

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: 2023-12-18

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 - 401R23A7M59
Manufacturer:	see Annex 1
Test Report No.:	492010913.076
File No.:	PVP07014/23P-04



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Essen, 2023-12-18

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.:	862010696.002
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.:	862010688.002
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:	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 A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details

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)
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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)
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
Fire safety class:	Class A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details
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 A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details



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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)
144 cells: TWMPG-72HSxxx (xxx = 565-590, in increment of 5)
144 cells: TWMPG-72HBxxx (xxx = 565-590, in increment of 5)
108 cells: TWMPG-54HSxxx (xxx = 420-440, in increment of 5)
108 cells: TWMPG-54HBxxx (xxx = 420-440, in increment of 5)
132 cells: TWMPH-66HSxxx (xxx = 565-585, in increment of 5)
132 cells: TWMPH-66HBxxx (xxx = 565-585, in increment of 5)
120 cells: TWMPH-60HSxxx (xxx = 515-530, in increment of 5)
120 cells: TWMPH-60HBxxx (xxx = 515-530, in increment of 5)
96 cells: TWMPH-48HSxxx (xxx = 410-425, in increment of 5)
96 cells: TWMPH-48HBxxx (xxx = 410-425, in increment of 5)

Maximum system voltage: 1500V
Fuse rating: 25A
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 A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details

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

156 cells: TWMND-78HSxxx (xxx = 570-640, in increment of 5)
156 cells: TWMND-78HBxxx (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-S (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-F (xxx = 570-640, in increment of 5)
144 cells: TWMND-72HSxxx (xxx = 525-590, in increment of 5)
144 cells: TWMND-72HBxxx (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-S (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-F (xxx = 525-590, in increment of 5)
132 cells: TWMND-66HSxxx (xxx = 485-540, in increment of 5)
132 cells: TWMND-66HBxxx (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-S (xxx = 485-540, in increment of 5)



132 cells: TWxxxMGT-132-H-F (xxx = 485-540 , in increment of 5)
120 cells: TWMND-60HSxxx (xxx = 440-490, in increment of 5)
120 cells: TWMND-60HBxxx (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-S (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-F (xxx = 440-490, in increment of 5)
108 cells: TWMND-54HSxxx (xxx = 395-440, in increment of 5)
108 cells: TWMND-54HBxxx (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-S (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-F (xxx = 395-440, in increment of 5)
144 cells: TWMNG-72HSxxx (xxx = 585-625, in increment of 5)
144 cells: TWMNG-72HBxxx (xxx = 585-625, in increment of 5)
108 cells: TWMNG-54HSxxx (xxx = 435-465, in increment of 5)
108 cells: TWMNG-54HBxxx (xxx = 435-465, in increment of 5)
132 cells: TWMNH-66HSxxx (xxx = 585-625, in increment of 5)
132 cells: TWMNH-66HBxxx (xxx = 585-625, in increment of 5)
120 cells: TWMNH-60HSxxx (xxx = 530-565, in increment of 5)
120 cells: TWMNH-60HBxxx (xxx = 530-565, in increment of 5)
96 cells: TWMNH-48HSxxx (xxx = 425-455, in increment of 5)
96 cells: TWMNH-48HBxxx (xxx = 425-455, in increment of 5)

Maximum system voltage: 1500V
Fuse rating: 25A
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 A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details

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)



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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)
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 = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-S (xxx = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-F (xxx = 535-580, 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 = 485-525, in increment of 5)
100 cells: TWxxxMCP-100-H-S (xxx = 485-525, in increment of 5)
100 cells: TWxxxMCP-100-H-F (xxx = 485-525, in increment of 5)

Maximum system voltage: 1500V
Fuse rating: 30A
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 A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details

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)
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
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 A or Class C according to ANSI/UL 1703-2018 (as per ANSI/UL 790-2018), refer to CDF for details

Remark:

For detailed product information, please refer to CDF (Constructional Data Form)



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To / 致:

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

Contact / 联系人: Mr. Wei Yang

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.: PVP07180/23P-03

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 21 406749 - 107R6A3M5

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 2023-12-07.
特此声明, 上述证书自 2023 年 12 月 7 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 21 406749 - 107R7A4M6) has (have) been issued to replace the cancelled one(s).新证书(证书号: 44 780 21 406749 - 107R7A4M6) 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 2023-12-07. Meanwhile, please send back the original copies of above mentioned certificate(s) to us.

