



CDF (Constructional Data Form) for Electrical Products

Applicant..... :	Tongwei Solar (Hefei) Co., Ltd. No.888, Changning Road, High-tech District, Hefei City, Anhui Province, 230088, P.R. China
Manufacturer 1..... :	Tongwei Solar (Hefei) Co., Ltd. No.888, Changning Road, High-tech District, Hefei City, Anhui Province, 230088, P.R. China
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
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.
Manufacturer 4..... :	Tangshan Haitai New Energy Technology Co., Ltd. Yutai Industrial Zone, Yutian, Tangshan City Hebei Province, 064100, P.R. China
Manufacturer 5..... :	SIYANG TALESUN NEW ENERGY TECHNOLOGIES CO., LTD. 211 Zhongxing East Road, Siyang Economic Development Zone, 223700 Suqian City, Jiangsu, China
Manufacturer 6..... :	Peixian Talesun New Energy Technology Co., Ltd. 18 Hanrun Road, Peixian Economic Development Zone, 221600 Xuzhou City, Jiangsu, China
Manufacturer 7..... :	Zibo JinenU Solar Technology Co., LTD. 3005, Silk Road, Zhoucun District, Zibo, Shandong China
Manufacturer 8..... :	Jiangsu Huapeng Photovoltaic Technology Co., LTD. No. 118, Jingang Road, Yangzhou economic and Technological Development Zone, 225100 Yangzhou City, Jiangsu Province, PEOPLE'S REPUBLIC OF CHINA
Product..... :	Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Standard(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.
Trade mark..... :	 通威太阳能  TW SOLAR

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Hefei, 01/29/2023 (Place and date)

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PV-F-026 CDF

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

(Signature of authorized TÜV NORD CERT engineer)

Module type(s) :	<p>Double Glass PV Modules with Segmented 6" Mono-crystalline Silicon Solar Cells: 408 cells: THxxxCM5-72SD (xxx = 350-390, in increment of 5) 340 cells: THxxxCM5-60SD (xxx = 290-325, in increment of 5)</p> <p>Double Glass PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells: 408 cells: THxxxPM5-72SD (xxx = 390-410, in increment of 5) 408 cells: THxxxPM5-72SDA (xxx = 410-440, in increment of 5) 408 cells: THxxxPM5-72SDA-F (xxx = 410-440, in increment of 5) 408 cells: THxxxPMB5-72SD (xxx = 390-410, in increment of 5) 408 cells: THxxxPMB5-72SDA (xxx = 410-440, in increment of 5) 408 cells: THxxxPMB5-72SDA-F (xxx = 410-440, in increment of 5) 340 cells: THxxxPM5-60SD (xxx = 325-340, in increment of 5) 340 cells: THxxxPM5-60SDA (xxx = 340-365, in increment of 5) 340 cells: THxxxPM5-60SDA-F (xxx = 340-365, in increment of 5) 340 cells: THxxxPMB5-60SD (xxx = 325-340, in increment of 5) 340 cells: THxxxPMB5-60SDA (xxx = 340-365, in increment of 5) 340 cells: THxxxPMB5-60SDA-F (xxx = 340-365, in increment of 5)</p> <p>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 = 625-660, 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)</p> <p>Double Glass PV Modules with Half-cut 7" PERC Mono-crystalline Silicon Solar Cells: 156 cells: TWxxxMBAP-156-D (xxx = 570-615, in increment of 5) 156 cells: TWxxxMBGP-156-D (xxx = 570-600, in increment of 5) 144 cells: TWxxxMBAP-144-D (xxx = 530-565, in increment of 5) 144 cells: TWxxxMBGP-144-D (xxx = 525-550, in increment of 5) 132 cells: TWxxxMBAP-132-D (xxx = 485-520, in increment of 5) 132 cells: TWxxxMBGP-132-D (xxx = 480-505, in increment of 5) 120 cells: TWxxxMBAP-120-D (xxx = 440-470, in increment of 5) 120 cells: TWxxxMBGP-120-D (xxx = 440-460, in increment of 5) 108 cells: TWxxxMBAP-108-D (xxx = 400-425, in increment of 5) 108 cells: TWxxxMBGP-108-D (xxx = 395-415, in increment of 5)</p>
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	<p>Double Glass PV Modules with Half-cut 7" TOPCon Mono-crystalline Silicon Solar Cells:</p> <p>156 cells: TWMND-78HDxxx (xxx = 580-615, in increment of 5)</p> <p>156 cells: TWxxxMBGT-156-D (xxx = 580-615, in increment of 5)</p> <p>144 cells: TWMND-72HDxxx (xxx = 535-565, in increment of 5)</p> <p>144 cells: TWxxxMBGT-144-D (xxx = 535-565, in increment of 5)</p> <p>132 cells: TWMND-66HDxxx (xxx = 490-520, in increment of 5)</p> <p>132 cells: TWxxxMBGT-132-D (xxx = 490-520, in increment of 5)</p> <p>120 cells: TWMND-60HDxxx (xxx = 445-470, in increment of 5)</p> <p>120 cells: TWxxxMBGT-120-D (xxx = 445-470, in increment of 5)</p> <p>108 cells: TWMND-54HDxxx (xxx = 400-425, in increment of 5)</p> <p>108 cells: TWxxxMBGT-108-D (xxx = 400-425, in increment of 5)</p> <p>Double Glass PV Modules with Half-cut 8" PERC Mono-crystalline Silicon Solar Cells:</p> <p>132 cells: TWMPF-66HDxxx (xxx = 635-675, in increment of 5)</p> <p>132 cells: TWxxxMBCP-132-D (xxx = 635-675, in increment of 5)</p> <p>132 cells: TWxxxMBIP-132-D (xxx = 635-675, in increment of 5)</p> <p>120 cells: TWMPF-60HDxxx (xxx = 580-610, in increment of 5)</p> <p>120 cells: TWxxxMBCP-120-D (xxx = 580-610, in increment of 5)</p> <p>120 cells: TWxxxMBIP-120-D (xxx = 580-610, in increment of 5)</p> <p>108 cells: TWMPF-54HDxxx (xxx = 520-550, in increment of 5)</p> <p>108 cells: TWxxxMBCP-108-D (xxx = 520-550, in increment of 5)</p> <p>108 cells: TWxxxMBIP-108-D (xxx = 520-550, in increment of 5)</p> <p>110 cells: TWMPF-55HDxxx (xxx = 530-560, in increment of 5)</p> <p>110 cells: TWxxxMBCP-110-D (xxx = 530-560, in increment of 5)</p> <p>110 cells: TWxxxMBIP-110-D (xxx = 530-560, in increment of 5)</p> <p>100 cells: TWMPF-50HDxxx (xxx = 480-510, in increment of 5)</p> <p>100 cells: TWxxxMBCP-100-D (xxx = 480-510, in increment of 5)</p> <p>100 cells: TWxxxMBIP-100-D (xxx = 480-510, in increment of 5)</p> <p>Double Glass PV Modules with Half-cut 8" TOPCon Mono-crystalline Silicon Solar Cells:</p> <p>132 cells: TWMNF-66HDxxx (xxx = 665-690, in increment of 5)</p> <p>132 cells: TWxxxMBIT-132-D (xxx = 665-690, in increment of 5)</p> <p>120 cells: TWMNF-60HDxxx (xxx = 605-625, in increment of 5)</p> <p>120 cells: TWxxxMBIT-120-D (xxx = 605-625, in increment of 5)</p> <p>108 cells: TWMNF-54HDxxx (xxx = 545-565, in increment of 5)</p> <p>108 cells: TWxxxMBIT-108-D (xxx = 545-565, in increment of 5)</p> <p>110 cells: TWMNF-55HDxxx (xxx = 530-565, in increment of 5)</p> <p>110 cells: TWxxxMBIT-110-D (xxx = 530-565, in increment of 5)</p> <p>100 cells: TWMNF-50HDxxx (xxx = 480-510, in increment of 5)</p> <p>100 cells: TWxxxMBIT-100-D (xxx = 480-510, in increment of 5)</p> <p>Remark: xxx indicates output power from the front side only.</p>
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Electrical ratings:

