

**To / 致:**

Company / 公司: Tongwei Solar (Hefei) Co., Ltd.

Contact / 联系人: Mr. Yang Wei

Email / 邮箱: YANGW012@tongwei.com

**From / 自:**

Company / 公司:

Contact / 联系人:

Email / 邮箱:

TÜV NORD (HANGZHOU)  
CO., LTD. / 杭州汉德质量认证  
服务有限公司

Ms. Miley Li / 李文颖 小姐

wli@tuv-nord.com

**Subject: Announcement of cancellation**

主题: 证书取消通知

File No.: PVP01043/23P-01

项目号:

License holder: **Tongwei Solar (Hefei) Co., Ltd.**持证人: No.888, Changning Road, High-tech District,  
Hefei City, Anhui Province, 230088, P.R. China

Certificate No.: 44 780 19 406749 - 401R18A1M30

证书号:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

产品: 晶硅光伏组件

Herewith it is declared, that the above noted certificate(s) has (have) been invalidated since 2023-03-08  
特此声明, 上述证书自 2023 年 03 月 08 日起失效。

The cancellation is due to:

取消原因:

 License holder applied for cancellation.

持证人申请取消。

 New certificate(s) (no: 44 780 19 406749 - 401R18A1M31) has (have) been issued to replace the cancelled one(s).新证书(证书号: 44 780 19 406749 - 401R18A1M31) 签发, 取代旧证书。 After the expiry date of the certificate(s), the certificate(s) has (have) not been renewed within 6 months.

证书到期 6 个月内未续证。

 After the expiry date of last factory inspection conclusion, no factory inspection has been conducted or no payment of annual fees has been received within 6 months.

上一厂检结论有效期到期后, 6 个月内未配合厂检或未支付年度费用。

 No payment of annual fees has been received within 6 month after last period of payment of annual fees.

上一证书年费支付期后, 超过 6 个月未支付证书年费。

 Others: \_\_\_\_\_

其他情况: \_\_\_\_\_

Please pay attention to stop using the invalid certificate(s) from 2023-03-08. Meanwhile, please send back the original copies of above mentioned certificate(s) to us.

请注意从 2023 年 03 月 08 日开始停止使用无效证书。同时, 请将上述证书原件寄回给我们。

TÜV NORD reserved the right of final explanation about the cancellation of certificate(s). TÜV NORD will not take any responsibility for the circumstance of misusing the invalid certificate(s) by the license holder or the manufacturer.

TÜV NORD 保留对证书取消的最终解释权。TÜV NORD 对证书持有者或制造商滥用无效证书的情况不承担任何责任。

Renewable Energy / 可再生能源

TÜV NORD (Hangzhou) Co., Ltd. / 杭州汉德质量认证服务有限公司

Miley Li / 李文颖



Technical Support / 技术支持

# CERTIFICATE

**TÜV NORD CERT GmbH**  
herewith declares that

**Tongwei Solar (Hefei) Co., Ltd.**  
No.888, Changning Road, High-tech District,  
Hefei City, Anhui Province, 230088  
P.R. China

is authorized to provide the product mentioned below with the mark as illustrated:

**Description of product (details see Annex 2):**

**Crystalline Silicon Terrestrial Photovoltaic (PV) modules**



Valid from: 2023-03-08

Valid until: 2027-10-19

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC / EN 61215-1:2016; IEC / EN 61215-1-1:2016; IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018; IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018.
Registered No.:	44 780 19 406749 - 401R18A1M31
Manufacturer:	see Annex 1
Test Report No.:	492010913.046
File No.:	PVP07101/22P



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Essen, 2023-03-08

Please also pay attention to the information stated overleaf.

**Manufacturer:**

Manufacturer 1:	<b>Tongwei Solar (Hefei) Co., Ltd.</b> No.888, Changning Road, High-tech District, Hefei City, Anhui Province, 230088, P.R. China
Factory inspection report no.:	862010358.006
Manufacturer 2:	<b>Hefei GCL System Integration New Energy Technology Co., Ltd.</b> Southeast Corner of Intersection of Sidingshan Road and Ruquan Road, Hefei Circular Economy Demonstration Park, Feidong County, Hefei City, Anhui Province, P.R. China
Factory inspection report no.:	862010696.001
Manufacturer 3:	<b>Jiangsu Yueyang Photovoltaic Technology Co., Ltd.</b> 777 Tangqiao Road, High-tech Economic Zone, Jianhu County, Yancheng City, 224700 Jiangsu Province, P.R. China.
Factory inspection report no.:	862010688.001
Manufacturer 4:	<b>Tangshan Haitai New Energy Technology Co., Ltd.</b> Yutai Industrial Zone, Yutian, Tangshan City Hebei Province, 064100, P.R. China
Factory inspection report no.:	862010687.001
Manufacturer 5:	<b>SIYANG TALESUN NEW ENERGY TECHNOLOGIES CO., LTD.</b> No.211 Zhongxing East Road, Siyang Economic Development Zone, 223700 Suqian City, Jiangsu, China
Factory inspection report no.:	862010690.001
Manufacturer 6:	<b>Peixian Talesun New Energy Technology Co., Ltd.</b> 18 Hanrun Road, Peixian Economic Development Zone, 221600 Xuzhou City, Jiangsu, China
Factory inspection report no.:	862010694.001



Manufacturer 7: **Zibo JinenU Solar Technology Co., LTD.**  
3005, Silk Road, Zhoucun District,  
Zibo, Shandong China

Factory inspection report no.: 862010689.001

Manufacturer 8: **Jiangsu Huapeng Photovoltaic Technology Co., LTD.**  
No. 118, Jingang Road, Yangzhou economic and Technological  
Development Zone, 225100 Yangzhou City, Jiangsu Province,  
PEOPLE'S REPUBLIC OF CHINA

Factory inspection report no.: 862010695.001

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.