请注意从 2023 年 12 月 7 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: 2023-12-07

Valid until: 2029-01-24

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 61701:2020 / EN IEC 61701:2020
Remark:	Test Method 6 Test duration:1344 hours
Registered No.:	44 780 19 406749 - 407R9A4M8
Manufacturer and factory(-ies):	See Annex 1
Test Report No.:	492011170.011
File No.:	PVP07180/23P-08



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Essen, 2023-12-07

Please also pay attention to the information stated overleaf.

Manufacturer and factory(-ies):

Manufacturer:	Tongwei Solar (Hefei) Co., Ltd. No.888, Changning Road, High-tech District, Hefei City, Anhui Province, 230088, P.R. China
Factory 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
Factory 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.:	862010696.002
Factory 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.:	862010688.002
Factory 4:	Zibo JinenU Solar Technology Co., LTD. 3005, Silk Road, Zhoucun District, Zibo, Shandong China
Factory inspection report no.:	862010689.002
Factory 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.:	862010744.002
Factory 6:	Tongwei Solar (Yancheng) Co., Ltd. No. 88, Jiuhuashan Road, Economic Development Zone, Yancheng City, Jiangsu Province, China
Factory inspection report no.:	862010763.001



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Factory 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

Factory 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

Factory 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.



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

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: THxxxPM5-72SA (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: THxxxPMB5-72SB (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) 408 cells: THxxxPM5-72SF (xxx = 395-435, in increment of 5) 408 cells: THxxxPM5-72SS (xxx = 395-435, in increment of 5) 408 cells: THxxxPMB5-72S (xxx = 395-455, 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: THxxxPMB5-72SF (xxx = 395-435, in increment of 5) 408 cells: THxxxPMB5-72SS (xxx = 395-435, 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: THxxxPM5-60SB (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: THxxxPM5-60SF (xxx = 325-360, in increment of 5)
340 cells: THxxxPM5-60SS (xxx = 325-360, 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 = 350-380, in increment of 5)
340 cells: THxxxPMB5-60SAS (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)

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

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)



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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
Application class: Class A
Electrical protection class: Class II

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)



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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)
144 cells: TWMPG-72HSxxx (xxx = 565-590, in increment of 5)
144 cells: TWMPG-72HBxxx (xxx = 565-590, in increment of 5)
108 cells: TWMPG-54HSxxx (xxx = 420-440, in increment of 5)
108 cells: TWMPG-54HBxxx (xxx = 420-440, in increment of 5)
132 cells: TWMPH-66HSxxx (xxx = 565-585, in increment of 5)
132 cells: TWMPH-66HBxxx (xxx = 565-585, in increment of 5)
120 cells: TWMPH-60HSxxx (xxx = 515-530, in increment of 5)
120 cells: TWMPH-60HBxxx (xxx = 515-530, in increment of 5)
96 cells: TWMPH-48HSxxx (xxx = 410-425, in increment of 5)
96 cells: TWMPH-48HBxxx (xxx = 410-425, in increment of 5)

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

Module types: **PV Modules with Half-cut 7" TOPCon Mono-crystalline Silicon Solar Cells:**
156 cells: TWMND-78HSxxx (xxx = 570-640, in increment of 5)
156 cells: TWMND-78HBxxx (xxx = 570-640, in increment of 5)



