

Shingled Technology

Innovative structure, low-temperature adhesive bonding, high-density layout.



Beautiful Appearance

Solderless interconnection, uniform appearance, displaying extreme beauty.



TERRA 5K
SHINGLED
MONOFACIAL MODULE

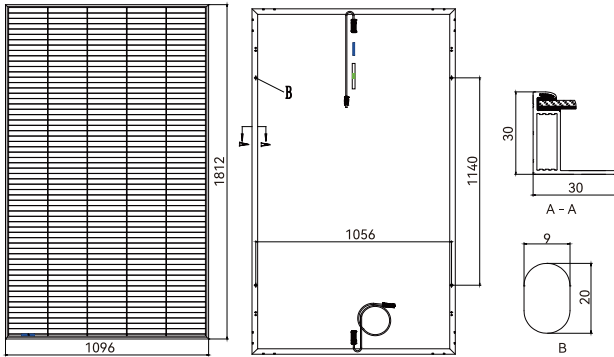
TH400~430PMB7
44SC

www.tw-solar.com



获取更多信息

DRAWINGS (Unit: mm)



ELECTRICAL CHARACTERISTICS (STC)

Module Type: TH***PMB7-44SC	430	425	420	415	410	405	400
Maximum Power: Pmax [W]	430	425	420	415	410	405	400
Open Circuit Voltage: Voc [V]	41.8	41.7	41.6	41.5	41.4	41.3	41.2
Short Circuit Current: Isc [A]	13.05	13.03	12.92	12.80	12.65	12.53	12.41
Voltage at Maximum Power: Vmp [V]	34.7	34.6	34.5	34.4	34.4	34.3	34.2
Current at Maximum Power: Imp [A]	12.40	12.30	12.19	12.08	11.93	11.82	11.71
Module Efficiency: η [%]	21.7	21.4	21.1	20.9	20.6	20.4	20.1

ELECTRICAL CHARACTERISTICS (NMOT)

Maximum Power: Pmax [W]	324	320	316	312	309	305	301
Open Circuit Voltage: Voc [V]	39.8	39.8	39.7	39.6	39.5	39.4	39.3
Short Circuit Current: Isc [A]	10.51	10.50	10.41	10.31	10.19	10.09	10.00
Voltage at Maximum Power: Vmp [V]	33.1	33.0	32.9	32.8	32.8	32.7	32.6
Current at Maximum Power: Imp [A]	9.79	9.70	9.62	9.53	9.41	9.33	9.24

1. Standard Test Conditions [STC]: irradiance 1000 W/m²; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Nominal Module Operating Temperature (NMOT): Irradiance 800W/m²; wind speed 1m/s, ambient temperature 20°C.
3. Tolerance of Pm: 0~+5W. Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

TEMPERATURE PARAMETERS

NMOT	42.30 °C (±2°C)
Temperature Coefficient of Voc	-0.27%/°C
Temperature Coefficient of Isc	+0.04%/°C
Temperature Coefficient of Pm	-0.34%/°C

MAXIMUM RATINGS

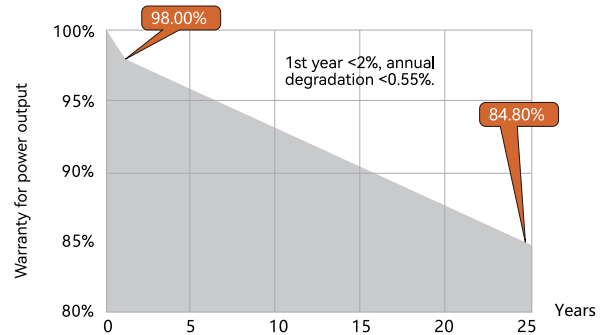
Maximum System Voltage [V]	DC1500 (IEC)
Series Fuse Rating [A]	25
Maximum Surface Load Capacity [Pa]	Front 5400 / Back 2400
Temperature Range [°C]	-40 ~ + 85
Withstanding Hail	Maximum diameter of 25mm with impact speed of 23m/s

MECHANICAL PARAMETERS

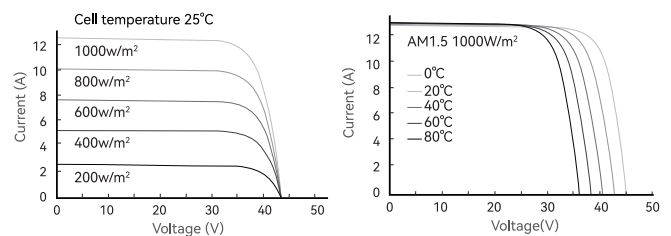
Dimensions	1812 × 1096 × 30mm
Weight	20.8kg±0.3kg
Front glass	tempered glass, 3.2mm
Frame	Anodized aluminum profile
Cells	Mono-crystalline solar cell
Cell Orientation	305 (61 × 5)
Junction Box	IP68, two diodes
Cable	4mm ² ,+300mm/-1000mm(Vertical), +220mm/-180mm(Horizontal)
Packaging	36pcs/box; 924pcs/40'container; 1296pcs/flat car

