IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TRINA SOLAR CO., LTD., Plaintiff, v. CANADIAN SOLAR (USA) INC., CANADIAN SOLAR US MODULE MANUFACTURING CORPORATION and RECURRENT ENERGY DEVELOPMENT HOLDINGS, LLC, Defendants.	)	C.A. No. **DEMAND FOR JURY TRIAL**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Trina Solar Co., Ltd. ("Trina Solar" or "Plaintiff") hereby alleges, for its Complaint against Defendants Canadian Solar (USA) Inc., Canadian Solar US Module Manufacturing Corporation and Recurrent Energy Development Holdings, LLC (collectively, "CSI" or "Defendants"), on personal knowledge as to Plaintiff's own actions and on information and belief as to the actions of others, as follows:

INTRODUCTION

1. This is a patent infringement action brought under 35 U.S.C. § 271 arising from CSI's infringement of Trina Solar's United States Patent Nos. 9,722,104 ("the '104 patent") and 10,230,009 ("the '009 patent") (collectively, the "Asserted Patents") by the manufacture, use, offer to sell, sale of, and/or importation into the United States of the Accused Products (defined below). CSI's solar cells, including its Tunnel Oxide Passivated Contact ("TOPCon") solar cells, and solar modules incorporating such cells, use Trina Solar's patented technology without authorization. Plaintiff brings this action to remedy CSI's infringement of Trina Solar's innovative, patented technology.

THE PARTIES

2. Plaintiff Trina Solar Co., Ltd. is a foreign company organized and existing under the laws of China, having a principal place of business at No. 2 Tianhe Road, Trina PV Industrial Park, Xinbei District, Jiangsu Province 213031, China.

3. On information and belief, Defendant Canadian Solar (USA) Inc. ("CSI USA") is a Delaware Corporation with its principal place of business at 1350 Treat Boulevard, Suite 500, Walnut Creek, CA 94597.

4. On information and belief, Defendant Canadian Solar US Module Manufacturing Corporation ("CSI MMC") is a Delaware Corporation with its principal place of business at 3000 Skyline Drive, Mesquite, TX 75149.

5. On information and belief, Defendant Recurrent Energy Development Holdings, LLC ("Recurrent Holdings") is a Delaware limited liability company with its principal place of business at 98 San Jacinto Boulevard, Suite 750, Austin, TX 78701.

JURISDICTION AND VENUE

6. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq*. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

7. This Court has general personal jurisdiction over the Defendants because each is, on information and belief, incorporated and/or organized in the State of Delaware. Moreover, on information and belief, Defendants have conducted business in this District, purposely availing themselves of the benefits of doing business in the State of Delaware.

8. Venue is proper in this Court under 28 U.S.C. § 1400(b) at least because, on information and belief, Defendants reside in this District.

TRINA'S INDUSTRY-LEADING TECHNOLOGY

9. Trina Solar is a global leader in the manufacture of photovoltaic products. Founded in 1997, Trina Solar has been a consistent innovator, facilitating the transformation of power systems for a net-zero emission future. Through 2023, Trina Solar has delivered over 205 GW of capacity to over 160 global customers.

10. Trina Solar has broken 26 world records for solar cell efficiency and module power.

11. In keeping with its tradition of innovation and excellence, Trina Solar was an early leader in the manufacture of commercially viable solar modules with TOPCon technology.

12. In or around 2018, Trina Solar built a 400 Megawatt solar facility that successfully utilized its n-type TOPCon technology. Building on that experience, Trina Solar has developed an entire line of high efficiency n-type solar panels with TOPCon technology for utility, commercial, and residential applications.

CSI'S INFRINGING SOLAR PRODUCTS

13. On information and belief, CSI makes, uses, sells, offers to sell, and/or imports infringing solar cells ("Accused Solar Cells") and solar modules ("Accused Solar Modules") (collectively "Accused Products") including, but not limited to, solar cells used in solar modules such as TOPBiHiKu7 bifacial solar modules, TOPBiHiKu6 bifacial solar modules and TOPHiKu6 monofacial solar modules. The material available at the web address for CSI's N-Type Series modules indicates CSI's use of TOPCon technology: https://www.csisolar.com/module.

14. On information and belief, CSI has constructed a solar module production facility in Mesquite, Texas, where CSI MMC produces the Accused Solar Modules in the United States from the Accused Solar Cells.[1]

15. On information and belief, Recurrent Energy at least uses and sells the Accused Products as part of its business of constructing solar farms and solar power plants to customers in the United States.

16. On information and belief, CSI USA at least sells the Accused Products in the United States.

COUNT I

(Infringement of U.S. Patent No. 9,722,104)

17. On August 1, 2017, the United States Patent and Trademark Office duly issued U.S. Patent No. 9,722,104, entitled "Solar cell and method for manufacturing the same." A true and correct copy of the '104 patent is attached hereto as **Exhibit A**.

18. The '104 patent has been in full force and effect since its issuance. Trina Solar owns by assignment the entire right, title, and interest in and to the '104 patent, including the right to seek damages for past, current, and future infringement thereof.