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156 cells: TWxxxMGT-156-H (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-S (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-F (xxx = 570-640, in increment of 5)
144 cells: TWMND-72HSxxx (xxx = 525-590, in increment of 5)
144 cells: TWMND-72HBxxx (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-S (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-F (xxx = 525-590, in increment of 5)
132 cells: TWMND-66HSxxx (xxx = 485-540, in increment of 5)
132 cells: TWMND-66HBxxx (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-S (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-F (xxx = 485-540, in increment of 5)
120 cells: TWMND-60HSxxx (xxx = 440-490, in increment of 5)
120 cells: TWMND-60HBxxx (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-S (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-F (xxx = 440-490, in increment of 5)
108 cells: TWMND-54HSxxx (xxx = 395-440, in increment of 5)
108 cells: TWMND-54HBxxx (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-S (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-F (xxx = 395-440, in increment of 5)
144 cells: TWMNG-72HSxxx (xxx = 585-625, in increment of 5)
144 cells: TWMNG-72HBxxx (xxx = 585-625, in increment of 5)
108 cells: TWMNG-54HSxxx (xxx = 435-465, in increment of 5)
108 cells: TWMNG-54HBxxx (xxx = 435-465, in increment of 5)
132 cells: TWMNH-66HSxxx (xxx = 585-625, in increment of 5)
132 cells: TWMNH-66HBxxx (xxx = 585-625, in increment of 5)
120 cells: TWMNH-60HSxxx (xxx = 530-565, in increment of 5)
120 cells: TWMNH-60HBxxx (xxx = 530-565, in increment of 5)
96 cells: TWMNH-48HSxxx (xxx = 425-455, in increment of 5)
96 cells: TWMNH-48HBxxx (xxx = 425-455, in increment of 5)

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



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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)
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 = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-S (xxx = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-F (xxx = 535-580, 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 = 485-525, in increment of 5)



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	100 cells: TWxxxMCP-100-H-S (xxx = 485-525, in increment of 5)
	100 cells: TWxxxMCP-100-H-F (xxx = 485-525, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	30A
Application class:	Class A
Electrical protection class:	Class II

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)
	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
Application class:	Class A
Electrical protection class:	Class II



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Certification Body
Consumer Products

Anlage 2 zum Zertifikat Nr.: / *Annex 2 to Certificate No.:* **44 780 19 406749 - 407R9A4M8**

Seite / Page 8 von / of 8

Aktenzeichen: / *File reference:* **PVP07180/23P-08**

2023-12-07

Remark:

For detailed product information, please refer to CDF (Constructional Data Form).

A handwritten signature in blue ink, appearing to read "Rolfen Aliao".

TÜV NORD CERT GmbH
Certification Body
Consumer Products

To / 致:

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

Contact / 联系人: Mr. Wei Yang

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.: PVP04018/23P-03

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 - 406R8A3M7

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 2023-12-07.
特此声明, 上述证书自 2023 年 12 月 7 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 - 406R9A4M8) has (have) been issued to replace the cancelled one(s).新证书(证书号: 44 780 19 406749 - 406R9A4M8) 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 2023-12-07. Meanwhile, please send back the original copies of above mentioned certificate(s) to us.

请注意从 2023 年 12 月 7 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 until: 2029-01-24

Certification program:	P12-VA-01 Rev. 17 09.20
Certification fundamental(s):	IEC 62716:2013 / EN 62716:2013 + AC:2014.
Registered No.:	44 780 19 406749 - 406R9A4M8
Manufacturer:	see Annex 1
Test Report No.:	492011171.011
File No.:	PVP07180/23P-09




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Essen, 2023-12-07

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.: 862010696.002

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.: 862010688.002

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



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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.



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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)

Maximum system voltage: 1500V

Fuse rating: 20A

Application class: Class A

Electrical protection class: Class II

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: THxxxPM5-72SA (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: THxxxPMB5-72SB (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)
408 cells: THxxxPM5-72SF (xxx = 395-435, in increment of 5)
408 cells: THxxxPM5-72SS (xxx = 395-435, in increment of 5)
408 cells: THxxxPMB5-72S (xxx = 395-455, 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: THxxxPMB5-72SF (xxx = 395-435, in increment of 5)



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408 cells: THxxxPMB5-72SS (xxx = 395-435, 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: THxxxPM5-60SB (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: THxxxPM5-60SF (xxx = 325-360, in increment of 5)
340 cells: THxxxPM5-60SS (xxx = 325-360, 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 = 350-380, in increment of 5)
340 cells: THxxxPMB5-60SAS (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)

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



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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
Application class: Class A
Electrical protection class: Class II

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)



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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)
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)
144 cells: TWMPG-72HSxxx (xxx = 565-590, in increment of 5)
144 cells: TWMPG-72HBxxx (xxx = 565-590, in increment of 5)
108 cells: TWMPG-54HSxxx (xxx = 420-440, in increment of 5)
108 cells: TWMPG-54HBxxx (xxx = 420-440, in increment of 5)
132 cells: TWMPH-66HSxxx (xxx = 565-585, in increment of 5)
132 cells: TWMPH-66HBxxx (xxx = 565-585, in increment of 5)
120 cells: TWMPH-60HSxxx (xxx = 515-530, in increment of 5)
120 cells: TWMPH-60HBxxx (xxx = 515-530, in increment of 5)
96 cells: TWMPH-48HSxxx (xxx = 410-425, in increment of 5)
96 cells: TWMPH-48HBxxx (xxx = 410-425, in increment of 5)