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**Description of product(s):**

Module types:	<b>PV Modules with Segmented 6" Mono-crystalline Silicon Solar Cells:</b> 408 cells: THxxxCM5-72S (xxx = 350-390, in increment of 5) 340 cells: THxxxCM5-60S (xxx = 290-325, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	III or II or I, refer to CDF for details
Design load (positive / negative):	2400Pa / 2400Pa or 3600Pa / 1600Pa , refer to CDF for details
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Module types:	<b>PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells:</b> 432 cells: THxxxPM5-78S (xxx = 445-480, in increment of 5) 432 cells: THxxxPM5-78SA (xxx = 445-480, in increment of 5) 432 cells: THxxxPM5-78SAF (xxx = 445-480, in increment of 5) 432 cells: THxxxPM5-78SAS (xxx = 445-480, in increment of 5) 432 cells: THxxxPMB5-78S (xxx = 445-480, in increment of 5) 432 cells: THxxxPMB5-78SA (xxx = 445-480, in increment of 5) 432 cells: THxxxPMB5-78SAF (xxx = 445-480, in increment of 5) 432 cells: THxxxPMB5-78SAS (xxx = 445-480, in increment of 5) 408 cells: THxxxPM5-72S (xxx = 395-455, in increment of 5) 408 cells: THxxxPM5-72SF (xxx = 395-435, in increment of 5) 408 cells: THxxxPM5-72SS (xxx = 395-435, in increment of 5) 408 cells: THxxxPM5-72SA (xxx = 420-455, in increment of 5) 408 cells: THxxxPM5-72SAF (xxx = 420-455, in increment of 5) 408 cells: THxxxPM5-72SAS (xxx = 420-455, in increment of 5) 408 cells: THxxxPM5-72SB (xxx = 460-500, in increment of 5) 408 cells: THxxxPM5-72SBF (xxx = 460-500, in increment of 5) 408 cells: THxxxPM5-72SBS (xxx = 460-500, in increment of 5) 408 cells: THxxxPMB5-72S (xxx = 395-455, in increment of 5) 408 cells: THxxxPMB5-72SF (xxx = 395-435, in increment of 5) 408 cells: THxxxPMB5-72SS (xxx = 395-435, in increment of 5) 408 cells: THxxxPMB5-72SA (xxx = 420-455, in increment of 5)
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408 cells: THxxxPMB5-72SAF (xxx = 420-455, in increment of 5)  
408 cells: THxxxPMB5-72SAS (xxx = 420-455, in increment of 5)  
408 cells: THxxxPMB5-72SB (xxx = 460-505, in increment of 5)  
408 cells: THxxxPMB5-72SBF (xxx = 460-500, in increment of 5)  
408 cells: THxxxPMB5-72SBS (xxx = 460-505, in increment of 5)  
360 cells: THxxxPM5-66S (xxx = 370-400, in increment of 5)  
360 cells: THxxxPM5-66SA (xxx = 370-400, in increment of 5)  
360 cells: THxxxPM5-66SAF (xxx = 370-400, in increment of 5)  
360 cells: THxxxPM5-66SAS (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66S (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66SA (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66SAF (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66SAS (xxx = 370-400, in increment of 5)  
340 cells: THxxxPM5-60S (xxx = 325-380, in increment of 5)  
340 cells: THxxxPM5-60SA (xxx = 350-380, in increment of 5)  
340 cells: THxxxPM5-60SAF (xxx = 350-380, in increment of 5)  
340 cells: THxxxPM5-60SAS (xxx = 350-380, in increment of 5)  
340 cells: THxxxPM5-60SF (xxx = 325-360, in increment of 5)  
340 cells: THxxxPM5-60SS (xxx = 325-360, in increment of 5)  
340 cells: THxxxPM5-60SB (xxx = 380-415, in increment of 5)  
340 cells: THxxxPM5-60SBF (xxx = 380-415, in increment of 5)  
340 cells: THxxxPM5-60SBS (xxx = 380-415, in increment of 5)  
340 cells: THxxxPMB5-60SB (xxx = 380-420, in increment of 5)  
340 cells: THxxxPMB5-60SBF (xxx = 380-415, in increment of 5)  
340 cells: THxxxPMB5-60SBS (xxx = 380-420, in increment of 5)  
340 cells: THxxxPMB5-60S (xxx = 325-380, in increment of 5)  
340 cells: THxxxPMB5-60SA (xxx = 350-380, in increment of 5)  
340 cells: THxxxPMB5-60SF (xxx = 325-360, in increment of 5)  
340 cells: THxxxPMB5-60SS (xxx = 325-360, in increment of 5)  
340 cells: THxxxPMB5-60SAF (xxx = 350-380, in increment of 5)  
340 cells: THxxxPMB5-60SAS (xxx = 350-380, in increment of 5)

Maximum system voltage: 1500V  
Fuse rating: 20A  
Electrical protection class: Class II  
Pollution degree: 1  
Material group: III or II or I, refer to CDF for details  
Design load (positive / negative): 2400Pa / 2400Pa or 3600Pa / 1600Pa, refer to CDF for details  
Safety factors: 1.5