19. On information and belief, CSI began selling and offering to sell Accused Products at least as early as about the first quarter 2023. On information and belief, Accused Products are manufactured in at least Thailand for importation into the United States. On information and belief, CSI uses, sells, and offers for sale the Accused Products in the United States, including in this District.

[1] http://investors.canadiansolar.com/news-releases/news-release-details/canadian-solar-reports-fourth-quarter-and-full-year-2023-results; http://investors.canadiansolar.com/news-releases/news-release-details/canadian-solar-partners-sol-systems-ramp-us-module-manufacturing

20. CSI has infringed and continues to infringe the '104 patent, including at least claim 1, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling, and/or importing into the United States CSI's Accused Products, without authority or license.

21. CSI indirectly infringes the '104 patent, including at least claim 1, pursuant to 35 U.S.C. § 271(b), by (among other things) and with specific intent or willful blindness, actively aiding and abetting infringement by others, such as CSI's partners, customers and end-users, in this District and elsewhere in the United States. For example, CSI's partners, customers and end-users directly infringe through their use of the inventions claimed in the '104 patent. CSI induces this direct infringement through its affirmative acts of selling, distributing, and/or otherwise making available the Accused Products. CSI has known of the '104 patent, and that the Accused Products infringe the '104 patent, or has been willfully blind to such infringement, since at least service of this complaint. Despite this knowledge of the '104 patent and that the Accused Products infringe the '104 patent, CSI has continued to perform these affirmative acts with the intent, or willful blindness, that the induced acts directly infringe the '104 patent.

22. CSI also indirectly infringes the '104 patent, including at least claim 1, pursuant to 35 U.S.C. § 271(c), by contributing to direct infringement committed by others, such as customers and end-users, in this District and elsewhere in the United States. CSI's affirmative acts of selling and offering to sell, in this District and elsewhere in the United States, the Accused Products and causing the Accused Products to be manufactured, used, sold, and offered for sale, contribute to CSI's customers' and end-users' use of the Accused Products, such that the '104 patent is directly infringed. Each of the Accused Products is a material part of the invention of the '104 patent, is not a staple article or commodity of commerce, has no substantial non-infringing

use, and is known by CSI to be especially made or adapted for use in the infringement of the '104 patent. CSI has known of the '104 patent, and that the Accused Products infringes the '104 patent, or has been willfully blind to such infringement, since at least service of this complaint. Despite this knowledge of the '104 patent and that the Accused Products infringe the '104 patent, CSI has continued to perform these affirmative acts with knowledge of the '104 patent and with intent, or willful blindness, that they cause the direct infringement of the '104 patent.

23. Claim 1 of the '104 patent is reproduced below with the addition of labels [a], [b], [c], [d], [e], [f], [g], [h], [i], [j], and [k] corresponding to limitations of the claim.

1. A solar cell, comprising:

[a] a semiconductor substrate;

[b] a tunnel layer on a first surface of the semiconductor substrate;

[c] a first conductive type semiconductor region on the tunnel layer and containing impurities of a first conductive type;

[d] a second conductive type semiconductor region on a second surface opposite to the first surface of the semiconductor substrate and containing impurities of a second conductive type opposite to the first conductive type;

[e] a first passivation film on the first conductive type semiconductor region;

[f] a first electrode formed on the first passivation film and connected to the first conductive type semiconductor region through an opening formed in the first passivation film;

[g] a second passivation film on the second conductive type semiconductor region;

[h] a second electrode formed on the second passivation film and connected to the second conductive type semiconductor region through an opening formed in the second passivation film; and

[i] an isolation portion for preventing a contact between the first conductive type semiconductor region and the second conductive type semiconductor region,

[j] wherein the isolation portion excludes the tunnel layer and the first conductive type semiconductor region, and is in an edge portion of the first surface of the semiconductor substrate, and

[k] wherein the first passivation film covers the first surface of the semiconductor substrate and the isolation portion together.

24. On information and belief, the Accused Products embody each and every limitation of at least claim 1 of the '104 patent, literally or under the doctrine of equivalents.

25. As one non-limiting example of an Accused Product's infringement, on information and belief, CSI's TOPHiKu6 modules, such as model no. CS6.1-54TM-455, embody each and every limitation of at least claim 1 of the '104 patent, as described in the following paragraphs. This non-limiting example is preliminary and is not intended to construe the scope of the claimed invention or limit Plaintiff's right to modify this non-limiting example or allege that other aspects of the Accused Products infringe the identified claims, or any other claims, of the '104 patent.