WARRANTY

Linear Power Output Warranty



I-V CURVE



CERTIFICATIONS

Quality Management System and Product Certification

IEC61215/61730、IEC62804(PID)、IEC61701(Salt)、
IEC62716 (Ammonia)、IEC60068-2-68(Sand)
ISO 9001:2015 / quality management system
ISO 14001:2015 / environmental management system
ISO 45001:2018 / occupation health safety management system
ISO 50001:2011 / energy management system
IEC TS 62941—2016 / PV industry quality management system





Enterprise Standard of Tongwei Solar

Twenty Five-Year Limited Product Warranty for Shingled Module

No.: TWSolar-M-QM-MR018

Version: A0

Issued on 2023-04-19

Implemented on 2023-04-19

Issued by Tongwei Solar Co., Ltd

Preface

The *Twenty Five-Year Limited Product Warranty for Shingled Module* is developed in accordance with laws and regulations, industry standards and the actual management of the company. This limited warranty shall Tongwei solar co., LTD. for the purpose of for personal use and buy installation below rules of crystalline silicon series photovoltaic modules of the end user, promises to provide limited warranty as described below. This limited warranty is applicable to Grade A modules, not to degraded or scrapped modules.

This document is submitted by the Quality Management Department of Tongwei Solar.

This document is managed by the Quality Management Department of Tongwei Solar.

Main drafter of this document: Jinzhi Hu

This document is interpreted by the Quality Management Department of Tongwei Solar.

Wrote by: Jinzhi Hu

Reviewed by: Minghui Chen

Approved by: Shengyi Xiao

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Document production/revision history			
Version	Revised content	Reviser	Effective date
A0	1. Create the <i>twenty Five-Year Limited Product Warranty for Shingled Module</i> for Tongwei solar; 2. This document replaces Q/TW 2101.6 Crystalline silicon Shingled Module Limited Warranty V2.3.	Jinzhi Hu	2023.4.xx

Twenty Five-Year Limited Product Warranty for Shingled Module

本文件为通威内部文件，未经书面许可，不得以任何形式向第三方透露。通威保留对上述行为进行追究的权利。

1 Scope

This limited warranty shall Tongwei solar co., LTD. (hereinafter referred to as the "Tongwei") for the purpose of for personal use and buy installation below rules of crystalline silicon series photovoltaic modules (hereinafter referred to as the "modules") of the enduser (hereinafter referred to as the "buyer"), promises to provide limited warranty as described below (hereinafter referred to as the "limited warranty").

This limited warranty is applicable to Grade A modules, not to degraded or scrapped modules.

2 Warranted products

2.1 This limited warranty only applies to the following series of shingled photovoltaic modules:

Shingled single glass photovoltaic modules:

166 mono c-Si cell shingled single glass photovoltaic modules:

TH415PMB5-60SBS

210 mono c-Si cell shingled single glass photovoltaic modules:

TH415PMB7-44SC, TH420PMB7-44SC, TH425PMB7-44SC;

TH415PMB7-44SCS, TH420PMB7-44SCS, TH425PMB7-44SCS;

TH410PMB7-44SCF, TH415PMB7-44SCF, TH420PMB7-44SCF;

TH435PMB7-46SC, TH440PMB7-46SC, TH445PMB7-46SC;

TH435PMB7-46SCS, TH440PMB7-46SCS, TH445PMB7-46SCS;

TH425PMB7-46SCF, TH430PMB7-46SCF, TH435PMB7-46SCF, TH440PMB7-46SCF;

The above limited warranty product series are limited to certified series.

Applicable to all customer feedback and complaint issues of Tongwei Solar.

3 Commencement date of warranty

It will be effective from the day of installation or the 90th day (natural day) after the delivery of the Tongwei modules, whichever occurs earlier.

4 25 years limited product warranty

4.1 Tongwei offers 25 years limited product warranty for roofing markets in Australia and Europe. Tongwei

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warrants that the module will be free from defects in design, materials and workmanship that impair the performance functioning of the products within the 25 years warranty period. The defects shall not include normal wear and tear, corrosion, musty and color difference.

4.2 To meet the 25 years limited product warranty, the application condition should be followed:

a) Application site: residential rooftop, installed distance should be more than 500m away from the sea;

b) Environmental condition: monthly average temperature $\leq 45^{\circ}\text{C}$, monthly average humidity $\leq 85\%RH$,

do not installed on the sites which have a extremely environment, such as extremely cold, heavy snow, strong wind or the heavy slat-mist etc.