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Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	<b>PV Modules with Segmented 8" PERC Mono-crystalline Silicon Solar Cells:</b> 414 cells: THxxxPM6-69SC (xxx = 645-655, in increment of 5) 414 cells: THxxxPMB6-69SC (xxx = 645-670, in increment of 5) 408 cells: THxxxPM6-68SC (xxx = 635-655, in increment of 5) 408 cells: THxxxPMB6-68SC (xxx = 635-660, in increment of 5) 390 cells: THxxxPM6-65SC (xxx = 605-625, in increment of 5) 390 cells: THxxxPMB6-65SC (xxx = 605-630, in increment of 5) 345 cells: THxxxPM6-58SC (xxx = 535-550, in increment of 5) 345 cells: THxxxPMB6-58SC (xxx = 535-555, in increment of 5) 340 cells: THxxxPM6-57SC (xxx = 530-545, in increment of 5) 340 cells: THxxxPMB6-57SC (xxx = 530-550, in increment of 5) 325 cells: THxxxPM6-54SC (xxx = 505-520, in increment of 5) 325 cells: THxxxPMB6-54SC (xxx = 505-525, in increment of 5) 320 cells: THxxxPMB7-46SC (xxx = 425-445, in increment of 5) 320 cells: THxxxPMB7-46SCS (xxx = 425-445, in increment of 5) 320 cells: THxxxPMB7-46SCF (xxx = 420-440, in increment of 5) 305 cells: THxxxPMB7-44SC (xxx = 405-425, in increment of 5) 305 cells: THxxxPMB7-44SCS (xxx = 405-425, in increment of 5) 305 cells: THxxxPMB7-44SCF (xxx = 400-420, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	30A or 25A, refer to CDF for details
Electrical protection class:	Class II
Pollution degree:	1
Material group:	III or II or I, refer to CDF for details
Design load (positive / negative):	3600Pa / 1600Pa, refer to CDF for details
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)



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Module types:

**PV Modules with Half-cut 7" PERC Mono-crystalline Silicon Solar Cells:**

156 cells: TWMPD-78HSxxx (xxx = 570-620, in increment of 5)  
156 cells: TWMPD-78HBxxx (xxx = 570-620, in increment of 5)  
156 cells: TWxxxMAP-156-H (xxx = 580-605, in increment of 5)  
156 cells: TWxxxMAP-156-H-S (xxx = 580-605, in increment of 5)  
156 cells: TWxxxMAP-156-H-F (xxx = 580-605, in increment of 5)  
156 cells: TWxxxMGP-156-H (xxx = 570-620, in increment of 5)  
156 cells: TWxxxMGP-156-H-S (xxx = 570-620, in increment of 5)  
156 cells: TWxxxMGP-156-H-F (xxx = 570-620, in increment of 5)  
144 cells: TWMPD-72HSxxx (xxx = 525-570, in increment of 5)  
144 cells: TWMPD-72HBxxx (xxx = 525-570, in increment of 5)  
144 cells: TWxxxMAP-144-H (xxx = 530-565, in increment of 5)  
144 cells: TWxxxMAP-144-H-S (xxx = 530-565, in increment of 5)  
144 cells: TWxxxMAP-144-H-F (xxx = 530-565, in increment of 5)  
144 cells: TWxxxMGP-144-H (xxx = 525-570, in increment of 5)  
144 cells: TWxxxMGP-144-H-S (xxx = 525-570, in increment of 5)  
144 cells: TWxxxMGP-144-H-F (xxx = 525-570, in increment of 5)  
132 cells: TWMPD-66HSxxx (xxx = 480-525, in increment of 5)  
132 cells: TWMPD-66HBxxx (xxx = 480-525, in increment of 5)  
132 cells: TWxxxMAP-132-H (xxx = 485-515, in increment of 5)  
132 cells: TWxxxMAP-132-H-S (xxx = 485-515, in increment of 5)  
132 cells: TWxxxMAP-132-H-F (xxx = 485-515, in increment of 5)  
132 cells: TWxxxMGP-132-H (xxx = 480-525, in increment of 5)  
132 cells: TWxxxMGP-132-H-S (xxx = 480-525, in increment of 5)  
132 cells: TWxxxMGP-132-H-F (xxx = 480-525, in increment of 5)  
120 cells: TWMPD-60HSxxx (xxx = 440-475, in increment of 5)  
120 cells: TWMPD-60HBxxx (xxx = 440-475, in increment of 5)  
120 cells: TWxxxMAP-120-H (xxx = 440-470, in increment of 5)  
120 cells: TWxxxMAP-120-H-S (xxx = 440-470, in increment of 5)  
120 cells: TWxxxMAP-120-H-F (xxx = 440-470, in increment of 5)  
120 cells: TWxxxMGP-120-H (xxx = 440-475, in increment of 5)  
120 cells: TWxxxMGP-120-H-S (xxx = 440-475, in increment of 5)  
120 cells: TWxxxMGP-120-H-F (xxx = 440-475, in increment of 5)  
108 cells: TWMPD-54HSxxx (xxx = 395-430, in increment of 5)  
108 cells: TWMPD-54HBxxx (xxx = 395-430, in increment of 5)  
108 cells: TWxxxMAP-108-H (xxx = 400-420, in increment of 5)  
108 cells: TWxxxMAP-108-H-S (xxx = 400-420, in increment of 5)  
108 cells: TWxxxMAP-108-H-F (xxx = 400-420, in increment of 5)  
108 cells: TWxxxMGP-108-H (xxx = 395-430, in increment of 5)