26. On information and belief, CSI's datasheets indicate that the Accused Products include one or more solar cells. For example:[2]

[2] https://static.csisolar.com/wp-content/uploads/sites/3/2024/04/01182613/CS-Datasheet-TOPHiKu6-All-Black_CS6.1-54TM-H_v1.1C25_F23_J2_TX.pdf

NEW

CanadianSolar

TOPHiKu6 (All-Black)

N-type TOPCon Technology

445 W ~ 470 W

CS6.1-54TM-445|450|455|460|465|470H

Assembled in the US from imported components
USA

MORE POWER

- 470 W — Module power up to 470 W, Module efficiency up to 23.0 %
- Excellent anti-LeTID & anti-PID performance. Low power degradation, high energy yield
- Lower temperature coefficient (Pmax): -0.29%/°C, increases energy yield in hot climate
- Lower LCOE & system cost

MORE RELIABLE

- Minimizes micro-crack impacts
- Heavy snow load up to 8100 Pa, wind load up to 6000 Pa*

25 Years — Industry Leading Product Warranty on Materials and Workmanship*

30 Years — Linear Power Performance Warranty*

1st year power degradation no more than 1%
Subsequent annual power degradation no more than 0.4%

*Subject to the terms and conditions contained in the applicable Canadian Solar Limited Warranty Statement. Also this 25-year limited product warranty is available only for products installed and operating on rooftops in certain regions.

MANAGEMENT SYSTEM CERTIFICATES*

ISO 9001:2015 / Quality management system
ISO 14001:2015 / Standards for environmental management system
ISO 45001: 2018 / International standards for occupational health & safety
IEC62941: 2019 / Photovoltaic module manufacturing quality system

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730
IEC 61701 / IEC 62716 / IEC 60068-2-68
Take-e-way

* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

CSI Solar Co., Ltd. is committed to providing high quality solar photovoltaic modules, solar energy and battery storage solutions to customers. The company was recognized as the No. 1 module supplier for quality and performance/price ratio in the IHS Module Customer Insight Survey. Over the past 22 years, it has successfully delivered over 100 GW of premium-quality solar modules across the world.

* For detailed information, please refer to the Installation Manual.

Canadian Solar (USA) Inc.
1350 Treat Blvd. Suite 500, Walnut Creek, CA 94597 | www.csisolar.com/na | service.ca@csisolar.com

MECHANICAL DATA

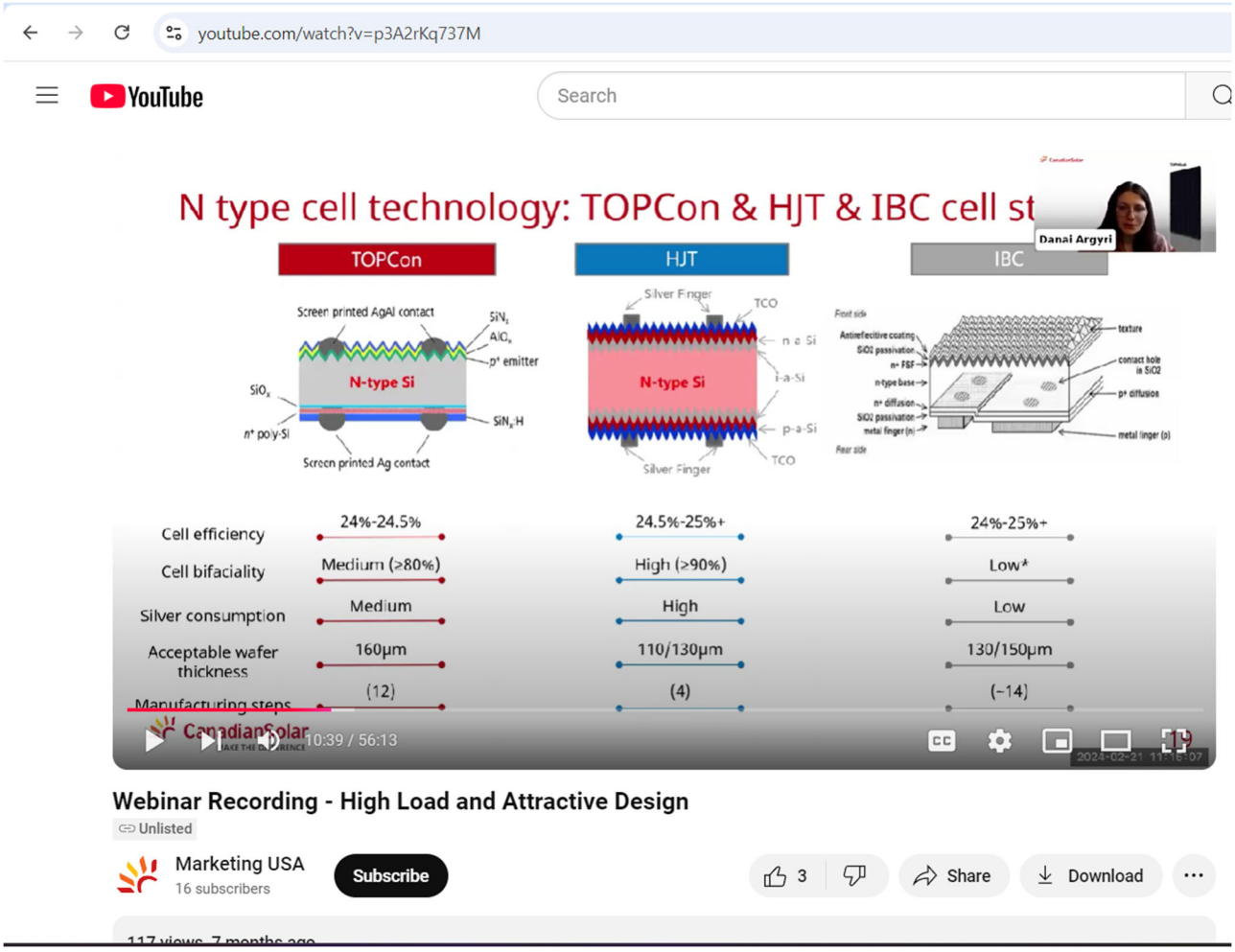
Specification	Data
Cell Type	TOPCon cells
Cell Arrangement	108 [2 X (9 X 6)]
Dimensions	1800 × 1134 × 35 mm (70.9 × 44.6 × 1.38 in)
Weight	23 kg (50.7 lbs)
Front Cover	3.2 mm tempered glass with anti-reflective coating
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Connector	T6, MC4, MC4-EVO2 or MC4- EVO2A
Cable Length (Including Connector)	1550 mm (61.0 in) (+) / 1100 mm (43.3 in) (-)
Per Pallet	30 pieces
Per Container (40' HQ)	720 pieces