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

Module types:

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

156 cells: TWMND-78HSxxx (xxx = 570-640, in increment of 5)
156 cells: TWMND-78HBxxx (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-S (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-F (xxx = 570-640, in increment of 5)
144 cells: TWMND-72HSxxx (xxx = 525-590, in increment of 5)
144 cells: TWMND-72HBxxx (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-S (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-F (xxx = 525-590, in increment of 5)
132 cells: TWMND-66HSxxx (xxx = 485-540, in increment of 5)
132 cells: TWMND-66HBxxx (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-S (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-F (xxx = 485-540, in increment of 5)
120 cells: TWMND-60HSxxx (xxx = 440-490, in increment of 5)
120 cells: TWMND-60HBxxx (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-S (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-F (xxx = 440-490, in increment of 5)
108 cells: TWMND-54HSxxx (xxx = 395-440, in increment of 5)
108 cells: TWMND-54HBxxx (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-S (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-F (xxx = 395-440, in increment of 5)
144 cells: TWMNG-72HSxxx (xxx = 585-625, in increment of 5)
144 cells: TWMNG-72HBxxx (xxx = 585-625, in increment of 5)
108 cells: TWMNG-54HSxxx (xxx = 435-465, in increment of 5)
108 cells: TWMNG-54HBxxx (xxx = 435-465, in increment of 5)
132 cells: TWMNH-66HSxxx (xxx = 585-625, in increment of 5)
132 cells: TWMNH-66HBxxx (xxx = 585-625, in increment of 5)



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	120 cells: TWMNH-60HSxxx (xxx = 530-565, in increment of 5)
	120 cells: TWMNH-60HBxxx (xxx = 530-565, in increment of 5)
	96 cells: TWMNH-48HSxxx (xxx = 425-455, in increment of 5)
	96 cells: TWMNH-48HBxxx (xxx = 425-455, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Application class:	Class A
Electrical protection class:	Class II

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)
- 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 = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-S (xxx = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-F (xxx = 535-580, 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 = 485-525, in increment of 5)
100 cells: TWxxxMCP-100-H-S (xxx = 485-525, in increment of 5)
100 cells: TWxxxMCP-100-H-F (xxx = 485-525, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 30A

Application class: Class A

Electrical protection class: Class II

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)
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)



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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
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.



TÜV NORD CERT GmbH
Certification Body
Consumer Products

To / 致:

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

Contact / 联系人: Mr. Wei Yang

Email / 邮箱: YANGW012@tongwei.com

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

Contact / 联系人: Ms. Miley Li / 李文颖 小姐

Email / 邮箱: wli@tuv-nord.com

Subject: Announcement of cancellation

主题: 证书取消通知

File No.: PVP04018/23P-11

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 - 363R11A3M10

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 2023-12-07.
特此声明, 上述证书自 2023 年 12 月 7 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 - 363R12A4M11) has (have) been issued to replace the cancelled one(s).新证书(证书号: 44 780 19 406749 - 363R12A4M11) 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 2023-12-07. Meanwhile, please send back the original copies of above mentioned certificate(s) to us.

请注意从 2023 年 12 月 7 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: 2023-12-07

Valid until: 2029-11-05

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 19 406749 - 363R12A4M11
Manufacturer:	see Annex 1
Test Report No.:	492011317. 013
File No.:	PVP05164/23P-05



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Essen, 2023-12-07

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.:	862010696.002
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.:	862010688.002
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.