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	108 cells: TWxxxMGP-108-H-S (xxx = 395-430, in increment of 5)
	108 cells: TWxxxMGP-108-H-F (xxx = 395-430, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A or 20A, refer to CDF for details
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
Design load (positive / negative):	3600Pa / 1600Pa, refer to CDF for details
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)
Module types:	<b>PV Modules with Half-cut 7" TOPCon Mono-crystalline Silicon Solar Cells:</b>
	156 cells: TWMND-78HSxxx (xxx = 570-630, in increment of 5)
	156 cells: TWMND-78HBxxx (xxx = 570-630, in increment of 5)
	156 cells: TWxxxMGT-156-H (xxx = 570-630, in increment of 5)
	156 cells: TWxxxMGT-156-H-S (xxx = 570-630, in increment of 5)
	156 cells: TWxxxMGT-156-H-F (xxx = 570-630, in increment of 5)
	144 cells: TWMND-72HSxxx (xxx = 525-580, in increment of 5)
	144 cells: TWMND-72HBxxx (xxx = 525-580, in increment of 5)
	144 cells: TWxxxMGT-144-H (xxx = 525-580, in increment of 5)
	144 cells: TWxxxMGT-144-H-S (xxx = 525-580, in increment of 5)
	144 cells: TWxxxMGT-144-H-F (xxx = 525-580, in increment of 5)
	132 cells: TWMND-66HSxxx (xxx = 485-530, in increment of 5)
	132 cells: TWMND-66HBxxx (xxx = 485-530, in increment of 5)
	132 cells: TWxxxMGT-132-H (xxx = 485-530, in increment of 5)
	132 cells: TWxxxMGT-132-H-S (xxx = 485-530, in increment of 5)
	132 cells: TWxxxMGT-132-H-F (xxx = 485-530, in increment of 5)
	120 cells: TWMND-60HSxxx (xxx = 440-485, in increment of 5)
	120 cells: TWMND-60HBxxx (xxx = 440-485, in increment of 5)
	120 cells: TWxxxMGT-120-H (xxx = 440-485, in increment of 5)
	120 cells: TWxxxMGT-120-H-S (xxx = 440-485, in increment of 5)
	120 cells: TWxxxMGT-120-H-F (xxx = 440-485, in increment of 5)
	108 cells: TWMND-54HSxxx (xxx = 395-435, in increment of 5)
	108 cells: TWMND-54HBxxx (xxx = 395-435, in increment of 5)
	108 cells: TWxxxMGT-108-H (xxx = 395-435, in increment of 5)
	108 cells: TWxxxMGT-108-H-S (xxx = 395-435, in increment of 5)
	108 cells: TWxxxMGT-108-H-F (xxx = 395-435, in increment of 5)



Maximum system voltage:	1500V
Fuse rating:	25A or 20A, refer to CDF for details
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
Design load (positive / negative):	3600Pa / 1600Pa, refer to CDF for details
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

## Module types:

**PV Modules with Half-cut 8" PERC Mono-crystalline Silicon Solar Cells:**

- 132 cells: TWMPF-66HSxxx (xxx = 640-695, in increment of 5)
- 132 cells: TWMPF-66HBxxx (xxx = 640-695, in increment of 5)
- 132 cells: TWxxxMIP-132-H (xxx = 640-695, in increment of 5)
- 132 cells: TWxxxMIP-132-H-S (xxx = 640-695, in increment of 5)
- 132 cells: TWxxxMIP-132-H-F (xxx = 640-695, in increment of 5)
- 132 cells: TWxxxMCP-132-H (xxx = 640-670, in increment of 5)
- 132 cells: TWxxxMCP-132-H-S (xxx = 640-670, in increment of 5)
- 132 cells: TWxxxMCP-132-H-F (xxx = 640-670, in increment of 5)
- 120 cells: TWMPF-60HSxxx (xxx = 580-630, in increment of 5)
- 120 cells: TWMPF-60HBxxx (xxx = 580-630, in increment of 5)
- 120 cells: TWxxxMIP-120-H (xxx = 580-630, in increment of 5)
- 120 cells: TWxxxMIP-120-H-S (xxx = 580-630, in increment of 5)
- 120 cells: TWxxxMIP-120-H-F (xxx = 580-630, in increment of 5)
- 120 cells: TWxxxMCP-120-H (xxx = 580-610, in increment of 5)
- 120 cells: TWxxxMCP-120-H-S (xxx = 580-610, in increment of 5)
- 120 cells: TWxxxMCP-120-H-F (xxx = 580-610, in increment of 5)
- 108 cells: TWMPF-54HSxxx (xxx = 525-565, in increment of 5)
- 108 cells: TWMPF-54HBxxx (xxx = 525-565, in increment of 5)
- 108 cells: TWxxxMIP-108-H (xxx = 525-565, in increment of 5)
- 108 cells: TWxxxMIP-108-H-S (xxx = 525-565, in increment of 5)
- 108 cells: TWxxxMIP-108-H-F (xxx = 525-565, in increment of 5)
- 108 cells: TWxxxMCP-108-H (xxx = 525-545, in increment of 5)
- 108 cells: TWxxxMCP-108-H-S (xxx = 525-545, in increment of 5)
- 108 cells: TWxxxMCP-108-H-F (xxx = 525-545, in increment of 5)
- 110 cells: TWMPF-55HSxxx (xxx = 535-580, in increment of 5)
- 110 cells: TWMPF-55HBxxx (xxx = 535-580, in increment of 5)
- 110 cells: TWxxxMIP-110-H (xxx = 535-580, in increment of 5)



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110 cells: TWxxxMIP-110-H-S (xxx = 535-580, in increment of 5)  
110 cells: TWxxxMIP-110-H-F (xxx = 535-580, in increment of 5)  
110 cells: TWxxxMCP-110-H (xxx = 535-550, in increment of 5)  
110 cells: TWxxxMCP-110-H-S (xxx = 535-550, in increment of 5)  
110 cells: TWxxxMCP-110-H-F (xxx = 535-550, in increment of 5)  
100 cells: TWMPF-50HSxxx (xxx = 485-525, in increment of 5)  
100 cells: TWMPF-50HBxxx (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMIP-100-H (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMIP-100-H-S (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMIP-100-H-F (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMCP-100-H (xxx = 485-500, in increment of 5)  
100 cells: TWxxxMCP-100-H-S (xxx = 485-500, in increment of 5)  
100 cells: TWxxxMCP-100-H-F (xxx = 485-500, in increment of 5)