27. The label affixed to a purchased TOPHiKu6 module, model no. CS6.1-54TM-455, indicates that the module contains TOPCon type solar cells:

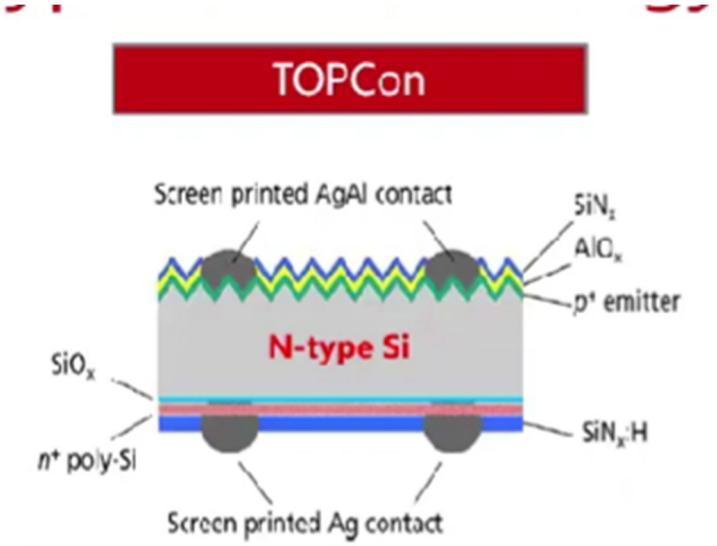
28.

CanadianSolar CS6.1-54TM-455H	Material Code Barcode	Crystal Type	Cell Type	Cell Size	Cell Color	Bus Bar	Cable	Frame	Backsheet
	* 1 0 0 3 5 5 1 5 *	Mono	TOPCon	182*95	Dark	16BB	MC4-1550\1100 mm	Black-F23	High Black

28. A February 2024 webinar[3] by Canadian Solar provided a graphic detailing the structure and properties of the Canadian Solar TOPCon solar cell ("Webinar Slide"):



[3] Video available at https://www.youtube.com/watch?v=p3A2rKq737M and accessible from https://pardot.canadiansolar.com/webinarsNA.



29. On information and belief, CSI's TOPHiKu6 modules, such as model no. CS6.1-54TM-455, contain solar cells comprising a semiconductor substrate. Specifically, on information and belief, the semiconductor substrate is shown in the large gray region of the Webinar Slide, denoted therein as an "N-Type Si" semiconductor substrate. *Id.*

30. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a tunnel layer on a first surface of the semiconductor substrate. On information and belief, CSI's N-Type Series modules, including TOPHiKu6, such as model no. CS6.1-54TM-455, utilize TOPCon[4] technology. On information and belief, TOPCon solar cells such as the Accused Products, such as model no. CS6.1-54TM-455, include a tunnel layer on a first surface of the semiconductor substrate. On information and belief, the tunnel layer is marked as "SiO_x" (a silicon oxide) in teal on the Webinar Slide.

31. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a first conductive type semiconductor region on the tunnel layer and containing impurities of a first

[4] *See* https://www.csisolar.com/module.

conductive type, such as an n-type region. On information and belief, the first conductive type semiconductor region is shown in pink on the Webinar Slide and marked as "n^+ poly-Si."

32. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a second conductive type semiconductor region on a second surface opposite to the first surface of the semiconductor substrate and containing impurities of a second conductive type, such as a p-type region, opposite to the first conductive type. On information and belief, the second conductive type semiconductor region is marked in green on the Webinar Slide and designated as "p^+ emitter."

33. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a first passivation film on the first conductive type semiconductor region. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the first passivation film in the CSI TOPHiKu6 module is comprised of an SiN_x layer.

34. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a first electrode formed on the first passivation film and connected to the first (n-type) conductive type semiconductor region through an opening formed in the first passivation film. On information and belief, the first electrode is marked as "Screen printed AG contact" at the bottom of the Webinar Slide.

35. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a second passivation film on the second (p-type) conductive type semiconductor region. On information and belief, the second passivation film is designated as the yellow region at the top of the Webinar Slide and is comprised of AlO_x.

36. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a second electrode formed on the second passivation film and connected to the second conductive type semiconductor region through an opening formed in the second passivation film. On

information and belief, the second electrode is designated at the top of the Webinar Slide as "Printed screen AgAl contact."

37. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the solar cells in CSI's TOPHiKu6 module contain an isolation portion for preventing a contact between the first conductive type semiconductor region and the second conductive type semiconductor region.

38. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the isolation portion in the cells within CSI's TOPHiKu6 module excludes the tunnel layer and the first conductive type semiconductor region and is in an edge portion of the first surface of the semiconductor substrate.

39. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the first passivation film in the solar cells within CSI's TOPHiKu6 module covers the first surface of the semiconductor substrate and the isolation portion together.

40. Plaintiff has been damaged as a result of CSI's acts of infringement in an amount subject to proof at trial.

41. On information and belief, CSI has had knowledge of Trina Solar's patents, including the '104 patent, since no later than service of this complaint.

42. CSI's infringement of the '104 patent from at least the filing of the complaint is willful, warranting enhanced damages under 35 U.S.C. § 284 and making this an exceptional case that warrants an award of attorneys' fees to Plaintiff pursuant to 35 U.S.C. § 285. Alternatively, CSI's continued infringement after service of this complaint is willful.

COUNT II

(Infringement of U.S. Patent No. 10,230,009)

43. On March 12, 2019, the United States Patent and Trademark Office duly issued U.S. Patent No. 10,230,009, entitled "Solar cell and method for manufacturing the same." A true and correct copy of the '009 patent is attached hereto as **Exhibit B**.

44. The '009 patent has been in full force and effect since its issuance. Trina Solar owns by assignment the entire right, title, and interest in and to the '009 patent, including the right to seek damages for past, current, and future infringement thereof.

45. On information and belief, CSI began selling and offering to sell Accused Products at least as early as about the first quarter of 2023. On information and belief, Accused Products are manufactured in Thailand for importation into the United States. On information and belief, CSI uses, sells, and offers for sale the Accused Products in the United States, including in this District.

46. CSI has infringed and continues to infringe the '009 patent, including at least claim 1, pursuant to 35 U.S.C. § 271(a), literally or under the doctrine of equivalents, by making, using, offering to sell, selling, and/or importing into the United States CSI's Accused Products, without authority or license.

47. CSI indirectly infringes the '009 patent, including at least claim 1, pursuant to 35 U.S.C. § 271(b), by (among other things) and with specific intent or willful blindness, actively aiding and abetting infringement by others, such as CSI's partners, customers and end-users, in this District and elsewhere in the United States. For example, CSI's partners, customers and end-users directly infringe through their use of the inventions claimed in the '009 patent. CSI induces this direct infringement through its affirmative acts of selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information

to customers and end-users informing them to use the Accused Products in an infringing manner, including on-site technical support and services, online technical support, training, marketing, product manuals, and advertisements, and providing software and mobile applications enabling customers and end-users to control and operate the Accused Products. As a result of CSI's inducement, CSI's partners, customers and end-users use the Accused Products in the way that CSI intends and that directly infringes the '009 patent. CSI has known of the '009 patent, and that the Accused Products infringes the '009 patent, or has been willfully blind to such infringement, since at least service of this complaint. Despite this knowledge of the '009 patent and that the Accused Products infringes the '009 patent, CSI has continued to perform these affirmative acts with the intent, or willful blindness, that the induced acts directly infringe the '009 patent.

48. CSI also indirectly infringes the '009 patent, including at least claim 1, pursuant to 35 U.S.C. § 271(c), by contributing to direct infringement committed by others, such as customers and end-users, in this District and elsewhere in the United States. CSI's affirmative acts of selling and offering to sell, in this District and elsewhere in the United States, the Accused Products and causing the Accused Products to be manufactured, used, sold, and offered for sale, contribute to CSI's customers' and end-users' use of the Accused Products, such that the '009 patent is directly infringed. The Accused Products is a material part of the invention of the '009 patent, is not a staple article or commodity of commerce, has no substantial non-infringing use, and is known by CSI to be especially made or adapted for use in the infringement of the '009 patent. CSI has known of the '009 patent, and that the Accused Products infringes the '009 patent, or has been willfully blind to such infringement, since at least service of this complaint. Despite this knowledge of the '009 patent and that the Accused Products infringe the '009 patent, CSI has

continued to perform these affirmative acts with knowledge of the '009 patent and with intent, or willful blindness, that they cause the direct infringement of the '009 patent.

49. Claim 1 of the '009 patent is reproduced below with the addition of labels [a], [b], [c], [d], [e], [f], [g], [h], [i], [j], and [k] corresponding to limitations of the claim.

