

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

**Applicant:** PT THORNOVA SOLAR INDONESIA

**Manufacturer:** Yuncheng Solar Technology Co., Ltd

**Address:** Jalan Brigjen Katamso, Kel. Tanjung  
Uncang, Kec. Batu Aji, Kota Batam,  
Provinsi Kepulauan Riau, 29466

**Address:** Building H and Building E (production),  
Phase II of Standard Plant, Runzhou  
Road, Huishan Industrial Transformation  
Cluster, Wuxi, Jiangsu

**Country:** Indonesia


**Country:** China

**Party Authorized To Apply Mark:** Same as Manufacturer

**Report Issuing Office:** Intertek Testing Services (Shanghai FTZ) Co., Ltd

**Control Number:** 5026027

**Authorized by:** \_\_\_\_\_

  
for L. Matthew Snyder, Certification Manager



This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.  
545 East Algonquin Road, Arlington Heights, IL 60005  
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

<b>Standard(s):</b>	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [UL 61730-1:2022 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [UL 61730-2:2022 Ed.2+R:25Apr2023]
	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [CSA C22.2#61730-1:2019 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [CSA C22.2#61730-2:2019 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1: Test Requirements [UL 61215-1:2021 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1-1: Special Requirements for Testing of Crystalline Silicon Photovoltaic (PV) Modules [UL 61215-1-1:2021 Ed.2]

<b>Product:</b>	Crystalline Silicon Photovoltaic (PV) Modules
<b>Brand Name:</b>	SUNOVA SOLAR, THORNOVA SOLAR

<p>TS- followed by SWT, SBT, BBT or BWT; followed by 78(; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 72(; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by ); maybe followed by -X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by )-X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 48(; followed by 435, 440, 445 or 450; followed by )-</p>
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**Models:**

G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 485, 490, 495, 500 or 505; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 545, 550, 555, 560 or 565; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 595, 600, 605, 610, 615 or 620; followed by )-G11 or )-G11-X.

SS- maybe followed by SB, BB or BW; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by -78MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by -72MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by -66MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by -60MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by -54MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH-X.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH-X.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH-X.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH-X.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH-X.

SS- maybe followed by SB, BB, BW; followed by 435, 440, 445 or 450; followed by -48MDH-G11(T) or -48MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 485, 490, 495, 500 or 505; followed by -54MDH-G11(T) or -54MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 545, 550, 555, 560 or 565; followed by -60MDH-G11(T) or -60MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 595, 600, 605, 610, 615 or 620; followed by -66MDH-G11(T) or -66MDH-G11(T)-X.

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**Applicant:** PT THORNOVA SOLAR INDONESIA

**Manufacturer:** PT APOLLO SOLAR INDONESIA

**Address:** Jalan Brigjen Katamso, Kel. Tanjung  
Uncang, Kec. Batu Aji, Kota Batam,  
Provinsi Kepulauan Riau, 29466

**Address:** Jalan Wiraraja Industrial Estate Building  
Blok B No. 7-8, Kel. Kabil, Kec. Nongsa,  
Kota Batam, Kepulauan Riau

**Country:** Indonesia


**Country:** Indonesia

**Party Authorized To Apply Mark:** Same as Manufacturer

**Report Issuing Office:** Intertek Testing Services (Shanghai FTZ) Co., Ltd

**Control Number:** 5029953

**Authorized by:** \_\_\_\_\_

  
for L. Matthew Snyder, Certification Manager



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This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.  
545 East Algonquin Road, Arlington Heights, IL 60005  
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

<b>Standard(s):</b>	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [UL 61730-1:2022 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [UL 61730-2:2022 Ed.2+R:25Apr2023]
	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [CSA C22.2#61730-1:2019 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [CSA C22.2#61730-2:2019 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1: Test Requirements [UL 61215-1:2021 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1-1: Special Requirements for Testing of Crystalline Silicon Photovoltaic (PV) Modules [UL 61215-1-1:2021 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 2: Test Procedures [UL 61215-2:2021 Ed.2]

<b>Product:</b>	Crystalline Silicon Photovoltaic (PV) Modules
<b>Brand Name:</b>	SUNOVA SOLAR, THORNOVA SOLAR

	<p>TS- followed by SWT, SBT, BBT or BWT; followed by 78(; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 72(; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by ); maybe followed by -X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by )-X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 48(; followed by 435, 440, 445 or 450; followed by )-</p>
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**Models:**

G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 485, 490, 495, 500 or 505; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 545, 550, 555, 560 or 565; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 595, 600, 605, 610, 615 or 620; followed by )-G11 or )-G11-X.