Double Glass PV Modules with Segmented 6" Mono-crystalline Silicon Solar Cells:

Module type	408 cells: THxxxCM5-72SD (xxx = 350-390, in increment of 5) for 6" mono cell 1		
Dimensions [mm] / l x w x h	1959 x 1076 x 6		
Rated Pmpp [W]	350; 355; 360; 365; 370; 375; 380; 385; 390	Tolerance of rated Pmpp [%]	±3
Rated Voc [V]	43.0; 43.2; 43.4; 43.6; 43.9; 44.0; 44.1; 44.1; 44.2	Tolerance of rated Voc [%]	±3
Rated Isc [A]	10.41; 10.48; 10.55; 10.62; 10.86; 10.98; 11.03; 11.13; 11.19	Tolerance of rated Isc [%]	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / front	1.5
Design load [Pa] / negative	See remark 3	Safety factor / back	1.5

Module type	340 cells: THxxxCM5-60SD (xxx = 290-325, in increment of 5) for 6" mono cell 1		
Dimensions [mm] / l x w x h	1639 x 1076 x 6		
Rated Pmpp [W]	290; 295; 300; 305; 310; 315; 320; 325	Tolerance of rated Pmpp [%]	±3
Rated Voc [V]	42.8; 43.0; 43.2; 43.9; 44.0; 44.1; 44.1; 44.2	Tolerance of rated Voc [%]	±3
Rated Isc [A]	8.76; 8.83; 8.90; 9.05; 9.15; 9.19; 9.28; 9.33	Tolerance of rated Isc [%]	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Double Glass PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells:

Module type	408 cells: THxxxPM5-72SD (xxx = 390-410, in increment of 5) for 6" mono cell 2		
Dimensions [mm] / l x w x h	Size1: 1959 x 1096 x 6 Size2: 1959 x 1076 x 6		
Rated Pmpp [W]	390; 395; 400; 405; 410	Tolerance of rated Pmpp [%]	±3

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Rated Voc [V]..... :	45.1; 45.2; 45.2; 45.3; 45.3	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	11.27; 11.31; 11.35; 11.39; 11.43	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	408 cells: THxxxPM5-72SDA (xxx = 410-440, in increment of 5) 408 cells: THxxxPM5-72SDA-F (xxx = 410-440, in increment of 5) for 6" mono cell 3		
Dimensions [mm] / l x w x h	1989 x 1101 x 30		
Rated Pmpp [W]..... :	410; 415; 420; 425; 430; 435; 440	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	45.9; 46.0; 46.1; 46.2; 46.3; 46.4; 46.5	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	11.85; 11.90; 11.96; 12.01; 12.06; 12.11; 12.15	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5
Module type	408 cells: THxxxPMB5-72SD (xxx = 390-410, in increment of 5) for 6" mono cell 4		
Dimensions [mm] / l x w x h	Size1: 1959 x 1096 x 6 Size2: 1959 x 1076 x 6		
Rated Pmpp [W]..... :	390; 395; 400; 405; 410	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	45.6; 45.6; 45.7; 45.7; 45.8	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	11.41; 11.43; 11.47; 11.51; 11.55	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

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Carra Chen

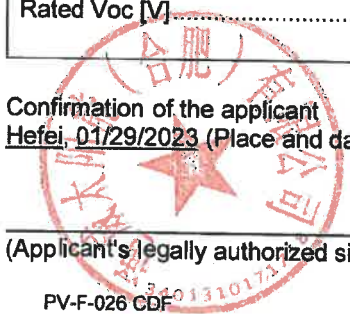
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Module type	408 cells: THxxxPMB5-72SDA (xxx = 410-440, in increment of 5) 408 cells: THxxxPMB5-72SDA-F (xxx = 410-440, in increment of 5) for 6" mono cell 5		
Dimensions [mm] / l x w x h	Size1: 1983 x 1095 x 6 Size2: 1989 x 1101 x 30		
Rated Pmpp [W].....	410; 415; 420; 425; 430; 435; 440	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.9; 46.0; 46.1; 46.2; 46.3; 46.4; 46.5	Tolerance of rated Voc [%]	±3
Rated Isc [A]	11.85; 11.90; 11.96; 12.01; 12.06; 12.11; 12.15	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative	1.5

Module type	340 cells: THxxxPM5-60SD (xxx = 325-340, in increment of 5) for 6" mono cell 2		
Dimensions [mm] / l x w x h	Size1: 1639 x 1096 x 6 Size2: 1639 x 1076 x 6		
Rated Pmpp [W].....	325; 330; 335; 340	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.1; 45.1; 45.2; 45.2	Tolerance of rated Voc [%]	±3
Rated Isc [A]	9.42; 9.45; 9.49; 9.51	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative	1.5