1. A solar cell, comprising:

[a] a silicon semiconductor substrate having a first conductive type;

[b] an oxide layer on a first surface of the silicon semiconductor substrate;

[c] a polysilicon layer on the oxide layer and having the first conductive type;

[d] an emitter region at a second surface of the silicon semiconductor substrate opposite to the first surface and having a second conductive type opposite to the first conductive type;

[e] a first passivation film on the polysilicon layer;

[f] a first electrode connected to the polysilicon layer through an opening formed in the first passivation film;

[g] a second passivation film on the emitter region;

[h] a second electrode connected to the emitter region through an opening formed in the second passivation film; and

[i] an isolation portion for preventing a contact between the polysilicon layer and the emitter region,

[j] wherein the isolation portion excludes the oxide layer and the polysilicon layer, and is in an edge portion of the first surface of the silicon semiconductor substrate, and

[k] the first passivation film covers the first surface of the silicon semiconductor substrate and the isolation portion together.

50. On information and belief, the Accused Products embody each and every limitation of at least claim 1 of the '009 patent, literally or under the doctrine of equivalents.

51. As one non-limiting example of an Accused Product's infringement, on information and belief, CSI's TOPHiKu6 modules, such as model no. CS6.1-54TM-455, embodies

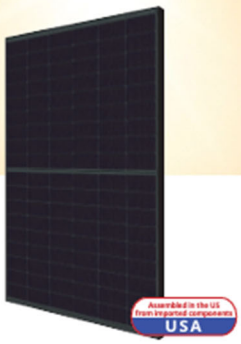
each and every limitation of at least claim 1 of the '009 patent, as described in the following paragraphs. This non-limiting example is preliminary and is not intended to construe the scope of the claimed invention or limit Plaintiff's right to modify this non-limiting example or allege that other aspects of the Accused Products infringe the identified claims, or any other claims, of the '009 patent.

52. On information and belief, CSI's TOPHiKu6 datasheet indicates that the Accused Product includes one or more solar cells. For example:[5]

[5]https://static.csisolar.com/wp-content/uploads/sites/3/2024/04/01182613/CS-Datasheet-TOPHiKu6-All-Black_CS6.1-54TM-H_v1.1C25_F23_J2_TX.pdf

NEW

CanadianSolar



TOPHiKu6 (All-Black)

N-type TOPCon Technology

445 W ~ 470 W

CS6.1-54TM-445|450|455|460|465|470H

MORE POWER

- 470 W — Module power up to 470 W, Module efficiency up to 23.0 %
- Excellent anti-LeTID & anti-PID performance. Low power degradation, high energy yield
- Lower temperature coefficient (Pmax): -0.29%/°C, increases energy yield in hot climate
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MORE RELIABLE

- Minimizes micro-crack impacts
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1st year power degradation no more than 1%

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*Subject to the terms and conditions contained in the applicable Canadian Solar Limited Warranty Statement. Also this 25-year limited product warranty is available only for products installed and operating on rooftops in certain regions.

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ISO 45001: 2018 / International standards for occupational health & safety
IEC62941: 2019 / Photovoltaic module manufacturing quality system

PRODUCT CERTIFICATES*

IEC 61215 / IEC 61730
IEC 61701 / IEC 62716 / IEC 60068-2-68
Take-e-way

* The specific certificates applicable to different module types and markets will vary, and therefore not all of the certifications listed herein will simultaneously apply to the products you order or use. Please contact your local Canadian Solar sales representative to confirm the specific certificates available for your Product and applicable in the regions in which the products will be used.

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* For detailed information, please refer to the Installation Manual.

Canadian Solar (USA) Inc.
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MECHANICAL DATA

