Date	Applic. No.	Filing Date	Owner
Solidification of crystalline silicon from reusable crucible molds	U.S.	2006 0219162	10/5/2006	11/394,970	3/31/2006	GT Solar Incorporated
Solidification of crystalline silicon from reusable crucible molds	PCT	WO 2006/107769	10/12/2006	PCT/US2006/01 2017	3/31/2006	GT Solar Incorporated
Solar cell stringing machine	Germany	N/A	N/A	10297633.3	4/18/2002	G.T. Equipment Technologies, Inc.
Method and apparatus for chemical vapor deposition of polysilicon	Japan	N/A	N/A	2001-559903	8/17/2000	G.T. Equipment Technologies, Inc.
Melting pot with silicon protective layers, method for applying said layer and the use thereof	Japan	N/A	N/A	533687-98	1/22/1998	GT Solar Incorporated

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EXHIBIT B

GT SOLAR INCORPORATED

TRADEMARKS

Trademark Registrations

Mark	Country	Reg. No.	Reg. Date	Serial No.	Filing Date	Owner
GT SOLAR	U.S.	2,612,767	8/27/2002	78/036,356	11/22/2000	GT Solar Incorporated

Trademark Applications - **None.**

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