Module type	340 cells: THxxxPM5-60SDA (xxx = 340-365, in increment of 5) 340 cells: THxxxPM5-60SDA-F (xxx = 340-365, in increment of 5) for 6" mono cell 3		
Dimensions [mm] / l x w x h	1665 x 1101 x 30		
Rated Pmpp [W].....	340; 345; 350; 355; 360; 365	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	46.0; 46.1; 46.2; 46.3; 46.4; 46.6	Tolerance of rated Voc [%]	±3

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Rated Isc [A]	9.87; 9.93; 9.99; 10.05; 10.11; 10.21	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	340 cells: THxxxPMB5-60SD (xxx = 325-340, in increment of 5) for 6" mono cell 4		
Dimensions [mm] / l x w x h	Size1: 1639 x 1096 x 6 Size2: 1639 x 1076 x 6		
Rated Pmpp [W].....	325; 330; 335; 340	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.1; 45.1; 45.2; 45.2	Tolerance of rated Voc [%]	±3
Rated Isc [A]	9.42; 9.45; 9.49; 9.51	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	340 cells: THxxxPMB5-60SDA (xxx = 340-365, in increment of 5) 340 cells: THxxxPMB5-60SDA-F (xxx = 340-365, in increment of 5) for 6" mono cell 5		
Dimensions [mm] / l x w x h	Size1: 1659 x 1095 x 6 Size2: 1665 x 1101 x 30		
Rated Pmpp [W].....	340; 345; 350; 355; 360; 365	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	46.0; 46.1; 46.2; 46.3; 46.4; 46.6	Tolerance of rated Voc [%]	±3
Rated Isc [A]	9.87; 9.93; 9.99; 10.05; 10.11; 10.21	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	20
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

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

Module type	414 cells: THxxxPMB6-69SDC (xxx = 635-670, in increment of 5) for 8" mono cell 6		
Dimensions [mm] / l x w x h	2384 x 1303 x 30 / 35		
Rated Pmpp [W].....	635; 640; 645; 650; 655; 660; 665; 670	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	46.4; 46.5; 46.6; 46.7; 46.8; 46.9; 47.0; 47.1;	Tolerance of rated Voc [%]	±3
Rated Isc [A]	17.54; 17.64; 17.74; 17.84; 17.97; 18.06; 18.16; 18.26	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative	1.5

Module type	408 cells: THxxxPMB6-68SDC (xxx = 625-660, in increment of 5) for 8" mono cell 6		
Dimensions [mm] / l x w x h	2355 x 1303 x 30 / 35		
Rated Pmpp [W].....	625; 630; 635; 640; 645; 650; 655; 660	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.7; 45.8; 45.9; 46.0; 46.1; 46.2; 46.3; 46.4	Tolerance of rated Voc [%]	±3
Rated Isc [A]	17.53; 17.63; 17.73; 17.83; 17.93; 18.03; 18.15; 18.26	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative	1.5

Module type	390 cells: THxxxPMB6-65SDC (xxx = 600-630, in increment of 5) for 8" mono cell 6		
Dimensions [mm] / l x w x h	2253 x 1303 x 30 / 35		
Rated Pmpp [W].....	600; 605; 610; 615; 620; 625; 630	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	43.9; 43.9; 44.0; 44.1; 44.2; 44.3; 44.4	Tolerance of rated Voc [%]	±3

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Rated Isc [A]	17.52; 17.66; 17.77; 17.87; 17.98; 18.08; 18.19	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	345 cells: THxxxPMB6-58SDC (xxx = 530-555, in increment of 5) for 8" mono cell 6		
Dimensions [mm] / l x w x h	2384 x 1096 x 30 / 35		
Rated Pmpp [W].....	530; 535; 540; 545; 550; 555	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	46.7; 46.8; 46.9; 47.0; 47.1; 47.2	Tolerance of rated Voc [%]	±3
Rated Isc [A]	14.55; 14.65; 14.76; 14.86; 14.97; 15.07	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	340 cells: THxxxPMB6-57SDC (xxx = 520-550, in increment of 5) for 8" mono cell 6		
Dimensions [mm] / l x w x h	Size1: 2355 x 1090 x 30 / 35 Size2: 2355 x 1096 x 35		
Rated Pmpp [W].....	520; 525; 530; 535; 540; 545; 550	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.8; 45.9; 46.0; 46.1; 46.2; 46.3; 46.4	Tolerance of rated Voc [%]	±3
Rated Isc [A]	14.55; 14.66; 14.77; 14.87; 14.98; 15.09; 15.20	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

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Module type	325 cells: THxxxPMB6-54SDC (xxx = 500-525, in increment of 5) for 8" mono cell 6		
Dimensions [mm] / l x w x h	2253 x 1096 x 30 / 35		
Rated Pmpp [W].....	500; 505; 510; 515; 520; 525	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	44.0; 44.1; 44.2; 44.3; 44.4; 44.5	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	14.57; 14.68; 14.79; 14.90; 15.01; 15.09	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	10.4	Fuse rating [A]	30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative	1.5

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

Module type	156 cells: TWMPD-78HDxxx (xxx = 575-615, in increment of 5) 156 cells: TWxxxMBAP-156-D (xxx = 575-615, in increment of 5) for 7" mono cell 9		
Dimensions [mm] / l x w x h	2465±2 x 1134±2 x 35		
Rated Pmpp [W].....	575, 580, 585, 590, 595, 600, 605, 610, 615	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	53.25, 53.45, 53.65, 53.85 54.05, 54.25, 54.45, 54.65, 54.85	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	13.88, 13.93, 13.98, 14.03, 14.08, 14.13, 14.18, 14.23, 14.28	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative	1.5

Module type	156 cells: TWMPD-78HDxxx (xxx = 570-600, in increment of 5) 156 cells: TWxxxMBGP-156-D (xxx = 570-600, in increment of 5) for 7" mono cell 11		
Dimensions [mm] / l x w x h	2465±2 x 1134±2 x 35		
Rated Pmpp [W].....	570, 575, 580, 585, 590, 595, 600	Tolerance of rated Pmpp [%].....	±3

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Rated Voc [V]..... :	53.05, 53.25, 53.45, 53.65, 53.85 54.05, 54.25	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.83, 13.88, 13.93, 13.98, 14.03, 14.08, 14.13	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative.....	1.5