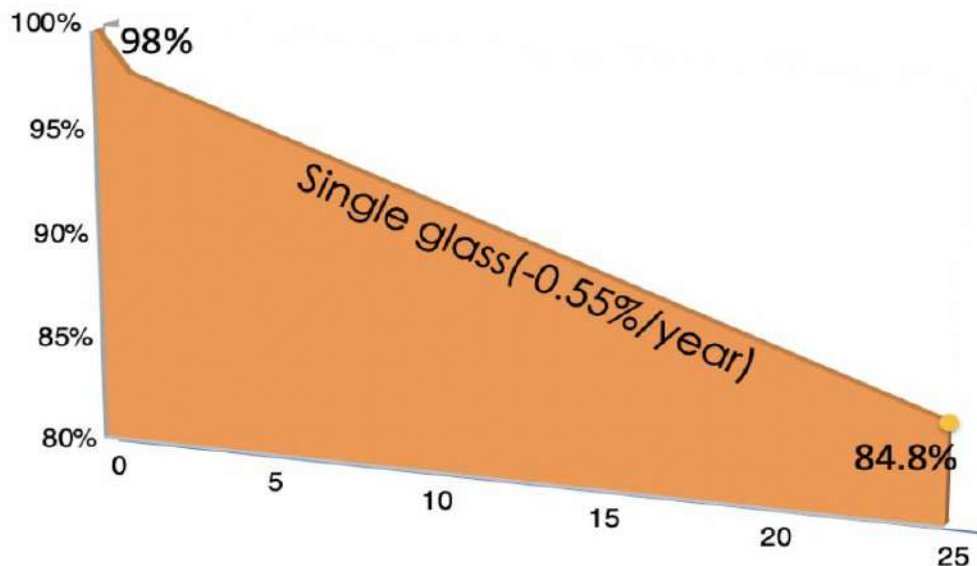
c) Installation: followed Tongwei standard installation manual.

4.3 If the application conditions do not conform to part 5.2, this additional 10 years warranty will be void.

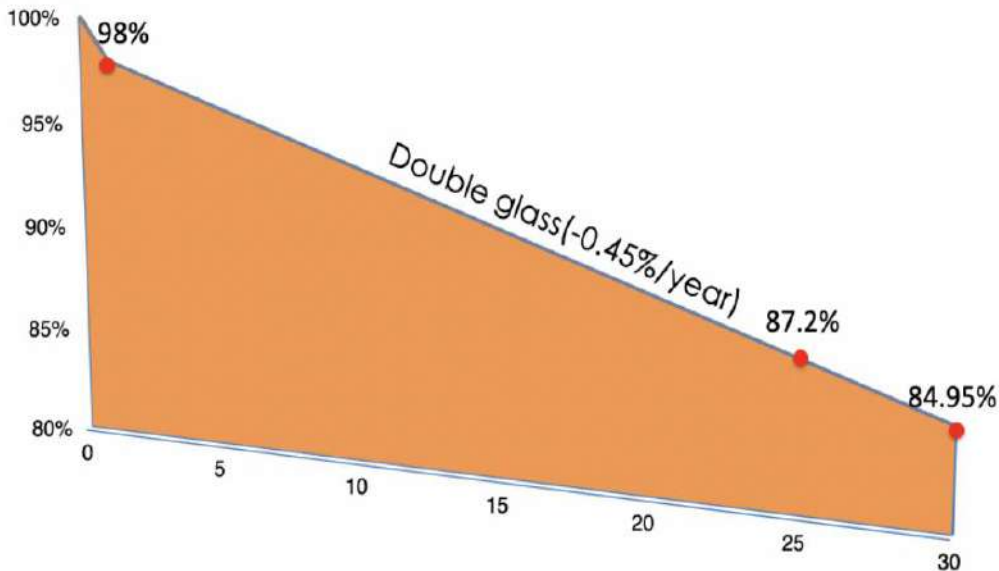
5 Limited warranty on power output

5.1 Tongwei also undertakes that the loss of power output, conforming to the comparison between the minimum tolerance which is specified in the label of modules and the practical peak value which is figured out under standard Test Conditions (STC).

a) **As for single glass modules:** 25 years limited warranty on power output , the first year of power loss will be within 2%, and it will maintain loss within 0.55% annually from the 2nd to the 25th year from the effective date of warranty. The last year of power output is not less than 84.8%.



b) **As for double glass modules:** 30 years limited warranty on power output, the first year of power loss will be within 2%, and it will maintain loss within 0.45% annually from the 2nd to the 30th year from the effective date of warranty. The last year of power output is not less than 84.95%.



5.2 The peak power is the maximum power of modules measured under standard test conditions. Standard test conditions are: spectrum AM1.5, light intensity 1000W/m², temperature 25 ± 2°C. Measurements According to IEC 61215, the tests are measured at the junction box terminals. The calibration and test standards for the Tongwei modules are valid on the date of manufacture of the module. The calibration standards are in accordance with the standards approved by the international organization.