Specification	Data
Cell Type	TOPCon cells
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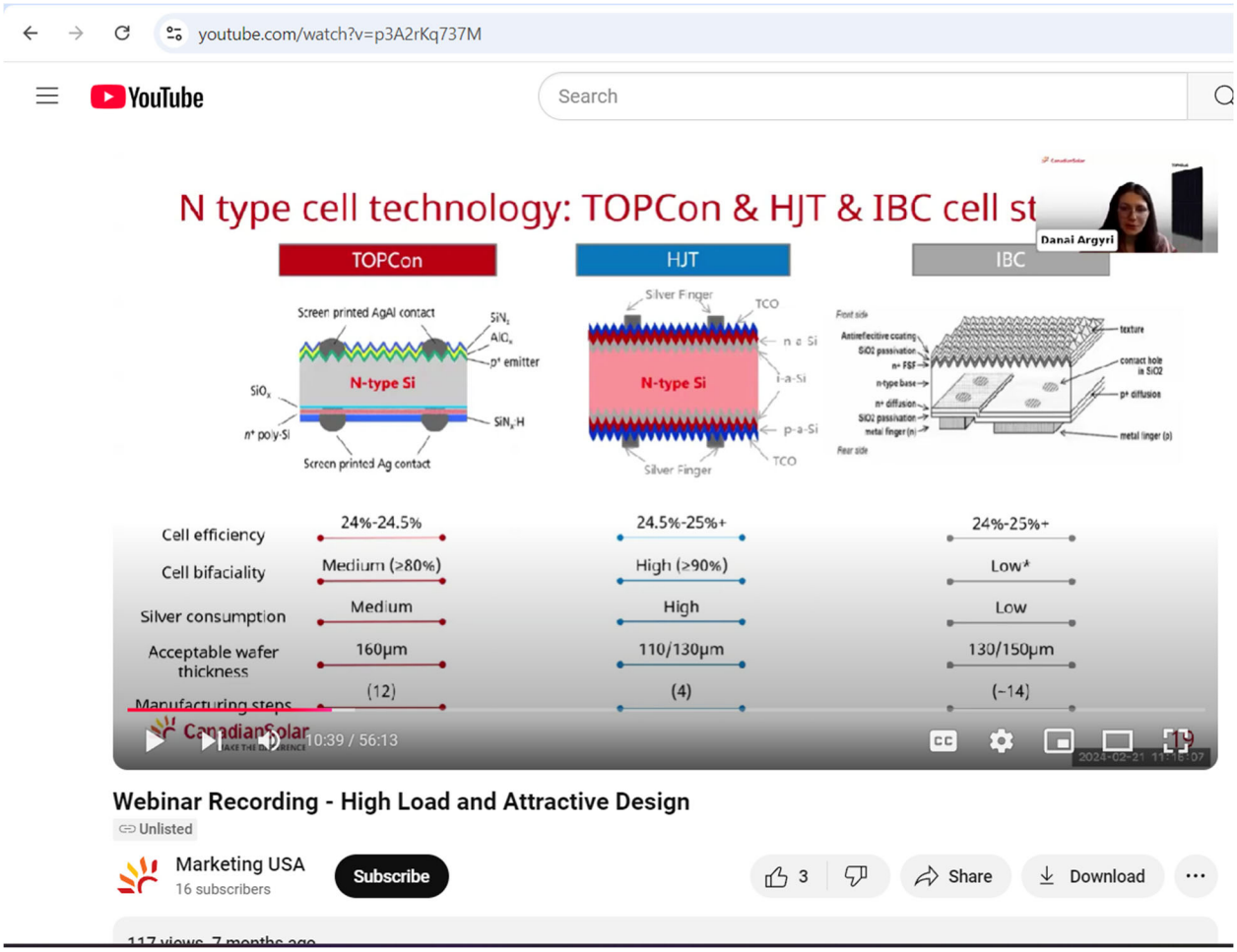
Weight	23 kg (50.7 lbs)
Front Cover	3.2 mm tempered glass with anti-reflective coating
Frame	Anodized aluminium alloy
J-Box	IP68, 3 bypass diodes
Cable	4 mm² (IEC), 12 AWG (UL)
Connector	T6, MC4, MC4-EVO2 or MC4- EVO2A
Cable Length (Including Connector)	1550 mm (61.0 in) (+) / 1100 mm (43.3 in) (-)
Per Pallet	30 pieces
Per Container (40' HQ)	720 pieces

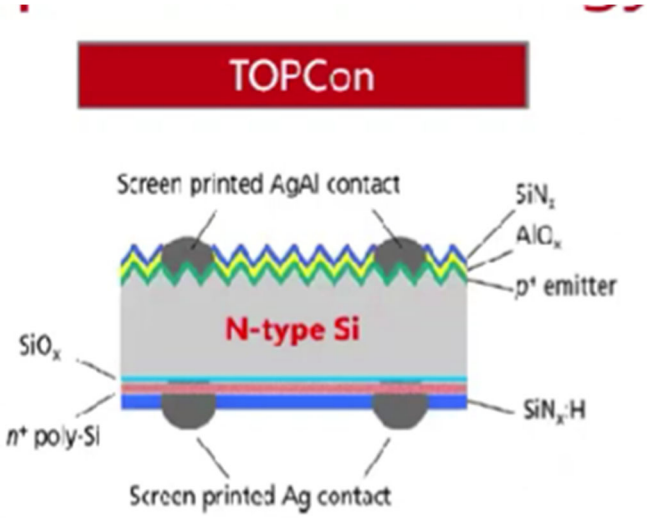
53. The label affixed to a purchased TOPHiKu6 module, model no. CS6.1-54TM-455, indicates that the module contains TOPCon type solar cells.

CanadianSolar CS6.1-54TM-455H	Material Code Barcode	Crystal Type	Cell Type	Cell Size	Cell Color	Bus Bar	Cable	Frame	Backsheet
		Mono	TOPCon	182*95	Dark	16BB	MC4-1550\1100 mm	Black-F23	High Black

54. A February 2024 webinar[6] by Canadian Solar provided a graphic detailing the structure and properties of the Canadian Solar TOPCon solar cell ("Webinar Slide"):



[6] Video available at https://www.youtube.com/watch?v=p3A2rKq737M and accessible from https://pardot.canadiansolar.com/webinarsNA.