SS- maybe followed by SB, BB or BW; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by -78MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by -72MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by -66MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by -60MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by -54MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH-X.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH-X.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH-X.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH-X.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH-X.

SS- maybe followed by SB, BB, BW; followed by 435, 440, 445 or 450; followed by -48MDH-G11(T) or -48MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 485, 490, 495, 500 or 505; followed by -54MDH-G11(T) or -54MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 545, 550, 555, 560 or 565; followed by -60MDH-G11(T) or -60MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 595, 600, 605, 610, 615 or 620; followed by -66MDH-G11(T) or -66MDH-G11(T)-X.



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**Applicant:** PT THORNOVA SOLAR INDONESIA

**Manufacturer:** PT Atelier Solar Indonesia

**Address:** Jalan Brigjen Katamso, Kel. Tanjung  
Uncang, Kec. Batu Aji, Kota Batam,  
Provinsi Kepulauan Riau, 29466

**Address:** Wiraraja Industrial Park I, Blok A No. 2 &  
3A, Jalan Wiraraja, Kelurahan Kabil,  
Kecamatan Nongsa, Kota Batam,  
Provinsi Kepulauan Riau, 29467

**Country:** Indonesia

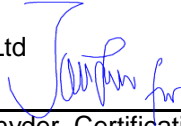
**Country:** Indonesia

**Party Authorized To Apply Mark:** Same as Manufacturer

**Report Issuing Office:** Intertek Testing Services (Shanghai FTZ) Co., Ltd

**Control Number:** 5030631

**Authorized by:** \_\_\_\_\_

  
for L. Matthew Snyder, Certification Manager



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Intertek Testing Services NA Inc.  
545 East Algonquin Road, Arlington Heights, IL 60005  
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

<b>Standard(s):</b>	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [UL 61730-1:2022 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [UL 61730-2:2022 Ed.2+R:25Apr2023]
	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [CSA C22.2#61730-1:2019 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [CSA C22.2#61730-2:2019 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1: Test Requirements [UL 61215-1:2021 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1-1: Special Requirements for Testing of Crystalline Silicon Photovoltaic (PV) Modules [UL 61215-1-1:2021 Ed.2]

<b>Product:</b>	Crystalline Silicon Photovoltaic (PV) Modules
<b>Brand Name:</b>	SUNOVA SOLAR, THORNOVA SOLAR

<p>TS- followed by SWT, SBT, BBT or BWT; followed by 78(; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 72(; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by ); maybe followed by -X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by )-X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 48(; followed by 435, 440, 445 or 450; followed by )-</p>
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**Models:**

G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 485, 490, 495, 500 or 505; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 545, 550, 555, 560 or 565; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 595, 600, 605, 610, 615 or 620; followed by )-G11 or )-G11-X.

SS- maybe followed by SB, BB or BW; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by -78MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by -72MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by -66MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by -60MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by -54MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH-X.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH-X.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH-X.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH-X.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH-X.

SS- maybe followed by SB, BB, BW; followed by 435, 440, 445 or 450; followed by -48MDH-G11(T) or -48MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 485, 490, 495, 500 or 505; followed by -54MDH-G11(T) or -54MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 545, 550, 555, 560 or 565; followed by -60MDH-G11(T) or -60MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 595, 600, 605, 610, 615 or 620; followed by -66MDH-G11(T) or -66MDH-G11(T)-X.

This authorizes the application of the Certification Mark(s) shown below to the models described in the Product(s) Covered section when made in accordance with the conditions set forth in the Certification Agreement and Listing Report. This authorization also applies to multiple listee model(s) identified on the correlation page of the Listing Report.

This document is the property of Intertek Testing Services and is not transferable. The certification mark(s) may be applied only at the location of the Party Authorized To Apply Mark.

**Applicant:** PT THORNOVA SOLAR INDONESIA

**Manufacturer:** PT THORNOVA SOLAR INDONESIA

**Address:** Jalan Brigjen Katamso, Kel. Tanjung  
Uncang, Kec. Batu Aji, Kota Batam,  
Provinsi Kepulauan Riau, 29466

**Address:** Jalan Brigjen Katamso, Kel. Tanjung  
Uncang, Kec. Batu Aji, Kota Batam,  
Provinsi Kepulauan Riau, 29466

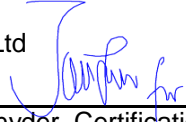
**Country:** Indonesia

**Country:** Indonesia

**Party Authorized To Apply Mark:** Same as Manufacturer  
**Report Issuing Office:** Intertek Testing Services (Shanghai FTZ) Co., Ltd

**Control Number:** 5030618

**Authorized by:** \_\_\_\_\_

  
for L. Matthew Snyder, Certification Manager



This document supersedes all previous Authorizations to Mark for the noted Report Number.