6 Repairs, replacements or refunds

6.1 If a module has a severe appearance defect or a power loss because of itself through analysis exceeding the guaranteed value within limited product warranty or limited power output warranty, or in the case of the buyer's request by the domestic or international well-known third-party testing organization (the buyer and Tongwei confirmed the choice of the common) identified as Tongwei module causes, Tongwei will choose any of the following relief measures:

a) Tongwei has the right to choose the net value of the defective modules or the current market module price refunded to the buyer, the so-called defective modules of the net value of the modules purchased at the time on the basis of the first deduction of 16% depreciation, subsequent annual deductions 3.5% depreciation, depreciation is calculated from the date of the warranty, Single glass modules up to 25 years, Double glass modules up to 30 years,;

b) Free repair or replacement of defective modules, and to provide the initial sale of the delivery point of

free delivery service, the modules and parts to be replaced are owned by Tongwei.

6.2 The above remedies are the sole and exclusive remedies provided by the Tongwei limited warranty and shall not be liable for any special, indirect, consequential, incidental or consequential damages (including loss of production, loss of profits, loss of goodwill, loss of business reputation or delay losses), the provisions of this exclusion apply irrespective of whether the claim for loss is based on a contract, assurances, negligence or strict liability.

6.3 If Tongwei chooses to take remedial measures for free repair or replacement of defective modules, Tongwei undertakes insurance, transportation (other than air transport), customs clearance and other related expenses arising from the return of defective modules to Tongwei and transportation of repaired or replaced modules to the buyer. The buyer may refund the defective modules to Tongwei after the written consent of Tongwei. If the buyer prepaid the above-mentioned expenses, the buyer shall provide the invoice to Tongwei for the related expenses, and Tongwei shall pay the cost to the buyer; Tongwei does not accept any returned defective modules without the written consent of Tongwei. If, at the time of the claim, Tongwei has ceased to produce modules of the same type as the defective module, Tongwei may provide other types of modules that meet the requirements of the purchaser module. All costs incurred during the removal or installation of the modules are at the buyer's option.

6.4 Tongwei repair or replacement defective modules, limited product warranty and limited power output warranty is not extended or renewed, the warranty period for repair or replacement modules is the warranty period remaining for the buyer to purchase the module.

6.5 The buyer is entitled to claim under the terms of the warranty, if a problem with a number of claims, Tong Wei in accordance with the provisions of a compensation, that is resolved as a result of this problem arising from all applicable claims.

7 Liability exemption and limitation

Limited Warranty above shall not be applied to these products under any circumstances as follows:

- a) No payment received by Tongwei;
- b) Only Grade A modules (not including Grade S1, Grade S2 and the Scrap) shall be guaranteed.
- c) Failure to comply with all requirements of the Tongwei Installation Manual;
- d) The type, nameplate, or bar code of the module is altered, erased or unable to be recognized (except results caused by any act or omission of Tongwei);
- e) The installation location or operating conditions of the modules are not within the scope specified in the Tongwei Installation Manual and are not approved in writing by Tongwei. Such as the installation on vehicles,

ships and other mobile platforms, or in the ocean, desert and other environments;

f) The building where the module is placed is defective;

g) The module is subject to any of the following conditions: intentional destruction, unauthorized modification, connection and opening, the repair with unauthorized spare parts, accidents, chemical effects, etc. and other events which beyond the reasonable control of Tongwei;

h) Pressure exceeds the maximum system voltage or surge;

i) The usage of modules is in a manner that infringes Tongwei or intellectual property of any third-party rights (such as patents for inventions, trademarks), imports in parallel;

j) The service of modules is considered that it's provided by unqualified technicians according to the relevant laws and regulations of installation.

8 Claims procedure, notice period, warranty performance

8.1 When any claim on Limited Warranty shall be founded, please notice Tongwei or its authorized distributor(s) in writing with claims, description of defective modules, bar code and nameplate picture, a copy of the commercial invoice and the module delivery date. Tongwei customer service center contact information:

Tongwei Solar (HEFEI) CO., LTD.

Add: NO.888 Changning Road, High-tech District, Hefei, Anhui, P.R.China

Z.C.: 230088

M.P.: 18019909071、18056077565

Web: www.tw-solar.com

EMAIL: yangw012@tongwei.com

8.2 Any claim for the Limited Warranty must be made within 30 days (natural day) from the date on which the breach is found.

8.3 In case of any dispute in terms of warranty-claims, a first-class domestic or international testing institute shall be entrusted by both parties upon mutual consents in order to provide third party verification and comments which are final, decisive, binding and compulsory in accordance with procedure mentioned in Limited Warranty. All fees and expenses shall be borne by the party that demanded such verification procedure, unless otherwise agreed.

8.4 If the result of the ruling is a defect in the Tongwei module, it is covered by this limited warranty, Tongwei shall be compensated in accordance with article 7 of the remedies; If the result of the ruling is a defect of the Tongwei module, which does not fall within the scope of this limited warranty, Tongwei does not bear any compensation, including but not limited to insurance, transportation, customs clearance and any other charges

incurred for the return of defective modules, and no obligation to repair, replace or refund defective modules.

8.5 When warranty period found that is not due Tongwei module's defects or module beyond the warranty period need for repair and replacement, the buyer may contact the Customer Service Center, advisory the cost of modules associated repair services.