Maximum system voltage: 1500V  
Fuse rating: 30A or 25A, refer to CDF for details  
Electrical protection class: Class II  
Pollution degree: 1  
Material group: I  
Design load (positive / negative): 3600Pa / 1600Pa, refer to CDF for details  
Safety factors: 1.5  
Fire safety class: Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Module types:

**PV Modules with Half-cut 8" TOPCon Mono-crystalline Silicon Solar Cells:**

132 cells: TWMNF-66HSxxx (xxx = 650-700, in increment of 5)  
132 cells: TWMNF-66HBxxx (xxx = 650-700, in increment of 5)  
132 cells: TWxxxMIT-132-H (xxx = 650-700, in increment of 5)  
132 cells: TWxxxMIT-132-H-S (xxx = 650-700, in increment of 5)  
132 cells: TWxxxMIT-132-H-F (xxx = 650-700, in increment of 5)  
120 cells: TWMNF-60HSxxx (xxx = 590-635, in increment of 5)  
120 cells: TWMNF-60HBxxx (xxx = 590-635, in increment of 5)  
120 cells: TWxxxMIT-120-H (xxx = 590-635, in increment of 5)  
120 cells: TWxxxMIT-120-H-S (xxx = 590-635, in increment of 5)  
120 cells: TWxxxMIT-120-H-F (xxx = 590-635, in increment of 5)  
108 cells: TWMNF-54HSxxx (xxx = 530-570, in increment of 5)  
108 cells: TWMNF-54HBxxx (xxx = 530-570, in increment of 5)  
108 cells: TWxxxMIT-108-H (xxx = 530-570, in increment of 5)  
108 cells: TWxxxMIT-108-H-S (xxx = 530-570, in increment of 5)



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108 cells: TWxxxMIT-108-H-F (xxx = 530-570, in increment of 5)  
110 cells: TWMNF-55HSxxx (xxx = 540-580, in increment of 5)  
110 cells: TWMNF-55HBxxx (xxx = 540-580, in increment of 5)  
110 cells: TWxxxMIT-110-H (xxx = 540-580, in increment of 5)  
110 cells: TWxxxMIT-110-H-S (xxx = 540-580, in increment of 5)  
110 cells: TWxxxMIT-110-H-F (xxx = 540-580, in increment of 5)  
100 cells: TWMNF-50HSxxx (xxx = 490-530, in increment of 5)  
100 cells: TWMNF-50HBxxx (xxx = 490-530, in increment of 5)  
100 cells: TWxxxMIT-100-H (xxx = 490-530, in increment of 5)  
100 cells: TWxxxMIT-100-H-S (xxx = 490-530, in increment of 5)  
100 cells: TWxxxMIT-100-H-F (xxx = 490-530, in increment of 5)

Maximum system voltage: 1500V  
Fuse rating: 30A or 25A, refer to CDF for details  
Electrical protection class: Class II  
Pollution degree: 1  
Material group: I  
Design load (positive / negative): 3600Pa / 1600Pa, refer to CDF for details  
Safety factors: 1.5  
Fire safety class: Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018)

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



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## Certificate of conformity with the following European Directives

Registered No.:  
**44 799 23 406749 - 050**

### Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2022-07-15	PVP07101/22P	492010913.046	2023-03-08	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

**Product:** Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

**Type designation:** See Annex 1

**Applicant:** **Tongwei Solar (Hefei) Co., Ltd.**  
No.888, Changning Road, High-tech District,  
Hefei City, Anhui Province, 230088, P.R. China

**Standard(s):** EN IEC 61730-1:2018; EN IEC 61730-1:2018/AC:2018-06  
EN IEC 61730-2:2018; EN IEC 61730-2:2018/AC:2018-06

This Certificate of conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.



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Specialist Manager Consumer Products

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Fax: +49 (0)201 825-3209  
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**Description of product(s):**

Module types: **PV Modules with Segmented 6" Mono-crystalline Silicon Solar Cells:**  
408 cells: THxxxCM5-72S (xxx = 350-390, in increment of 5)  
340 cells: THxxxCM5-60S (xxx = 290-325, in increment of 5)

Module types: **PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells:**  
432 cells: THxxxPM5-78S (xxx = 445-480, in increment of 5)  
432 cells: THxxxPM5-78SA (xxx = 445-480, in increment of 5)  
432 cells: THxxxPM5-78SAF (xxx = 445-480, in increment of 5)  
432 cells: THxxxPM5-78SAS (xxx = 445-480, in increment of 5)  
432 cells: THxxxPMB5-78S (xxx = 445-480, in increment of 5)  
432 cells: THxxxPMB5-78SA (xxx = 445-480, in increment of 5)  
432 cells: THxxxPMB5-78SAF (xxx = 445-480, in increment of 5)  
432 cells: THxxxPMB5-78SAS (xxx = 445-480, in increment of 5)  
408 cells: THxxxPM5-72S (xxx = 395-455, in increment of 5)  
408 cells: THxxxPM5-72SF (xxx = 395-435, in increment of 5)  
408 cells: THxxxPM5-72SS (xxx = 395-435, in increment of 5)  
408 cells: THxxxPM5-72SA (xxx = 420-455, in increment of 5)  
408 cells: THxxxPM5-72SAF (xxx = 420-455, in increment of 5)  
408 cells: THxxxPM5-72SAS (xxx = 420-455, in increment of 5)  
408 cells: THxxxPM5-72SB (xxx = 460-500, in increment of 5)  
408 cells: THxxxPM5-72SBF (xxx = 460-500, in increment of 5)  
408 cells: THxxxPM5-72SBS (xxx = 460-500, in increment of 5)  
408 cells: THxxxPMB5-72S (xxx = 395-455, in increment of 5)  
408 cells: THxxxPMB5-72SF (xxx = 395-435, in increment of 5)  
408 cells: THxxxPMB5-72SS (xxx = 395-435, in increment of 5)  
408 cells: THxxxPMB5-72SA (xxx = 420-455, in increment of 5)  
408 cells: THxxxPMB5-72SAF (xxx = 420-455, in increment of 5)  
408 cells: THxxxPMB5-72SAS (xxx = 420-455, in increment of 5)  
408 cells: THxxxPMB5-72SB (xxx = 460-505, in increment of 5)  
408 cells: THxxxPMB5-72SBF (xxx = 460-500, in increment of 5)  
408 cells: THxxxPMB5-72SBS (xxx = 460-505, in increment of 5)