Module type	144 cells: TWMPD-72HDxxx (xxx = 530-565, in increment of 5) 144 cells: TWxxxMBAP-144-D (xxx = 530-565, in increment of 5) for 7" mono cell 9		
Dimensions [mm] / l x w x h	2278±2 x 1134±2 x 30 / 35 2278±2 x 1140±2 x 30 / 35		
Rated Pmpp [W]..... :	530, 535, 540, 545, 550, 555, 560, 565	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V]..... :	49.30, 49.50, 49.70, 49.90, 50.10, 50.30, 50.50, 50.70	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.68, 13.73, 13.78, 13.83, 13.88, 13.93, 13.98, 14.03	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative.....	1.5

Module type	144 cells: TWMPD-72HDxxx (xxx = 525-550, in increment of 5) 144 cells: TWxxxMBGP-144-D (xxx = 525-550, in increment of 5) for 7" mono cell 11		
Dimensions [mm] / l x w x h	2278±2 x 1134±2 x 30 / 35 2278±2 x 1140±2 x 30 / 35		
Rated Pmpp [W]..... :	525, 530, 535, 540, 545, 550	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V]..... :	49.10, 49.30, 49.50, 49.70, 49.90, 50.10	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.63, 13.68, 13.73, 13.78, 13.83, 13.88	Tolerance of rated Isc [%].....	±3

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Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

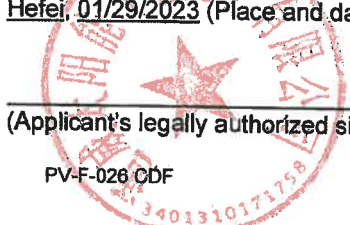
Module type	132 cells: TWMPD-66HDxxx (xxx = 485-520, in increment of 5) 132 cells: TWxxxMBAP-132-D (xxx = 485-520, in increment of 5) for 7" mono cell 9		
Dimensions [mm] / l x w x h	2093±2 x 1134±2 x 30 / 35		
Rated Pmpp [W]..... :	485, 490, 495, 500, 505, 510, 515, 520	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	45.20, 45.40, 45.60, 45.80, 46.00, 46.20, 46.40, 46.60	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.67, 13.72, 13.77, 13.82, 13.87, 13.92, 13.97, 14.02	Tolerance of rated Isc [%].....:	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	132 cells: TWMPD-66HDxxx (xxx = 480-505, in increment of 5) 132 cells: TWxxxMBGP-132-D (xxx = 480-505, in increment of 5) for 7" mono cell 11		
Dimensions [mm] / l x w x h	2093±2 x 1134±2 x 30 / 35		
Rated Pmpp [W]..... :	480, 485, 490, 495, 500, 505,	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	45.00, 45.20, 45.40, 45.60, 45.80, 46.00	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.62, 13.67, 13.72, 13.77, 13.82, 13.87	Tolerance of rated Isc [%].....:	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	120 cells: TWMPD-60HDxxx (xxx = 440-470, in increment of 5)		
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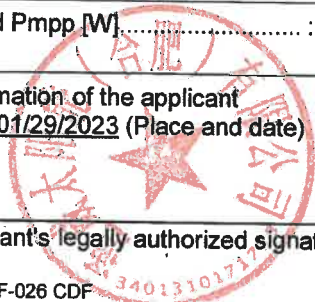
	120 cells: TWxxxMBAP-120-D (xxx = 440-470, in increment of 5) for 7" mono cell 9		
Dimensions [mm] / l x w x h	1903±2 x 1134±2 x 30 / 35 1908±2 x 1134±2 x 30 / 35		
Rated Pmpp [W].....	440, 445, 450, 455, 460, 465, 470	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	41.10, 41.30, 41.50, 41.70, 41.90, 42.10, 42.30	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.65, 13.70, 13.75, 13.80, 13.85, 13.90, 13.95	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative.....	1.5

Module type	120 cells: TWMPD-60HDxxx (xxx = 440-460, in increment of 5) 120 cells: TWxxxMBGP-120-D (xxx = 440-460, in increment of 5) for 7" mono cell 11		
Dimensions [mm] / l x w x h	1903±2 x 1134±2 x 30 / 35 1908±2 x 1134±2 x 30 / 35		
Rated Pmpp [W].....	440, 445, 450, 455, 460	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	41.10, 41.30, 41.50, 41.70, 41.90	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.65, 13.70, 13.75, 13.80, 13.85	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative.....	1.5

Module type	108 cells: TWMPD-54HDxxx (xxx = 400-425, in increment of 5) 108 cells: TWxxxMBAP-108-D (xxx = 400-425, in increment of 5) for 7" mono cell 9		
Dimensions [mm] / l x w x h	1722±2 x 1134±2 x 30 / 35 1722±2 x 1140±2 x 30 / 35		
Rated Pmpp [W].....	400, 405, 410, 415, 420, 425	Tolerance of rated Pmpp [%]	±3

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Rated Voc [V]..... :	37.08, 37.23, 37.38, 37.53, 37.68, 37.83	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]..... :	13.77, 13.87, 13.92, 13.95, 13.98, 14.01	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]..... :	12.6	Fuse rating [A]..... :	30 or 25
Design load [Pa] / positive..... :	See remark 3	Safety factor / positive..... :	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

Module type..... :	108 cells: TWMPD-54HDxxx (xxx = 395-415, in increment of 5) 108 cells: TWxxxMBGP-108-D (xxx = 395-415, in increment of 5) for 7" mono cell 11		
Dimensions [mm] / l x w x h..... :	1722±2 x 1134±2 x 30 / 35 1722±2 x 1140±2 x 30 / 35		
Rated Pmpp [W]..... :	395, 400, 405, 410, 415	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	36.93, 37.08, 37.23, 37.38, 37.53	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]..... :	13.67, 13.77, 13.87, 13.92, 13.95	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]..... :	12.6	Fuse rating [A]..... :	30 or 25
Design load [Pa] / positive..... :	See remark 3	Safety factor / positive..... :	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

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

Module type..... :	156 cells: TWMND-78HDxxx (xxx = 580-615, in increment of 5) 156 cells: TWxxxMBGT-156-D (xxx = 580-615, in increment of 5) 7" mono cell 12		
Dimensions [mm] / l x w x h..... :	2465±2 x 1134±2 x 30 / 35		
Rated Pmpp [W]..... :	580, 585, 590, 595, 600, 605, 610, 615	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	54.00, 54.20, 54.40, 54.60, 54.80, 55.00, 55.20, 55.40	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]..... :	13.86, 13.90, 13.94, 13.98, 14.02, 14.06, 14.10, 14.14	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II