9 Transfer of Rights

This Limited Warranty is applied to the original end user and the product remains to be installed at the original site, and on the other hand the warranty shall be adapted to subsequent owners when the owner holds a legal certification of inheritance or transfer.

10 Severability

If a section, provision or clause of this Warranty, or the application thereof to any person or circumstance, is held invalid, void or unenforceable, such shall not affect and thus shall leave all other sections, provisions, clauses or applications under this Warranty severable, and therefore validly binding.

11 Force majeure

For any unforeseen events due to fire, flood, blizzard, hurricane, lightning, public policy changes, terrorism, war, riots, strikes, lack of appropriate or sufficient labor, materials or production capacity, technical or physical events, and Tongwei's uncontrollability Force majeure, such as incidents, caused Tongwei to fail to perform or delay the performance of its obligations under this limited warranty. Tongwei shall not be liable to the buyer or any third party in any way.

12. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Agent Information:

Name: ONE STOP WAREHOUSE PTY LTD

Address: 55 RAI DRIVE, CRESTMEAD, QLD 4132, AUSTRALIA

Contact Person: Charles Wang

Tel: 02 9725 1111

Website: www.onestopwarehouse.com.au

email : support@osw.energy

ABN: 46161849323

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.: PVP07102/22P-27

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 - 401R16A1M28

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 2023-01-31.
特此声明, 上述证书自 2023 年 01 月 31 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 - 401R17A1M29) has (have) been issued to replace the cancelled one(s).新证书(证书号: 44 780 19 406749 - 401R17A1M29) 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 2023-01-31. Meanwhile, please send back the original copies of above mentioned certificate(s) to us.

请注意从 2023 年 01 月 31 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: 2023-01-31
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 - 401R17A1M29
Manufacturer:	see Annex 1
Test Report No.:	492010913.043
File No.:	PVP07102/22P-28



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2023-01-31

Please also pay attention to the information stated overleaf.

Manufacturer:

Manufacturer 1:	Tongwei Solar (Hefei) Co., Ltd. No.888, Changning Road, High-tech District, Hefei City, Anhui Province, 230088, P.R. China
Factory inspection report no.:	862010358.006
Manufacturer 2:	Hefei GCL System Integration New Energy Technology Co., Ltd. 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:	Jiangsu Yueyang Photovoltaic Technology Co., Ltd. 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:	Tangshan Haitai New Energy Technology Co., Ltd. Yutai Industrial Zone, Yutian, Tangshan City Hebei Province, 064100, P.R. China
Factory inspection report no.:	862010687.001
Manufacturer 5:	SIYANG TALESUN NEW ENERGY TECHNOLOGIES CO., LTD. No.211 Zhongxing East Road, Siyang Economic Development Zone, 223700 Suqian City, Jiangsu, China
Factory inspection report no.:	862010690.001
Manufacturer 6:	Peixian Talesun New Energy Technology Co., Ltd. 18 Hanrun Road, Peixian Economic Development Zone, 221600 Xuzhou City, Jiangsu, China
Factory inspection report no.:	862010694.001



TÜV NORD CERT GmbH
Certification Body
Consumer Products

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.



TÜV NORD CERT GmbH
Certification Body
Consumer Products

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)
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:	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)
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TÜV NORD CERT GmbH
Certification Body
Consumer Products

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:	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) 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 = 570-605, in increment of 5)
156 cells: TWMPD-78HBxxx (xxx = 570-605, 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 = 570-605, in increment of 5)
156 cells: TWxxxMGP-156-H-S (xxx = 570-605, in increment of 5)
156 cells: TWxxxMGP-156-H-F (xxx = 570-605, in increment of 5)
144 cells: TWMPD-72HSxxx (xxx = 525-565, in increment of 5)
144 cells: TWMPD-72HBxxx (xxx = 525-565, 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 = 525-555, in increment of 5)
144 cells: TWxxxMGP-144-H-S (xxx = 525-555, in increment of 5)
144 cells: TWxxxMGP-144-H-F (xxx = 525-555, in increment of 5)
132 cells: TWMPD-66HSxxx (xxx = 480-515, in increment of 5)
132 cells: TWMPD-66HBxxx (xxx = 480-515, 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 = 480-510, in increment of 5)
132 cells: TWxxxMGP-132-H-S (xxx = 480-510, in increment of 5)
132 cells: TWxxxMGP-132-H-F (xxx = 480-510, in increment of 5)
120 cells: TWMPD-60HSxxx (xxx = 440-470, in increment of 5)
120 cells: TWMPD-60HBxxx (xxx = 440-470, 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 = 440-465, in increment of 5)
120 cells: TWxxxMGP-120-H-S (xxx = 440-465, in increment of 5)
120 cells: TWxxxMGP-120-H-F (xxx = 440-465, in increment of 5)
108 cells: TWMPD-54HSxxx (xxx = 395-420, in increment of 5)
108 cells: TWMPD-54HBxxx (xxx = 395-420, 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 = 395-415, in increment of 5)