This Authorization to Mark is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Authorization to Mark. Only the Client is authorized to permit copying or distribution of this Authorization to Mark and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement and in this Authorization to Mark. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

Intertek Testing Services NA Inc.  
545 East Algonquin Road, Arlington Heights, IL 60005  
Telephone 800-345-3851 or 847-439-5667 Fax 312-283-1672

<b>Standard(s):</b>	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [UL 61730-1:2022 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [UL 61730-2:2022 Ed.2+R:25Apr2023]
	Photovoltaic (PV) Module Safety Qualification - Part 1: Requirements for Construction [CSA C22.2#61730-1:2019 Ed.2]
	Photovoltaic (PV) Module Safety Qualification - Part 2: Requirements for Testing [CSA C22.2#61730-2:2019 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1: Test Requirements [UL 61215-1:2021 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 1-1: Special Requirements for Testing of Crystalline Silicon Photovoltaic (PV) Modules [UL 61215-1-1:2021 Ed.2]
	Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval - Part 2: Test Procedures [UL 61215-2:2021 Ed.2]

<b>Product:</b>	Crystalline Silicon Photovoltaic (PV) Modules
<b>Brand Name:</b>	SUNOVA SOLAR, THORNOVA SOLAR

	<p>TS- followed by SWT, SBT, BBT or BWT; followed by 78(; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 72(; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by ); maybe followed by -X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by ); maybe followed by -X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 78(; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 72(; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 66(; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 60(; followed by 435, 440, 445, 450, 455, 460 or 465; followed by )-X.</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by ).</p> <p>TS- followed by SB, SW, BB or BW; followed by 54(; followed by 395, 400, 405, 410, 415 or 420; followed by )-X.</p> <p>TS- followed by SWT, SBT, BBT or BWT; followed by 48(; followed by 435, 440, 445 or 450; followed by )-</p>
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**Models:**

G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 54(; followed by 485, 490, 495, 500 or 505; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 60(; followed by 545, 550, 555, 560 or 565; followed by )-G11 or )-G11-X.

TS- followed by SWT, SBT, BBT or BWT; followed by 66(; followed by 595, 600, 605, 610, 615 or 620; followed by )-G11 or )-G11-X.

SS- maybe followed by SB, BB or BW; followed by 580, 585, 590, 595, 600, 605, 610, 615, 620, 625, 630, 635, 640, 645, 650, 655, 660 or 665; followed by -78MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 535, 540, 545, 550, 555, 560, 565, 570, 575, 580, 585, 590, 595, 600, 605, 610 or 615; followed by -72MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 490, 495, 500, 505, 510, 515, 520, 525, 530, 535, 540, 545, 550, 555 or 560; followed by -66MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 445, 450, 455, 460, 465, 470, 475, 480, 485, 490, 495, 500, 505 or 510; followed by -60MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 400, 405, 410, 415, 420, 425, 430, 435, 440, 445, 450, 455 or 460; followed by -54MDH(T); maybe followed by -X.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH.

SS- maybe followed by SB, BB or BW; followed by 565, 570, 575, 580, 585, 590, 595, 600, 605 or 610; followed by -78MDH-X.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH.

SS- maybe followed by SB, BB or BW; followed by 520, 525, 530, 535, 540, 545, 550, 555, 560 or 565; followed by -72MDH-X.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH.

SS- maybe followed by SB, BB or BW; followed by 480, 485, 490, 495, 500, 505, 510 or 515; followed by -66MDH-X.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH.

SS- maybe followed by SB, BB or BW; followed by 435, 440, 445, 450, 455, 460 or 465; followed by -60MDH-X.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH.

SS- maybe followed by SB, BB or BW; followed by 395, 400, 405, 410, 415 or 420; followed by -54MDH-X.

SS- maybe followed by SB, BB, BW; followed by 435, 440, 445 or 450; followed by -48MDH-G11(T) or -48MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 485, 490, 495, 500 or 505; followed by -54MDH-G11(T) or -54MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 545, 550, 555, 560 or 565; followed by -60MDH-G11(T) or -60MDH-G11(T)-X.

SS- maybe followed by SB, BB, BW; followed by 595, 600, 605, 610, 615 or 620; followed by -66MDH-G11(T) or -66MDH-G11(T)-X.