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Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	144 cells: TWMND-72HDxxx (xxx = 535-565, in increment of 5) 144 cells: TWxxxMBGT-144-D (xxx = 535-565, in increment of 5) 7" mono cell 12		
Dimensions [mm] / l x w x h	2278±2 x 1134±2 x 30 / 35 2278±2 x 1140±2 x 30 / 35		
Rated Pmpp [W].....	535, 540, 545, 550, 555, 560, 565	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	49.84, 50.04, 50.24, 50.44, 50.64, 50.84, 51.04	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	13.93, 13.97, 14.01, 14.05, 14.09, 14.13, 14.17	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	132 cells: TWMND-66HDxxx (xxx = 490-520, in increment of 5) 132 cells: TWxxxMBGT-132-D (xxx = 490-520, in increment of 5) 7" mono cell 12		
Dimensions [mm] / l x w x h	2093±2 x 1134±2 x 30 / 35		
Rated Pmpp [W].....	490, 495, 500, 505, 510, 515, 520	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.65, 45.85, 46.05, 46.25, 46.45, 46.65, 46.85	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	13.96, 14.00, 14.04, 14.08, 14.12, 14.16, 14.20	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

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Module type	120 cells: TWMND-60HDxxx (xxx = 445-470, in increment of 5) 120 cells: TWxxxMBGT-120-D (xxx = 445-470, in increment of 5) 7" mono cell 12		
Dimensions [mm] / l x w x h	1903±2 x 1134±2 x 30 / 35 1908±2 x 1134±2 x 30 / 35		
Rated Pmpp [W].....	445, 450, 455, 460, 465, 470	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	41.51, 41.69, 41.87, 42.05, 42.23, 42.41	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.95, 13.99, 14.03, 14.07, 14.11, 14.15	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.2	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	108 cells: TWMND-54HDxxx (xxx = 400-425, in increment of 5) 108 cells: TWxxxMBGT-108-D (xxx = 400-425, in increment of 5) 7" mono cell 12		
Dimensions [mm] / l x w x h	1722±2 x 1134±2 x 30 / 35 1722±2 x 1140±2 x 30 / 35		
Rated Pmpp [W].....	400, 405, 410, 415, 420, 425	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	37.41, 37.58, 37.75, 37.92, 38.09, 38.26	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.96, 13.99, 14.02, 14.05, 14.08, 14.11	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.6	Fuse rating [A]	30 or 25
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

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

Module type	132 cells: TWMPF-66HDxxx (xxx = 635-675, in increment of 5) 132 cells: TWxxxMBCP-132-D (xxx = 635-675, in increment of 5) for mono cell 10
Dimensions [mm] / l x w x h	2384±2 x 1303±2 x 35

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Rated Pmpp [W]..... :	635; 640; 645; 650; 655; 660; 665; 670; 675	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	44.80; 45.00; 45.20; 45.40; 45.60; 45.80; 46.00; 46.20; 46.40	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	18.07; 18.12; 18.17; 18.21; 18.26; 18.31; 18.36; 18.41; 18.46	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	12.0	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

Module type	132 cells: TWMPF-66HDxxx (xxx = 635-675, in increment of 5) 132 cells: TWxxxMBIP-132-D (xxx = 635-675, in increment of 5) for 8" mono cell 8		
Dimensions [mm] / l x w x h	2384±2 x 1303±2 x 35		
Rated Pmpp [W]..... :	635; 640; 645; 650; 655; 660; 665; 670; 675	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	44.80; 45.00; 45.20; 45.40; 45.60; 45.80; 46.00; 46.20; 46.40	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	18.07; 18.12; 18.17; 18.21; 18.26; 18.31; 18.36; 18.41; 18.46	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	12.0	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

Module type	120 cells: TWMPF-60HDxxx (xxx = 580-610, in increment of 5) 120 cells: TWxxxMBCP-120-D (xxx = 580-610, in increment of 5) for 8" mono cell 10		
Dimensions [mm] / l x w x h	2172±2 x 1303±2 x 35		
Rated Pmpp [W]..... :	580; 585; 590; 595; 600; 605; 610	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	40.84; 41.04; 41.24; 41.44; 41.64; 41.84; 42.04	Tolerance of rated Voc [%]..... :	±3

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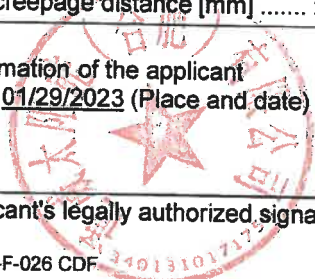


Rated Isc [A]	18.25; 18.30; 18.36; 18.41; 18.46; 18.52; 18.57	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. To IEC 61140	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	120 cells: TWMPF-60HDxxx (xxx = 580-610, in increment of 5) 120 cells: TWxxxMBIP-120-D (xxx = 580-610, in increment of 5) for 8" mono cell 8		
Dimensions [mm] / l x w x h	2172±2 x 1303±2 x 35		
Rated Pmpp [W].....	580; 585; 590; 595; 600; 605; 610	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	40.84; 41.04; 41.24; 41.44; 41.64; 41.84; 42.04	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.25; 18.30; 18.36; 18.41; 18.46; 18.52; 18.57	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. To IEC 61140	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	108 cells: TWMPF-54HDxxx (xxx = 520-550, in increment of 5) 108 cells: TWxxxMBCP-108-D (xxx = 520-550, in increment of 5) for 8" mono cell 10		
Dimensions [mm] / l x w x h	1960±2 x 1303±2 x 35		
Rated Pmpp [W].....	520; 525; 530; 535; 540; 545; 550	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	36.57; 36.73; 36.89; 37.05; 37.21; 37.37; 37.53	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.23; 18.29; 18.33; 18.37; 18.41; 18.45; 18.49	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V]	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30

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Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	110 cells: TWMPF-55HDxxx (xxx = 530-560, in increment of 5) 110 cells: TWxxxMBIP-110-D (xxx = 530-560, in increment of 5) for 8" mono cell 8		
Dimensions [mm] / l x w x h	2384±2 x 1096±2 x 35		
Rated Pmpp [W].....	530, 535, 540, 545, 550, 555, 560	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	37.30, 37.50, 37.70, 37.90, 38.10, 38.30, 38.50	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.19, 18.24, 18.30, 18.35, 18.39, 18.43, 18.47	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5