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	108 cells: TWxxxMGP-108-H-S (xxx = 395-415, in increment of 5)
	108 cells: TWxxxMGP-108-H-F (xxx = 395-415, 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:	1
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 7" TOPCon Mono-crystalline Silicon Solar Cells:**

156 cells: TWMND-78HSxxx (xxx = 570-590, in increment of 5)
156 cells: TWMND-78HBxxx (xxx = 570-590, in increment of 5)
156 cells: TWxxxMGT-156-H (xxx = 570-590, in increment of 5)
156 cells: TWxxxMGT-156-H-S (xxx = 570-590, in increment of 5)
156 cells: TWxxxMGT-156-H-F (xxx = 570-590, in increment of 5)
144 cells: TWMND-72HSxxx (xxx = 525-545, in increment of 5)
144 cells: TWMND-72HBxxx (xxx = 525-545, in increment of 5)
144 cells: TWxxxMGT-144-H (xxx = 525-545, in increment of 5)
144 cells: TWxxxMGT-144-H-S (xxx = 525-545, in increment of 5)
144 cells: TWxxxMGT-144-H-F (xxx = 525-545, in increment of 5)
132 cells: TWMND-66HSxxx (xxx = 485-500, in increment of 5)
132 cells: TWMND-66HBxxx (xxx = 485-500, in increment of 5)
132 cells: TWxxxMGT-132-H (xxx = 485-500, in increment of 5)
132 cells: TWxxxMGT-132-H-S (xxx = 485-500, in increment of 5)
132 cells: TWxxxMGT-132-H-F (xxx = 485-500, in increment of 5)
120 cells: TWMND-60HSxxx (xxx = 440-450, in increment of 5)
120 cells: TWMND-60HBxxx (xxx = 440-450, in increment of 5)
120 cells: TWxxxMGT-120-H (xxx = 440-450, in increment of 5)
120 cells: TWxxxMGT-120-H-S (xxx = 440-450, in increment of 5)
120 cells: TWxxxMGT-120-H-F (xxx = 440-450, in increment of 5)
108 cells: TWMND-54HSxxx (xxx = 395-405, in increment of 5)
108 cells: TWMND-54HBxxx (xxx = 395-405, in increment of 5)
108 cells: TWxxxMGT-108-H (xxx = 395-405, in increment of 5)
108 cells: TWxxxMGT-108-H-S (xxx = 395-405, in increment of 5)
108 cells: TWxxxMGT-108-H-F (xxx = 395-405, in increment of 5)



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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 = 640-670, in increment of 5)
- 132 cells: TWMPF-66HBxxx (xxx = 640-670, in increment of 5)
- 132 cells: TWxxxMIP-132-H (xxx = 640-670, in increment of 5)
- 132 cells: TWxxxMIP-132-H-S (xxx = 640-670, in increment of 5)
- 132 cells: TWxxxMIP-132-H-F (xxx = 640-670, 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 = 580-610, in increment of 5)
- 120 cells: TWMPF-60HBxxx (xxx = 580-610, in increment of 5)
- 120 cells: TWxxxMIP-120-H (xxx = 580-610, in increment of 5)
- 120 cells: TWxxxMIP-120-H-S (xxx = 580-610, in increment of 5)
- 120 cells: TWxxxMIP-120-H-F (xxx = 580-610, 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 = 525-545, in increment of 5)
- 108 cells: TWMPF-54HBxxx (xxx = 525-545, in increment of 5)
- 108 cells: TWxxxMIP-108-H (xxx = 525-545, in increment of 5)
- 108 cells: TWxxxMIP-108-H-S (xxx = 525-545, in increment of 5)
- 108 cells: TWxxxMIP-108-H-F (xxx = 525-545, 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 = 535-555, in increment of 5)
- 110 cells: TWMPF-55HBxxx (xxx = 535-555, in increment of 5)
- 110 cells: TWxxxMIP-110-H (xxx = 535-555, in increment of 5)



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110 cells: TWxxxMIP-110-H-S (xxx = 535-555, in increment of 5)
110 cells: TWxxxMIP-110-H-F (xxx = 535-555, 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 = 485-505, in increment of 5)
100 cells: TWMPF-50HBxxx (xxx = 485-505, in increment of 5)
100 cells: TWxxxMIP-100-H (xxx = 485-505, in increment of 5)
100 cells: TWxxxMIP-100-H-S (xxx = 485-505, in increment of 5)
100 cells: TWxxxMIP-100-H-F (xxx = 485-505, 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 = 650-685, in increment of 5)
132 cells: TWMNF-66HBxxx (xxx = 650-685, in increment of 5)
132 cells: TWxxxMIT-132-H (xxx = 650-685, in increment of 5)
132 cells: TWxxxMIT-132-H-S (xxx = 650-685, in increment of 5)
132 cells: TWxxxMIT-132-H-F (xxx = 650-685, in increment of 5)
120 cells: TWMNF-60HSxxx (xxx = 590-620, in increment of 5)
120 cells: TWMNF-60HBxxx (xxx = 590-620, in increment of 5)
120 cells: TWxxxMIT-120-H (xxx = 590-620, in increment of 5)
120 cells: TWxxxMIT-120-H-S (xxx = 590-620, in increment of 5)
120 cells: TWxxxMIT-120-H-F (xxx = 590-620, in increment of 5)
108 cells: TWMNF-54HSxxx (xxx = 530-560, in increment of 5)
108 cells: TWMNF-54HBxxx (xxx = 530-560, in increment of 5)
108 cells: TWxxxMIT-108-H (xxx = 530-560, in increment of 5)
108 cells: TWxxxMIT-108-H-S (xxx = 530-560, in increment of 5)