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Description of product(s):

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: THxxxPM5-72SA (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: THxxxPMB5-72SB (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)
408 cells: THxxxPM5-72SF (xxx = 395-435, in increment of 5)
408 cells: THxxxPM5-72SS (xxx = 395-435, in increment of 5)
408 cells: THxxxPMB5-72S (xxx = 395-455, 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: THxxxPMB5-72SF (xxx = 395-435, in increment of 5)
408 cells: THxxxPMB5-72SS (xxx = 395-435, 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)



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340 cells: THxxxPM5-60SAF (xxx = 350-380, in increment of 5)
340 cells: THxxxPM5-60SAS (xxx = 350-380, in increment of 5)
340 cells: THxxxPM5-60SB (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: THxxxPM5-60SF (xxx = 325-360, in increment of 5)
340 cells: THxxxPM5-60SS (xxx = 325-360, 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 = 350-380, in increment of 5)
340 cells: THxxxPMB5-60SAS (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)

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

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)



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	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
Application class:	Class A
Electrical protection class:	Class II

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)
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)
144 cells: TWMPG-72HSxxx (xxx = 565-590, in increment of 5)
144 cells: TWMPG-72HBxxx (xxx = 565-590, in increment of 5)
108 cells: TWMPG-54HSxxx (xxx = 420-440, in increment of 5)
108 cells: TWMPG-54HBxxx (xxx = 420-440, in increment of 5)
132 cells: TWMPH-66HSxxx (xxx = 565-585, in increment of 5)
132 cells: TWMPH-66HBxxx (xxx = 565-585, in increment of 5)
120 cells: TWMPH-60HSxxx (xxx = 515-530, in increment of 5)
120 cells: TWMPH-60HBxxx (xxx = 515-530, in increment of 5)
96 cells: TWMPH-48HSxxx (xxx = 410-425, in increment of 5)
96 cells: TWMPH-48HBxxx (xxx = 410-425, in increment of 5)

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

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

156 cells: TWMND-78HSxxx (xxx = 570-640, in increment of 5)
156 cells: TWMND-78HBxxx (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-S (xxx = 570-640, in increment of 5)
156 cells: TWxxxMGT-156-H-F (xxx = 570-640, in increment of 5)
144 cells: TWMND-72HSxxx (xxx = 525-590, in increment of 5)
144 cells: TWMND-72HBxxx (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-S (xxx = 525-590, in increment of 5)
144 cells: TWxxxMGT-144-H-F (xxx = 525-590, in increment of 5)
132 cells: TWMND-66HSxxx (xxx = 485-540, in increment of 5)
132 cells: TWMND-66HBxxx (xxx = 485-540, in increment of 5)



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132 cells: TWxxxMGT-132-H (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-S (xxx = 485-540, in increment of 5)
132 cells: TWxxxMGT-132-H-F (xxx = 485-540, in increment of 5)
120 cells: TWMND-60HSxxx (xxx = 440-490, in increment of 5)
120 cells: TWMND-60HBxxx (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-S (xxx = 440-490, in increment of 5)
120 cells: TWxxxMGT-120-H-F (xxx = 440-490, in increment of 5)
108 cells: TWMND-54HSxxx (xxx = 395-440, in increment of 5)
108 cells: TWMND-54HBxxx (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-S (xxx = 395-440, in increment of 5)
108 cells: TWxxxMGT-108-H-F (xxx = 395-440, in increment of 5)
144 cells: TWMNG-72HSxxx (xxx = 585-625, in increment of 5)
144 cells: TWMNG-72HBxxx (xxx = 585-625, in increment of 5)
108 cells: TWMNG-54HSxxx (xxx = 435-465, in increment of 5)
108 cells: TWMNG-54HBxxx (xxx = 435-465, in increment of 5)
132 cells: TWMNH-66HSxxx (xxx = 585-625, in increment of 5)
132 cells: TWMNH-66HBxxx (xxx = 585-625, in increment of 5)
120 cells: TWMNH-60HSxxx (xxx = 530-565, in increment of 5)
120 cells: TWMNH-60HBxxx (xxx = 530-565, in increment of 5)
96 cells: TWMNH-48HSxxx (xxx = 425-455, in increment of 5)
96 cells: TWMNH-48HBxxx (xxx = 425-455, in increment of 5)

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

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)



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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)
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 = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-S (xxx = 535-580, in increment of 5)
110 cells: TWxxxMCP-110-H-F (xxx = 535-580, 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 = 485-525, in increment of 5)
100 cells: TWxxxMCP-100-H-S (xxx = 485-525, in increment of 5)
100 cells: TWxxxMCP-100-H-F (xxx = 485-525, in increment of 5)

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

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)



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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)
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
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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