Module type	110 cells: TWMPF-55HDxxx (xxx = 530-560, in increment of 5) 110 cells: TWxxxMBCP-110-D (xxx = 530-560, in increment of 5) for 8" mono cell 10		
Dimensions [mm] / l x w x h	2384±2 x 1096±2 x 35		
Rated Pmpp [W].....	530, 535, 540, 545, 550, 555, 560	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	37.30, 37.50, 37.70, 37.90, 38.10, 38.30, 38.50	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.19, 18.24, 18.30, 18.35, 18.39, 18.43, 18.47	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative	See remark 3	Safety factor / negative	1.5

Module type	100 cells: TWMPF-50HDxxx (xxx = 480-510, in increment of 5) 100 cells: TWxxxMBIP-100-D (xxx = 480-510, in increment of 5)		
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Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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Shanghai, 01/29/2023 (Place and date)

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(Signature of authorized TÜV NORD CERT engineer)

	for 8" mono cell 8		
Dimensions [mm] / l x w x h	2172±2 x 1096±2 x 35		
Rated Pmpp [W].....	480, 485, 490, 495, 500, 505, 510	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	33.85, 34.00, 34.15, 34.30, 34.45, 34.60, 34.75	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.15, 18.20, 18.25, 18.30, 18.35, 18.40, 18.45	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative.....	1.5

Module type	100 cells: TWMPF-50HDxxx (xxx = 480-510, in increment of 5) 100 cells: TWxxxMBCP-100-D(xxx = 480-510, in increment of 5) for 8" mono cell 10		
Dimensions [mm] / l x w x h	2172±2 x 1096±2 x 35		
Rated Pmpp [W].....	480, 485, 490, 495, 500, 505, 510	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	33.85, 34.00, 34.15, 34.30, 34.45, 34.60, 34.75	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.15, 18.20, 18.25, 18.30, 18.35, 18.40, 18.45	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative.....	1.5


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

Module type	132 cells: TWMNF-66HDxxx (xxx = 665-690, in increment of 5) 132 cells: TWxxxMBIT-132-D (xxx = 665-690, in increment of 5) 8" mono cell 7		
Dimensions [mm] / l x w x h	2384±2 x 1303±2 x 35		
Rated Pmpp [W].....	665; 670; 675; 680; 685; 690	Tolerance of rated Pmpp [%].....	±3

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Rated Voc [V]..... :	46.90; 47.10; 47.30; 47.50; 47.70; 47.85	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	18.06; 18.10; 18.14; 18.18; 18.22; 18.26	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	12.0	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

Module type	120 cells: TWMNF-60HDxxx (xxx = 605-625, in increment of 5) 120 cells: TWxxxMBIT-120-D (xxx = 605-625, in increment of 5) 8" mono cell 7		
Dimensions [mm] / l x w x h	2172±2 x 1303±2 x 35		
Rated Pmpp [W]..... :	605; 610; 615; 620; 625	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	42.70; 42.90; 43.10; 43.30; 43.45	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.05; 18.10; 18.15; 18.21; 18.26	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

Module type	108 cells: TWMNF-54HDxxx (xxx = 545-565, in increment of 5) 108 cells: TWxxxMBIT-108-D (xxx = 545-565, in increment of 5) 8" mono cell 7		
Dimensions [mm] / l x w x h	1960±2 x 1303±2 x 35		
Rated Pmpp [W]..... :	545; 550; 555; 560; 565	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	38.57; 38.74; 38.91; 39.08; 39.25	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.13; 18.18; 18.23; 18.28; 18.33	Tolerance of rated Isc [%]..... :	±3
Maximum system voltage [V]..... :	1500	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative..... :	See remark 3	Safety factor / negative..... :	1.5

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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Shanghai, 01/29/2023 (Place and date)

Cara Chen
(Signature of authorized TÜV NORD CERT engineer)

Module type	110 cells: TWMNF-55HDxxx (xxx = 530-565, in increment of 5) 110 cells: TWxxxMBIT-110-D (xxx = 530-565, in increment of 5) 8" mono cell 7		
Dimensions [mm] / l x w x h	2384±2 x 1096±2 x 35		
Rated Pmpp [W].....	530, 535, 540, 545; 550; 555; 560; 565	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	38.05, 38.25, 38.45, 38.65, 38.85, 39.05, 39.25, 39.45	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	17.96, 18.00, 18.04, 18.08, 18.12, 18.16, 18.20, 18.24	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative.....	1.5

Module type	100 cells: TWMNF-50HDxxx (xxx = 480-510, in increment of 5) 100 cells: TWxxxMBIT-108-D (xxx = 480-510, in increment of 5) 8" mono cell 7		
Dimensions [mm] / l x w x h	2172±2 x 1096±2 x 35		
Rated Pmpp [W].....	480, 485, 490, 495, 500, 505, 510	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	34.68, 34.85, 35.02, 35.19, 35.36, 35.53, 35.70	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	17.89, 17.94, 17.99, 18.04, 18.09, 18.14, 18.19	Tolerance of rated Isc [%].....	±3
Maximum system voltage [V].....	1500	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.3	Fuse rating [A]	35 or 30
Design load [Pa] / positive	See remark 3	Safety factor / positive	1.5
Design load [Pa] / negative.....	See remark 3	Safety factor / negative.....	1.5

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

Cara Chen

(Signature of authorized TÜV NORD CERT engineer)

Copy of marking plate:

<p>地面用晶硅光伏组件 光伏改变世界</p> <p>组件型号: _____ 最大功率(Pm): _____ 开路电压(Voc): _____ 短路电流(Isc): _____ 最大功率点电压(Vm): _____ 最大功率点电流(Imp): _____ 重量: _____ 尺寸: _____</p> <p>最大额定短路电流: 20A 功率分档: 0~+5W 最大功率公差: ±3% 开路电压公差: ±3% 短路电流公差: ±3% 标准测试条件: 1000W/m², 25°C, AM1.5 生产依据标准: IEC 61215 & IEC 61730 组件防火等级: Class C 最大系统电压: ###V 组件等级: Class II</p> <p>警告-电气危险 组件在光照条件下能产生电能, 需遵循所有适用的电气安全防护措施。</p> <p>CE □ G ⚡</p> <p>XX/XX 通威太阳能(合肥)有限公司 地址: 安徽省合肥市高新区长宁大道888号 网址: www.tw-solar.com 中国制造</p>	<p>PV Changes the World</p> <p>Module Type: ##### Maximum Power(Pm): ### Open Circuit Voltage(Voc): ### Short Circuit Current(Isc): ### Maximum Power Voltage(Vm): ### Maximum Power Current(Imp): ### Weight: ### Dimensions: #####X#####X#####</p> <p>Series Fuse Rating: 20A Tolerance of Pm: 0~+5W Measuring uncertainty of Pm: ±3% Tolerance of Voc: ±3% Tolerance of Isc: ±3% Standard Test Conditions: 1000W/m², 25°C, AM1.5 Produced in accordance with: IEC 61215 & IEC 61730 Fire Rating/Module Fire Performance: Class C MAX.System Voltage: ###V Module Protection: Class II</p> <p>CE □ G ⚡</p> <p>XX/XX Tongwei Solar(Hefei) Co.,Ltd. Add:NO.888 Changning Road,High-tech District,Hefei,Anhui,P.R.China www.tw-solar.com Made in China</p>
<p>地面用晶硅光伏组件 光伏改变世界</p> <p>组件型号: ##### 最大功率(Pm): ### 开路电压(Voc): ### 短路电流(Isc): ### 最大功率点电压(Vm): ### 最大功率点电流(Imp): ### 重量: ### 尺寸: #####X#####X#####</p> <p>最大额定短路电流: 20A 功率分档: 0~+5W 最大功率公差: ±3% 开路电压公差: ±3% 短路电流公差: ±3% 标准测试条件: 1000W/m², 25°C, AM1.5 生产依据标准: IEC 61215:2016 & IEC 61730:2016 组件防火等级: Class C 最大系统电压: ###V 组件等级: Class II</p> <p>警告-电气危险 组件在光照条件下能产生电能, 需遵循所有适用的电气安全防护措施。</p> <p>CE □ G ⚡</p> <p>XX/XX 通威太阳能(合肥)有限公司 地址: 安徽省合肥市高新区长宁大道888号 网址: www.tw-solar.com 中国制造</p>	<p>PV Changes the World</p> <p>Module Type: ##### Maximum Power(Pm): ### Open Circuit Voltage(Voc): ### Short Circuit Current(Isc): ### Maximum Power Voltage(Vm): ### Maximum Power Current(Imp): ### Weight: ### Dimensions: #####X#####X#####</p> <p>Series Fuse Rating: 20A Tolerance of Pm: 0~+5W Measuring uncertainty of Pm: ±3% Tolerance of Voc: ±3% Tolerance of Isc: ±3% Standard Test Conditions: 1000W/m², 25°C, AM1.5 Produced in accordance with: IEC 61215:2016 & IEC 61730:2016 Fire Rating/Module Fire Performance: Class C MAX.System Voltage: ###V Module Protection: Class II</p> <p>CE □ G ⚡</p> <p>XX/XX Tongwei Solar(Hefei) Co.,Ltd. Add:NO.888 Changning Road,High-tech District,Hefei,Anhui,P.R.China www.tw-solar.com Made in China</p>

Confirmation of the applicant
 Hefei, 01/29/2023 (Place and date)



(Applicant's legally authorized signature and stamp)

Confirmation of TÜV NORD CERT
 Shanghai, 01/29/2023 (Place and date)

Cara Chen

(Signature of authorized TÜV NORD CERT engineer)

<p>地面用晶硅光伏组件 光伏改变世界</p> <p>组件型号: #####-## 最大功率(Pm): #### 开路电压(Voc): ### 短路电流(Isc): ### 最大功率点电压(Vm): ### 最大功率点电流(Imp): ### 重量: ### 尺寸: #####X#####X#####</p> <p>最大保险丝额定电流: ### 功率分档: 0~+5W 最大功率公差: ±3% 开路电压公差: ±3% 短路电流公差: ±3% 标准测试条件: 1000W/m², 25°C, AM1.5 生产依据标准: IEC 61215:2016 & IEC 61730:2016 组件防火等级: Class C 最大系统电压: ### 组件等级: Class II</p> <p>警告-电气危险 组件在光照条件下能产生电能, 需遵循所有适用的电气安全预防措施。</p> <p>CE, RoHS, G, Warning symbols</p> <p>XX 通威太阳能(合肥)有限公司 地址: 安徽省合肥市高新区长宁大道888号 网址: www.tw-solar.com 中国制造</p>	<p>PV Changes the World</p> <p>Module Type: #####-## Maximum Power(Pm): #### Open Circuit Voltage(Voc): ### Short Circuit Current(Isc): ### Maximum Power Voltage(Vm): ### Maximum Power Current(Imp): ### Weight: ### Dimensions: #####X#####X#####</p> <p>Series Fuse Rating: ### Tolerance of Pm: 0~+5W Measuring uncertainty of Pm: ±3% Tolerance of Voc: ±3% Tolerance of Isc: ±3% Standard Test Conditions: 1000W/m², 25°C, AM1.5 Produced in accordance with: IEC 61215:2016 & IEC 61730:2016 Fire Rating/Module Fire Performance: Class C MAX.System Voltage: ### Module Protection: Class II</p> <p>CE, RoHS, G, Warning symbols</p> <p>XX/XX Tongwei Solar(Hefei) Co.,Ltd. Add:NO.888 Changning Road,High-tech District,Hefei,Anhui,P.R.China www.tw-solar.com Made in China</p>
<p>通威太阳能(合肥)有限公司 地址: 安徽省合肥市高新区长宁大道888号 网址: www.tw-solar.com 中国制造</p> <p>CE, RoHS, G, Warning symbols</p> <p>标准测试条件: 1000W/m², 25°C, AM1.5, 正面测试 生产依据标准: IEC61215&IEC61730 组件防火等级: Class C 最大系统电压: 1500V 组件等级: Class II</p> <p>XX/XX 光伏改变世界</p>	<p>地面用晶硅光伏组件</p> <p>组件型号: #####-## 最大功率(Pm): #### 开路电压(Voc): ### 短路电流(Isc): ### 最大功率点电压(Vm): ### 最大功率点电流(Imp): ### 重量: ### 尺寸: #####X#####X#####</p> <p>最大保险丝额定电流: 20A 功率分档: 0~+5W 最大功率公差: ±3% 开路电压公差: ±3% 短路电流公差: ±3%</p>
<p>Tongwei Solar(Hefei)Co.,Ltd. Add:NO.888 Changning Road,High-tech District,Hefei,Anhui,P.R.China www.tw-solar.com Made in China</p> <p>CE, RoHS, G, Warning symbols</p> <p>Standard Test Conditions: 1000W/m², 25°C, AM1.5, Positive Test Produced in accordance with: IEC61215&IEC61730 Fire Rating/Module Fire Performance: Class C MAX.System Voltage: 1500V PV Module Classification: Class II</p> <p>XX/XX PV Changes the World</p>	<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules</p> <p>Module Type: #####-## Maximum Power(Pm): #### Open Circuit Voltage(Voc): ### Short Circuit Current(Isc): ### Maximum Power Voltage(Vm): ### Maximum Power Current(Imp): ### Weight: ### Dimensions: #####X#####X#####</p> <p>Series Fuse Rating: 20A Power Selection: 0~+5W Power Production Tolerance: ±3% Tolerance of Voc: ±3% Tolerance of Isc: ±3%</p>