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108 cells: TWxxxMIT-108-H-F (xxx = 530-560, in increment of 5)
110 cells: TWMNF-55HSxxx (xxx = 540-555, in increment of 5)
110 cells: TWMNF-55HBxxx (xxx = 540-555, in increment of 5)
110 cells: TWxxxMIT-110-H (xxx = 540-555, in increment of 5)
110 cells: TWxxxMIT-110-H-S (xxx = 540-555, in increment of 5)
110 cells: TWxxxMIT-110-H-F (xxx = 540-555, in increment of 5)
100 cells: TWMNF-50HSxxx (xxx = 490-505, in increment of 5)
100 cells: TWMNF-50HBxxx (xxx = 490-505, in increment of 5)
100 cells: TWxxxMIT-100-H (xxx = 490-505, in increment of 5)
100 cells: TWxxxMIT-100-H-S (xxx = 490-505, in increment of 5)
100 cells: TWxxxMIT-100-H-F (xxx = 490-505, 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 - 014

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2022-07-20	PVP07102/22P-28	492010913.043	2023-01-31	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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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 = 570-605, in increment of 5)
156 cells: TWMPD-78HBxxx (xxx = 570-605, 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 = 570-605, in increment of 5)
156 cells: TWxxxMGP-156-H-S (xxx = 570-605, in increment of 5)
156 cells: TWxxxMGP-156-H-F (xxx = 570-605, in increment of 5)
144 cells: TWMPD-72HSxxx (xxx = 525-565, in increment of 5)
144 cells: TWMPD-72HBxxx (xxx = 525-565, 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 = 525-555, in increment of 5)
144 cells: TWxxxMGP-144-H-S (xxx = 525-555, in increment of 5)
144 cells: TWxxxMGP-144-H-F (xxx = 525-555, in increment of 5)
132 cells: TWMPD-66HSxxx (xxx = 480-515, in increment of 5)
132 cells: TWMPD-66HBxxx (xxx = 480-515, 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 = 480-510, in increment of 5)
132 cells: TWxxxMGP-132-H-S (xxx = 480-510, in increment of 5)
132 cells: TWxxxMGP-132-H-F (xxx = 480-510, in increment of 5)
120 cells: TWMPD-60HSxxx (xxx = 440-470, in increment of 5)
120 cells: TWMPD-60HBxxx (xxx = 440-470, 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 = 440-465, in increment of 5)
120 cells: TWxxxMGP-120-H-S (xxx = 440-465, in increment of 5)
120 cells: TWxxxMGP-120-H-F (xxx = 440-465, in increment of 5)
108 cells: TWMPD-54HSxxx (xxx = 395-420, in increment of 5)
108 cells: TWMPD-54HBxxx (xxx = 395-420, 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 = 395-415, in increment of 5)
108 cells: TWxxxMGP-108-H-S (xxx = 395-415, in increment of 5)
108 cells: TWxxxMGP-108-H-F (xxx = 395-415, in increment of 5)

Module types:

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

156 cells: TWMND-78HSxxx (xxx = 570-590, in increment of 5)
156 cells: TWMND-78HBxxx (xxx = 570-590, in increment of 5)
156 cells: TWxxxMGT-156-H (xxx = 570-590, in increment of 5)
156 cells: TWxxxMGT-156-H-S (xxx = 570-590, in increment of 5)
156 cells: TWxxxMGT-156-H-F (xxx = 570-590, in increment of 5)
144 cells: TWMND-72HSxxx (xxx = 525-545, in increment of 5)
144 cells: TWMND-72HBxxx (xxx = 525-545, in increment of 5)
144 cells: TWxxxMGT-144-H (xxx = 525-545, in increment of 5)
144 cells: TWxxxMGT-144-H-S (xxx = 525-545, in increment of 5)
144 cells: TWxxxMGT-144-H-F (xxx = 525-545, in increment of 5)