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360 cells: THxxxPM5-66S (xxx = 370-400, in increment of 5)  
360 cells: THxxxPM5-66SA (xxx = 370-400, in increment of 5)  
360 cells: THxxxPM5-66SAF (xxx = 370-400, in increment of 5)  
360 cells: THxxxPM5-66SAS (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66S (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66SA (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66SAF (xxx = 370-400, in increment of 5)  
360 cells: THxxxPMB5-66SAS (xxx = 370-400, in increment of 5)  
340 cells: THxxxPM5-60S (xxx = 325-380, in increment of 5)  
340 cells: THxxxPM5-60SA (xxx = 350-380, in increment of 5)  
340 cells: THxxxPM5-60SAF (xxx = 350-380, in increment of 5)  
340 cells: THxxxPM5-60SAS (xxx = 350-380, in increment of 5)  
340 cells: THxxxPM5-60SF (xxx = 325-360, in increment of 5)  
340 cells: THxxxPM5-60SS (xxx = 325-360, in increment of 5)  
340 cells: THxxxPM5-60SB (xxx = 380-415, in increment of 5)  
340 cells: THxxxPM5-60SBF (xxx = 380-415, in increment of 5)  
340 cells: THxxxPM5-60SBS (xxx = 380-415, in increment of 5)  
340 cells: THxxxPMB5-60SB (xxx = 380-420, in increment of 5)  
340 cells: THxxxPMB5-60SBF (xxx = 380-415, in increment of 5)  
340 cells: THxxxPMB5-60SBS (xxx = 380-420, in increment of 5)  
340 cells: THxxxPMB5-60S (xxx = 325-380, in increment of 5)  
340 cells: THxxxPMB5-60SA (xxx = 350-380, in increment of 5)  
340 cells: THxxxPMB5-60SAF (xxx = 325-360, in increment of 5)  
340 cells: THxxxPMB5-60SS (xxx = 325-360, in increment of 5)  
340 cells: THxxxPMB5-60SAF (xxx = 350-380, in increment of 5)  
340 cells: THxxxPMB5-60SAS (xxx = 350-380, in increment of 5)

Module types:

**PV Modules with Segmented 8" PERC Mono-crystalline Silicon Solar Cells:**

414 cells: THxxxPM6-69SC (xxx = 645-655, in increment of 5)  
414 cells: THxxxPMB6-69SC (xxx = 645-670, in increment of 5)  
408 cells: THxxxPM6-68SC (xxx = 635-655, in increment of 5)  
408 cells: THxxxPMB6-68SC (xxx = 635-660, in increment of 5)  
390 cells: THxxxPM6-65SC (xxx = 605-625, in increment of 5)



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390 cells: THxxxPMB6-65SC (xxx = 605-630, in increment of 5)  
345 cells: THxxxPM6-58SC (xxx = 535-550, in increment of 5)  
345 cells: THxxxPMB6-58SC (xxx = 535-555, in increment of 5)  
340 cells: THxxxPM6-57SC (xxx = 530-545, in increment of 5)  
340 cells: THxxxPMB6-57SC (xxx = 530-550, in increment of 5)  
325 cells: THxxxPM6-54SC (xxx = 505-520, in increment of 5)  
325 cells: THxxxPMB6-54SC (xxx = 505-525, in increment of 5)  
320 cells: THxxxPMB7-46SC (xxx = 425-445, in increment of 5)  
320 cells: THxxxPMB7-46SCS (xxx = 425-445, in increment of 5)  
320 cells: THxxxPMB7-46SCF (xxx = 420-440, in increment of 5)  
305 cells: THxxxPMB7-44SC (xxx = 405-425, in increment of 5)  
305 cells: THxxxPMB7-44SCS (xxx = 405-425, in increment of 5)  
305 cells: THxxxPMB7-44SCF (xxx = 400-420, in increment of 5)