55. On information and belief, CSI's TOPHiKu6 modules, such as model no. CS6.1-54M-455, contain solar cells comprising a semiconductor substrate having a first conductive type. Specifically, on information and belief, and as shown in the large gray region in the Webinar Slide, the Accused Products include a "N-Type Si" semiconductor substrate.

56. On information and belief, the solar cells in CSI's TOPHiKu6 module contain an oxide layer on a first surface of the semiconductor substrate. On information and belief, CSI's N-Type Series modules, including TOPHiKu6, utilize TOPCon technology.[7] On information and belief, TOPCon solar cells such as the Accused Products include an oxide layer on a first surface of the semiconductor substrate. On information and belief, the oxide layer is marked as SiO_x in teal in the Webinar Slide.

57. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a polysilicon layer region on the oxide layer and containing impurities of a first conductive type, such as an n-type region. On information and belief, the polysilicon region is shown in pink on the Webinar Slide and marked as "n^+ poly-Si."

[7] *See* https://www.csisolar.com/module.

58. On information and belief, the solar cells in CSI's TOPHiKu6 module contain an emitter region at a second surface opposite of the silicon semiconductor substrate opposite to the first surface of the semiconductor substrate and having a second conductive type, such as a p-type region, opposite to the first conductive type. On information and belief, the emitter region is marked in green on the Webinar Slide and designated as "p^+ emitter."

59. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a first passivation film on the polysilicon layer. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the first passivation film is comprised of an SiN_x layer.

60. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a first electrode connected to the polysilicon layer through an opening formed in the first passivation film. On information and belief, the first electrode is marked as "Screen printed AG contact" at the bottom of the Webinar Slide.

61. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a second passivation film on the emitter region. On information and belief, the second passivation film is shown in the Webinar Slide and designated as the yellow region at the top of the Webinar Slide and is comprised of AlO_x.

62. On information and belief, the solar cells in CSI's TOPHiKu6 module contain a second electrode connected to the emitter region through an opening formed in the second passivation film. On information and belief, the second electrode is designated at the top of the Webinar Slide as "Printed screen AgAl contact."

63. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the solar cells in CSI's TOPHiKu6 module contain an isolation portion for preventing a contact between the polysilicon layer and the emitter region.

64. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the isolation portion in the solar cells within CSI's TOPHiKu6 module excludes the oxide layer and the polysilicon layer and is in an edge portion of the first surface of the silicon semiconductor substrate.

65. On information and belief, including reverse engineering conducted on a CSI TOPHiKu6 module, the first passivation film in the solar cells within CSI's TOPHiKu6 module covers the first surface of the silicon semiconductor substrate and the isolation portion together.

66. Plaintiff has been damaged as a result of CSI's acts of infringement in an amount subject to proof at trial.

67. On information and belief, CSI has had knowledge of Trina Solar's patents, including the '009 patent, since at least no later than service of this complaint.

68. CSI's infringement of the '009 patent from at least the filing of the complaint is willful, warranting enhanced damages under 35 U.S.C. § 284 and making this an exceptional case that warrants an award of attorneys' fees to Plaintiff pursuant to 35 U.S.C. § 285. Alternatively, CSI's continued infringement after service of this complaint is willful.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for a judgment in its favor and against CSI and respectfully requests the following relief:

A. A judgment that CSI infringes the '104 patent;

B. A judgment that CSI infringes the '009 patent;

C. Damages for infringement of the ’104 patent in an amount to be determined at trial, adequate to compensate Plaintiff for Defendants’ past infringement and any continuing or future infringement up until the date such judgment is entered, and in no event less than a reasonable royalty, including interest, costs, and disbursements pursuant to 35 U.S.C. § 284 and, if necessary to adequately compensate Plaintiff for Defendants’ infringement, an accounting of all infringing sales including, but not limited to, those sales not presented at trial;

D. Damages for infringement of the ’009 patent in an amount to be determined at trial, adequate to compensate Plaintiff for Defendants’ past infringement and any continuing or future infringement up until the date such judgment is entered, and in no event less than a reasonable royalty, including interest, costs, and disbursements pursuant to 35 U.S.C. § 284 and, if necessary to adequately compensate Plaintiff for Defendants’ infringement, an accounting of all infringing sales including, but not limited to, those sales not presented at trial;;

E. An order permanently enjoining CSI from further infringement of the ’104 patent or a compulsory royalty in an amount to be determined at trial;

F. An order permanently enjoining CSI from further infringement of the ’009 patent or a compulsory royalty in an amount to be determined at trial;

G. For other monetary relief, including costs and expenses and pre- and post-judgment interest;

H. A determination that CSI’s infringement of the ’104 and ’009 patents has been and is willful from at least the service of the complaint, and an award of enhanced damages, up to and including trebling of the damages awarded to Plaintiff;

I. A determination that this is an exceptional case under 35 U.S.C. § 285 and an award of attorneys’ fees and costs to Plaintiff;

J. An order awarding Plaintiff any such other relief as the Court may deem just and proper under the circumstances.

JURY DEMAND

Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Plaintiff hereby demands a jury trial as to all issues so triable.

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