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132 cells: TWMND-66HSxxx (xxx = 485-500, in increment of 5)
132 cells: TWMND-66HBxxx (xxx = 485-500, in increment of 5)
132 cells: TWxxxMGT-132-H (xxx = 485-500, in increment of 5)
132 cells: TWxxxMGT-132-H-S (xxx = 485-500, in increment of 5)
132 cells: TWxxxMGT-132-H-F (xxx = 485-500, in increment of 5)
120 cells: TWMND-60HSxxx (xxx = 440-450, in increment of 5)
120 cells: TWMND-60HBxxx (xxx = 440-450, in increment of 5)
120 cells: TWxxxMGT-120-H (xxx = 440-450, in increment of 5)
120 cells: TWxxxMGT-120-H-S (xxx = 440-450, in increment of 5)
120 cells: TWxxxMGT-120-H-F (xxx = 440-450, in increment of 5)
108 cells: TWMND-54HSxxx (xxx = 395-405, in increment of 5)
108 cells: TWMND-54HBxxx (xxx = 395-405, in increment of 5)
108 cells: TWxxxMGT-108-H (xxx = 395-405, in increment of 5)
108 cells: TWxxxMGT-108-H-S (xxx = 395-405, in increment of 5)
108 cells: TWxxxMGT-108-H-F (xxx = 395-405, in increment of 5)

Module types:

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

132 cells: TWMPF-66HSxxx (xxx = 640-670, in increment of 5)
132 cells: TWMPF-66HBxxx (xxx = 640-670, in increment of 5)
132 cells: TWxxxMIP-132-H (xxx = 640-670, in increment of 5)
132 cells: TWxxxMIP-132-H-S (xxx = 640-670, in increment of 5)
132 cells: TWxxxMIP-132-H-F (xxx = 640-670, 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 = 580-610, in increment of 5)
120 cells: TWMPF-60HBxxx (xxx = 580-610, in increment of 5)
120 cells: TWxxxMIP-120-H (xxx = 580-610, in increment of 5)
120 cells: TWxxxMIP-120-H-S (xxx = 580-610, in increment of 5)
120 cells: TWxxxMIP-120-H-F (xxx = 580-610, 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 = 525-545, in increment of 5)



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108 cells: TWMPF-54HBxxx (xxx = 525-545, in increment of 5)
108 cells: TWxxxMIP-108-H (xxx = 525-545, in increment of 5)
108 cells: TWxxxMIP-108-H-S (xxx = 525-545, in increment of 5)
108 cells: TWxxxMIP-108-H-F (xxx = 525-545, 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 = 535-555, in increment of 5)
110 cells: TWMPF-55HBxxx (xxx = 535-555, in increment of 5)
110 cells: TWxxxMIP-110-H (xxx = 535-555, in increment of 5)
110 cells: TWxxxMIP-110-H-S (xxx = 535-555, in increment of 5)
110 cells: TWxxxMIP-110-H-F (xxx = 535-555, 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 = 485-505, in increment of 5)
100 cells: TWMPF-50HBxxx (xxx = 485-505, in increment of 5)
100 cells: TWxxxMIP-100-H (xxx = 485-505, in increment of 5)
100 cells: TWxxxMIP-100-H-S (xxx = 485-505, in increment of 5)
100 cells: TWxxxMIP-100-H-F (xxx = 485-505, 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 = 650-685, in increment of 5)
132 cells: TWMNF-66HBxxx (xxx = 650-685, in increment of 5)
132 cells: TWxxxMIT-132-H (xxx = 650-685, in increment of 5)
132 cells: TWxxxMIT-132-H-S (xxx = 650-685, in increment of 5)
132 cells: TWxxxMIT-132-H-F (xxx = 650-685, in increment of 5)
120 cells: TWMNF-60HSxxx (xxx = 590-620, in increment of 5)
120 cells: TWMNF-60HBxxx (xxx = 590-620, in increment of 5)
120 cells: TWxxxMIT-120-H (xxx = 590-620, in increment of 5)



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120 cells: TWxxxMIT-120-H-S (xxx = 590-620, in increment of 5)
120 cells: TWxxxMIT-120-H-F (xxx = 590-620, in increment of 5)
108 cells: TWMNF-54HSxxx (xxx = 530-560, in increment of 5)
108 cells: TWMNF-54HBxxx (xxx = 530-560, in increment of 5)
108 cells: TWxxxMIT-108-H (xxx = 530-560, in increment of 5)
108 cells: TWxxxMIT-108-H-S (xxx = 530-560, in increment of 5)
108 cells: TWxxxMIT-108-H-F (xxx = 530-560, in increment of 5)
110 cells: TWMNF-55HSxxx (xxx = 540-555, in increment of 5)
110 cells: TWMNF-55HBxxx (xxx = 540-555, in increment of 5)
110 cells: TWxxxMIT-110-H (xxx = 540-555, in increment of 5)
110 cells: TWxxxMIT-110-H-S (xxx = 540-555, in increment of 5)
110 cells: TWxxxMIT-110-H-F (xxx = 540-555, in increment of 5)
100 cells: TWMNF-50HSxxx (xxx = 490-505, in increment of 5)
100 cells: TWMNF-50HBxxx (xxx = 490-505, in increment of 5)
100 cells: TWxxxMIT-100-H (xxx = 490-505, in increment of 5)
100 cells: TWxxxMIT-100-H-S (xxx = 490-505, in increment of 5)
100 cells: TWxxxMIT-100-H-F (xxx = 490-505, in increment of 5)



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