## Module types:

**PV Modules with Half-cut 7" PERC Mono-crystalline Silicon Solar Cells:**

156 cells: TWMPD-78HSxxx (xxx = 570-620, in increment of 5)  
156 cells: TWMPD-78HBxxx (xxx = 570-620, in increment of 5)  
156 cells: TWxxxMAP-156-H (xxx = 580-605, in increment of 5)  
156 cells: TWxxxMAP-156-H-S (xxx = 580-605, in increment of 5)  
156 cells: TWxxxMAP-156-H-F (xxx = 580-605, in increment of 5)  
156 cells: TWxxxMGP-156-H (xxx = 570-620, in increment of 5)  
156 cells: TWxxxMGP-156-H-S (xxx = 570-620, in increment of 5)  
156 cells: TWxxxMGP-156-H-F (xxx = 570-620, in increment of 5)  
144 cells: TWMPD-72HSxxx (xxx = 525-570, in increment of 5)  
144 cells: TWMPD-72HBxxx (xxx = 525-570, in increment of 5)  
144 cells: TWxxxMAP-144-H (xxx = 530-565, in increment of 5)  
144 cells: TWxxxMAP-144-H-S (xxx = 530-565, in increment of 5)  
144 cells: TWxxxMAP-144-H-F (xxx = 530-565, in increment of 5)  
144 cells: TWxxxMGP-144-H (xxx = 525-570, in increment of 5)  
144 cells: TWxxxMGP-144-H-S (xxx = 525-570, in increment of 5)  
144 cells: TWxxxMGP-144-H-F (xxx = 525-570, in increment of 5)  
132 cells: TWMPD-66HSxxx (xxx = 480-525, in increment of 5)  
132 cells: TWMPD-66HBxxx (xxx = 480-525, in increment of 5)  
132 cells: TWxxxMAP-132-H (xxx = 485-515, in increment of 5)



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132 cells: TWxxxMAP-132-H-S (xxx = 485-515, in increment of 5)  
132 cells: TWxxxMAP-132-H-F (xxx = 485-515, in increment of 5)  
132 cells: TWxxxMGP-132-H (xxx = 480-525, in increment of 5)  
132 cells: TWxxxMGP-132-H-S (xxx = 480-525, in increment of 5)  
132 cells: TWxxxMGP-132-H-F (xxx = 480-525, in increment of 5)  
120 cells: TWMPD-60HSxxx (xxx = 440-475, in increment of 5)  
120 cells: TWMPD-60HBxxx (xxx = 440-475, in increment of 5)  
120 cells: TWxxxMAP-120-H (xxx = 440-470, in increment of 5)  
120 cells: TWxxxMAP-120-H-S (xxx = 440-470, in increment of 5)  
120 cells: TWxxxMAP-120-H-F (xxx = 440-470, in increment of 5)  
120 cells: TWxxxMGP-120-H (xxx = 440-475, in increment of 5)  
120 cells: TWxxxMGP-120-H-S (xxx = 440-475, in increment of 5)  
120 cells: TWxxxMGP-120-H-F (xxx = 440-475, in increment of 5)  
108 cells: TWMPD-54HSxxx (xxx = 395-430, in increment of 5)  
108 cells: TWMPD-54HBxxx (xxx = 395-430, in increment of 5)  
108 cells: TWxxxMAP-108-H (xxx = 400-420, in increment of 5)  
108 cells: TWxxxMAP-108-H-S (xxx = 400-420, in increment of 5)  
108 cells: TWxxxMAP-108-H-F (xxx = 400-420, in increment of 5)  
108 cells: TWxxxMGP-108-H (xxx = 395-430, in increment of 5)  
108 cells: TWxxxMGP-108-H-S (xxx = 395-430, in increment of 5)  
108 cells: TWxxxMGP-108-H-F (xxx = 395-430, in increment of 5)

Module types:

**PV Modules with Half-cut 7" TOPCon Mono-crystalline Silicon Solar Cells:**

156 cells: TWMND-78HSxxx (xxx = 570-630, in increment of 5)  
156 cells: TWMND-78HBxxx (xxx = 570-630, in increment of 5)  
156 cells: TWxxxMGT-156-H (xxx = 570-630, in increment of 5)  
156 cells: TWxxxMGT-156-H-S (xxx = 570-630, in increment of 5)  
156 cells: TWxxxMGT-156-H-F (xxx = 570-630, in increment of 5)  
144 cells: TWMND-72HSxxx (xxx = 525-580, in increment of 5)  
144 cells: TWMND-72HBxxx (xxx = 525-580, in increment of 5)  
144 cells: TWxxxMGT-144-H (xxx = 525-580, in increment of 5)  
144 cells: TWxxxMGT-144-H-S (xxx = 525-580, in increment of 5)  
144 cells: TWxxxMGT-144-H-F (xxx = 525-580, in increment of 5)



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132 cells: TWMND-66HSxxx (xxx = 485-530, in increment of 5)  
132 cells: TWMND-66HBxxx (xxx = 485-530, in increment of 5)  
132 cells: TWxxxMGT-132-H (xxx = 485-530, in increment of 5)  
132 cells: TWxxxMGT-132-H-S (xxx = 485-530, in increment of 5)  
132 cells: TWxxxMGT-132-H-F (xxx = 485-530, in increment of 5)  
120 cells: TWMND-60HSxxx (xxx = 440-485, in increment of 5)  
120 cells: TWMND-60HBxxx (xxx = 440-485, in increment of 5)  
120 cells: TWxxxMGT-120-H (xxx = 440-485, in increment of 5)  
120 cells: TWxxxMGT-120-H-S (xxx = 440-485, in increment of 5)  
120 cells: TWxxxMGT-120-H-F (xxx = 440-485, in increment of 5)  
108 cells: TWMND-54HSxxx (xxx = 395-435, in increment of 5)  
108 cells: TWMND-54HBxxx (xxx = 395-435, in increment of 5)  
108 cells: TWxxxMGT-108-H (xxx = 395-435, in increment of 5)  
108 cells: TWxxxMGT-108-H-S (xxx = 395-435, in increment of 5)  
108 cells: TWxxxMGT-108-H-F (xxx = 395-435, in increment of 5)

Module types:

**PV Modules with Half-cut 8" PERC Mono-crystalline Silicon Solar Cells:**

132 cells: TWMPF-66HSxxx (xxx = 640-695, in increment of 5)  
132 cells: TWMPF-66HBxxx (xxx = 640-695, in increment of 5)  
132 cells: TWxxxMIP-132-H (xxx = 640-695, in increment of 5)  
132 cells: TWxxxMIP-132-H-S (xxx = 640-695, in increment of 5)  
132 cells: TWxxxMIP-132-H-F (xxx = 640-695, in increment of 5)  
132 cells: TWxxxMCP-132-H (xxx = 640-670, in increment of 5)  
132 cells: TWxxxMCP-132-H-S (xxx = 640-670, in increment of 5)  
132 cells: TWxxxMCP-132-H-F (xxx = 640-670, in increment of 5)  
120 cells: TWMPF-60HSxxx (xxx = 580-630, in increment of 5)  
120 cells: TWMPF-60HBxxx (xxx = 580-630, in increment of 5)  
120 cells: TWxxxMIP-120-H (xxx = 580-630, in increment of 5)  
120 cells: TWxxxMIP-120-H-S (xxx = 580-630, in increment of 5)  
120 cells: TWxxxMIP-120-H-F (xxx = 580-630, in increment of 5)  
120 cells: TWxxxMCP-120-H (xxx = 580-610, in increment of 5)  
120 cells: TWxxxMCP-120-H-S (xxx = 580-610, in increment of 5)  
120 cells: TWxxxMCP-120-H-F (xxx = 580-610, in increment of 5)  
108 cells: TWMPF-54HSxxx (xxx = 525-565, in increment of 5)  
108 cells: TWMPF-54HBxxx (xxx = 525-565, in increment of 5)



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108 cells: TWxxxMIP-108-H (xxx = 525-565, in increment of 5)  
108 cells: TWxxxMIP-108-H-S (xxx = 525-565, in increment of 5)  
108 cells: TWxxxMIP-108-H-F (xxx = 525-565, in increment of 5)  
108 cells: TWxxxMCP-108-H (xxx = 525-545, in increment of 5)  
108 cells: TWxxxMCP-108-H-S (xxx = 525-545, in increment of 5)  
108 cells: TWxxxMCP-108-H-F (xxx = 525-545, in increment of 5)  
110 cells: TWMPF-55HSxxx (xxx = 535-580, in increment of 5)  
110 cells: TWMPF-55HBxxx (xxx = 535-580, in increment of 5)  
110 cells: TWxxxMIP-110-H (xxx = 535-580, in increment of 5)  
110 cells: TWxxxMIP-110-H-S (xxx = 535-580, in increment of 5)  
110 cells: TWxxxMIP-110-H-F (xxx = 535-580, in increment of 5)  
110 cells: TWxxxMCP-110-H (xxx = 535-550, in increment of 5)  
110 cells: TWxxxMCP-110-H-S (xxx = 535-550, in increment of 5)  
110 cells: TWxxxMCP-110-H-F (xxx = 535-550, in increment of 5)  
100 cells: TWMPF-50HSxxx (xxx = 485-525, in increment of 5)  
100 cells: TWMPF-50HBxxx (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMIP-100-H (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMIP-100-H-S (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMIP-100-H-F (xxx = 485-525, in increment of 5)  
100 cells: TWxxxMCP-100-H (xxx = 485-500, in increment of 5)  
100 cells: TWxxxMCP-100-H-S (xxx = 485-500, in increment of 5)  
100 cells: TWxxxMCP-100-H-F (xxx = 485-500, in increment of 5)

Module types:

**PV Modules with Half-cut 8" TOPCon Mono-crystalline Silicon Solar Cells:**

132 cells: TWMNF-66HSxxx (xxx = 650-700, in increment of 5)  
132 cells: TWMNF-66HBxxx (xxx = 650-700, in increment of 5)  
132 cells: TWxxxMIT-132-H (xxx = 650-700, in increment of 5)  
132 cells: TWxxxMIT-132-H-S (xxx = 650-700, in increment of 5)  
132 cells: TWxxxMIT-132-H-F (xxx = 650-700, in increment of 5)  
120 cells: TWMNF-60HSxxx (xxx = 590-635, in increment of 5)  
120 cells: TWMNF-60HBxxx (xxx = 590-635, in increment of 5)  
120 cells: TWxxxMIT-120-H (xxx = 590-635, in increment of 5)  
120 cells: TWxxxMIT-120-H-S (xxx = 590-635, in increment of 5)



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120 cells: TWxxxMIT-120-H-F (xxx = 590-635, in increment of 5)  
108 cells: TWMNF-54HSxxx (xxx = 530-570, in increment of 5)  
108 cells: TWMNF-54HBxxx (xxx = 530-570, in increment of 5)  
108 cells: TWxxxMIT-108-H (xxx = 530-570, in increment of 5)  
108 cells: TWxxxMIT-108-H-S (xxx = 530-570, in increment of 5)  
108 cells: TWxxxMIT-108-H-F (xxx = 530-570, in increment of 5)  
110 cells: TWMNF-55HSxxx (xxx = 540-580, in increment of 5)  
110 cells: TWMNF-55HBxxx (xxx = 540-580, in increment of 5)  
110 cells: TWxxxMIT-110-H (xxx = 540-580, in increment of 5)  
110 cells: TWxxxMIT-110-H-S (xxx = 540-580, in increment of 5)  
110 cells: TWxxxMIT-110-H-F (xxx = 540-580, in increment of 5)  
100 cells: TWMNF-50HSxxx (xxx = 490-530, in increment of 5)  
100 cells: TWMNF-50HBxxx (xxx = 490-530, in increment of 5)  
100 cells: TWxxxMIT-100-H (xxx = 490-530, in increment of 5)  
100 cells: TWxxxMIT-100-H-S (xxx = 490-530, in increment of 5)  
100 cells: TWxxxMIT-100-H-F (xxx = 490-530, in increment of 5)



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