

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

Tongwei Co., Ltd.

No. 588, Middle Section Tianfu Avenue,
High-Tech Zone, Chengdu,
China (Sichuan) Pilot Free Trade Zone

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: 2024-01-11
Valid until: 2028-12-26

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	P12.4-AA-02 Rev. 00 (IEC TS 62804-1:2015 modified)
Remark:	Test temperature: 85°C; Relative humidity: 85%; Test duration: 96 hours.
Registered No.:	44 780 23 406749 - 335R1A1M1
Manufacturer:	see Annex 1
Test Report No.:	492012727.02
File No.:	PVP12119/23P-04



Essen, 2024-01-11

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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.: 862010358.007

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.: 862010696.007

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.: 862010688.007

Manufacturer 4: **Zibo JinenU Solar Technology Co., LTD.**
3005, Silk Road, Zhoucun District,
Zibo, Shandong China
Factory inspection report no.: 862010689.002

Manufacturer 5: **Funing GCL System Integration Technology Co., Ltd.**
No.888 (A) Hong Kong Road, Funing Economic Development Zone,
Yancheng City, Jiangsu Province, P.R. China
Factory inspection report no.: 862010744.001

Manufacturer 6: **Tongwei Solar (Yancheng) Co., Ltd.**
No. 88, Jiuhuashan Road, Economic Development Zone,
Yancheng City, Jiangsu Province, China
Factory inspection report no.: 862010763.001



Manufacturer 7: **Tongwei Solar (Sichuan) Co., Ltd.**
No.888, Jilin East Road, Huai Kou Street, Jintang County, Chengdu City,
Sichuan Province

Factory inspection report no.: 862010782.001

Manufacturer 8: **Tongwei Solar (Nantong) Co., LTD**
No. 8, Bonded 10 Road, Economic Development Zone, Nantong City,
Jiangsu Province, P. R. China

Factory inspection report no.: 862010863.001

Manufacturer 9: **Tongwei Solar (Chengdu) Co., LTD**
No. 888, Linjiaci Road, Huangjia Subdistrict, Shuangliu District, Chengdu
City, Sichuan Province, China

Factory inspection report no.: 862010864.001

Remark:

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



Description of product(s):

Module types: **Double Glass PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells:**
408 cells: THxxxPM5-72SD (xxx = 390-410, in increment of 5)
340 cells: THxxxPM5-60SD (xxx = 325-340, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 20A
Application class: Class A
Electrical protection class: Class II

Module types: **Double Glass PV Modules with Segmented 8" PERC Mono-crystalline Silicon Solar Cells:**
414 cells: THxxxPMB6-69SDC (xxx = 635-670, in increment of 5)
408 cells: THxxxPMB6-68SDC (xxx = 630-660, in increment of 5)
390 cells: THxxxPMB6-65SDC (xxx = 600-630, in increment of 5)
345 cells: THxxxPMB6-58SDC (xxx = 530-555, in increment of 5)
340 cells: THxxxPMB6-57SDC (xxx = 520-550, in increment of 5)
325 cells: THxxxPMB6-54SDC (xxx = 500-525, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 30A or 25A
Application class: Class A
Electrical protection class: Class II

Module types: **Double Glass PV Modules with Half-cut 7" PERC Mono-crystalline Silicon Solar Cells:**
156 cells: TWMPD-78HDxxx (xxx = 570-615, in increment of 5)
156 cells: TWxxxMBAP-156-D (xxx = 575-615, in increment of 5)
156 cells: TWxxxMBGP-156-D (xxx = 570-610, in increment of 5)
144 cells: TWMPD-72HDxxx (xxx = 525-565, in increment of 5)
144 cells: TWxxxMBAP-144-D (xxx = 530-565, in increment of 5)
144 cells: TWxxxMBGP-144-D (xxx = 525-560, in increment of 5)
132 cells: TWMPD-66HDxxx (xxx = 480-520, in increment of 5)
132 cells: TWxxxMBAP-132-D (xxx = 485-520, in increment of 5)
132 cells: TWxxxMBGP-132-D (xxx = 480-515, in increment of 5)
120 cells: TWMPD-60HDxxx (xxx = 440-470, in increment of 5)



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120 cells: TWxxxMBAP-120-D (xxx = 440-470, in increment of 5)
120 cells: TWxxxMBGP-120-D (xxx = 440-470, in increment of 5)
108 cells: TWMPD-54HDxxx (xxx = 395-425, in increment of 5)
108 cells: TWxxxMBAP-108-D (xxx = 400-425, in increment of 5)
108 cells: TWxxxMBGP-108-D (xxx = 395-420, in increment of 5)
144 cells: TWMPG-72HDxxx (xxx = 560-590, in increment of 5)
108 cells: TWMPG-54HDxxx (xxx = 420-440, in increment of 5)
108 cells: TWMPG-54HCxxx (xxx = 420-440, in increment of 5)
132 cells: TWMPH-66HDxxx (xxx = 575-590, in increment of 5)
120 cells: TWMPH-60HDxxx (xxx = 525-535, in increment of 5)
96 cells: TWMPH-48HDxxx (xxx = 420-430, in increment of 5)
96 cells: TWMPH-48HCxxx (xxx = 420-430, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 30A
Application class: Class A
Electrical protection class: Class II

Module types:

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

156 cells: TWMND-78HDxxx (xxx = 580-640, in increment of 5)
156 cells: TWxxxMBGT-156-D (xxx = 580-640, in increment of 5)
144 cells: TWMND-72HDxxx (xxx = 535-590, in increment of 5)
144 cells: TWxxxMBGT-144-D (xxx = 535-590, in increment of 5)
132 cells: TWMND-66HDxxx (xxx = 490-540, in increment of 5)
132 cells: TWxxxMBGT-132-D (xxx = 490-540, in increment of 5)
120 cells: TWMND-60HDxxx (xxx = 445-490, in increment of 5)
120 cells: TWxxxMBGT-120-D (xxx = 445-490, in increment of 5)
108 cells: TWMND-54HDxxx (xxx = 400-440, in increment of 5)
108 cells: TWxxxMBGT-108-D (xxx = 400-440, in increment of 5)
144 cells: THxxxTMBI-72ZDD (xxx = 545-560, in increment of 5)
144 cells: THxxxTMBI-72ZDDF (xxx = 545-560, in increment of 5)
132 cells: THxxxTMBI-66ZDD (xxx = 500-510, in increment of 5)
132 cells: THxxxTMBI-66ZDDF (xxx = 500-510, in increment of 5)
120 cells: THxxxTMBI-60ZDD (xxx = 455-465, in increment of 5)
120 cells: THxxxTMBI-60ZDDF (xxx = 455-465, in increment of 5)
108 cells: THxxxTMBI-54ZDD (xxx = 410-420, in increment of 5)
108 cells: THxxxTMBI-54ZDDF (xxx = 410-420, in increment of 5)
144 cells: TWMNG-72HDxxx (xxx = 580-620, in increment of 5)



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108 cells: TWMNG-54HDxxx (xxx = 435-465, in increment of 5)
108 cells: TWMNG-54HCxxx (xxx = 435-465, in increment of 5)
132 cells: TWMNH-66HDxxx (xxx = 595-620, in increment of 5)
120 cells: TWMNH-60HDxxx (xxx = 540-560, in increment of 5)
96 cells: TWMNH-48HDxxx (xxx = 435-450, in increment of 5)
96 cells: TWMNH-48HCxxx (xxx = 435-450, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 30A
Application class: Class A
Electrical protection class: Class II

Module types:

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

132 cells: TWMPF-66HDxxx (xxx = 635-685, in increment of 5)
132 cells: TWxxxMBIP-132-D (xxx = 635-675, in increment of 5)
132 cells: TWxxxMBIP-132-D (xxx = 635-685, in increment of 5)
120 cells: TWMPF-60HDxxx (xxx = 580-620, in increment of 5)
120 cells: TWxxxMBIP-120-D (xxx = 580-610, in increment of 5)
120 cells: TWxxxMBIP-120-D (xxx = 580-620, in increment of 5)
108 cells: TWMPF-54HDxxx (xxx = 520-560, in increment of 5)
108 cells: TWxxxMBIP-108-D (xxx = 520-550, in increment of 5)
108 cells: TWxxxMBIP-108-D (xxx = 520-560, in increment of 5)
110 cells: TWMPF-55HDxxx (xxx = 530-570, in increment of 5)
110 cells: TWxxxMBIP-110-D (xxx = 530-560, in increment of 5)
110 cells: TWxxxMBIP-110-D (xxx = 530-570, in increment of 5)
100 cells: TWMPF-50HDxxx (xxx = 480-515, in increment of 5)
100 cells: TWxxxMBIP-100-D (xxx = 480-510, in increment of 5)
100 cells: TWxxxMBIP-100-D (xxx = 480-515, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 35A
Application class: Class A
Electrical protection class: Class II

Module types:

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

132 cells: TWMNF-66HDxxx (xxx = 665-690, in increment of 5)



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132 cells: TWxxxMBIT-132-D (xxx = 665-690, in increment of 5)
120 cells: TWMNF-60HDxxx (xxx = 605-625, in increment of 5)
120 cells: TWxxxMBIT-120-D (xxx = 605-625, in increment of 5)
108 cells: TWMNF-54HDxxx (xxx = 545-565, in increment of 5)
108 cells: TWxxxMBIT-108-D (xxx = 545-565, in increment of 5)
110 cells: TWMNF-55HDxxx (xxx = 530-570, in increment of 5)
110 cells: TWxxxMBIT-110-D (xxx = 530-570, in increment of 5)
100 cells: TWMNF-50HDxxx (xxx = 480-515, in increment of 5)
100 cells: TWxxxMBIT-100-D (xxx = 480-515, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 35A
Application class: Class A
Electrical protection class: Class II

Module types: **Double Glass PV Modules with Half-cut 8" HJT Mono-crystalline Silicon Solar Cells:**

132 cells: TWMHF-66HDxxx (xxx = 660-720, in increment of 5)
120 cells: TWMHF-60HDxxx (xxx = 600-655, in increment of 5)
Remark: xxx indicates output power from the front side only.

Maximum system voltage: 1500V
Fuse rating: 35A
Application class: Class A
Electrical protection class: Class II

Remark:

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



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