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

(Applicant's legally authorized signature and stamp)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

Cara Chen

(Signature of authorized TÜV NORD CERT engineer)

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<p>标准测试条件: 1000W/m², 25°C, AM1.5, 正面测试 生产依据标准: IEC 61215: 2016 & IEC 61730: 2016 组件防火等级: Class C 最大系统电压: 1500V 组件等级: Class II</p> <p>XX/XX 光伏改变世界</p>			
<p>Tongwei Solar(Hefei)Co.,Ltd. Add:NO.888 Changning Road,High-tech District,Hefei,Anhui,P.R.China www.tw-solar.com Made in China</p>		<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules</p> <p>Module Type: #####-#### Maximum Power(Pm): #### Open Circuit Voltage(Voc): ###.## Short Circuit Current(Isc): ###.### Maximum Power Voltage(Vm): ##.### Maximum Power Current(Imp): ##.### Weight: ###.### Dimensions: ##### Series Fuse Rating: 20A Power Selection: 0~+5W Power Production Tolerance: ±3% Tolerance of Voc: ±3% Tolerance of Isc: ±3%</p>	
<p>Standard Test Conditions: 1000W/m², 25°C, AM1.5, Positive Test Produced in accordance with: IEC 61215: 2016 & IEC 61730: 2016 Fire Rating/Module Fire Performance: Class C MAX. System Voltage: 1500V PV Module Classification: Class II</p> <p>XX/XX PV Changes the World</p>			
<p>通威太阳能(合肥)有限公司 地址:安徽省合肥市高新区长宁大道888号 网址:www.tw-solar.com 中国制造</p>		<p>地面用晶硅光伏组件</p> <p>组件型号: #####-### 最大功率(Pm): #### 开路电压(Voc): ###.## 短路电流(Isc): ###.### 最大功率点电压(Vm): ##.### 最大功率点电流(Imp): ##.### 重量: ###.### 尺寸: ##### 最大保险丝额定电流: 20A 功率分档: 0~+5W 最大功率公差: ±3% 开路电压公差: ±3% 短路电流公差: ±3%</p>	
<p>标准测试条件: 1000W/m², 25°C, AM1.5, 正面测试 生产依据标准: IEC 61215: 2016 & IEC 61730: 2016 组件防火等级: Class C 最大系统电压: 1500V 组件等级: Class II</p> <p>XX/XX 光伏改变世界</p>			
<p>Tongwei Solar(Hefei)Co.,Ltd. Add:NO.888 Changning Road,High-tech District,Hefei,Anhui,P.R.China www.tw-solar.com Made in China</p>		<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules</p> <p>Module Type: #####-#### Maximum Power(Pm): #### Open Circuit Voltage(Voc): ###.## Short Circuit Current(Isc): ###.### Maximum Power Voltage(Vm): ##.### Maximum Power Current(Imp): ##.### Weight: ###.### Dimensions: ##### Series Fuse Rating: 20A Power Selection: 0~+5W Power Production Tolerance: ±3% Tolerance of Voc: ±3% Tolerance of Isc: ±3%</p>	
<p>Standard Test Conditions: 1000W/m², 25°C, AM1.5, Positive Test Produced in accordance with: IEC 61215: 2016 & IEC 61730: 2016 Fire Rating/Module Fire Performance: Class C MAX. System Voltage: 1500V PV Module Classification: Class II</p> <p>XX/XX PV Changes the World</p>			
<p>通威太阳能(合肥)有限公司 地址:安徽省合肥市高新区长宁大道888号 网址:www.tw-solar.com 中国制造</p>		<p>标准测试条件: 1000W/m², 25°C, AM1.5, 正面测试 功率分档: 0~+5W 组件防火等级: Class C 最大系统电压: 1500V 生产依据标准: IEC61215:2016 & IEC61730:2016 组件等级: Class II 最大保险丝额定电流: 30A</p> <p>地址:安徽省合肥市高新区长宁大道888号 网址:www.tw-solar.com</p>	
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Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

(Applicant's legally authorized signature and stamp)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

Cara Chen
(Signature of authorized TÜV NORD CERT engineer)

<p>Tongwei Solar(Hefei)Co.,Ltd. Made in China</p>	<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Module Type: #####-### Maximum Power(Pm)(±3%): ### Open Circuit Voltage(Voc)(±3%): ### Short Circuit Current(Isc)(±3%): ### Maximum Power Voltage(Vm): ### Maximum Power Current(I m): ### XX/XX PV Changes the World</p>	<p>STC: 1000W/m², 25°C, AM1.5, Positive Test Power Selection: 0~+5W Fire Rating/Module Fire Performance: Class C MAX. System Voltage: 1500V According to: IEC 61215:2016 & IEC 61730:2016 Module Classification: Class II Series Fuse Rating: 30A Add: NO.888 Changning Road, High-tech District, Hefei, Anhui, P.R. China</p>	
<p>通威太阳能(合肥)有限公司 中国制造</p>	<p>晶体硅太阳能电池组件 组件型号: #####-### 最大功率 (Pm) (±3%): ### 开路电压 (Voc) (±3%): ### 短路电流 (Isc) (±3%): ### 最大功率电压 (Vm): ### 最大功率点电流 (Im): ### XX/XX 光伏改变世界</p>	<p>标准测试条件: 1000W/m², 25°C, AM1.5, 正负测试 功率分档: 0~+5W 组件防火等级: Class C 最大系统电压: 1500V 生产标准标准: IEC 61215:2016 & IEC 61730:2016 组件等级: Class II 最大保险丝额定电流: 30A 地址: 安徽省合肥市高新区长宁大道888号 网址: www.tw-solar.com</p>	
<p>Tongwei Solar(Hefei)Co.,Ltd. Made in China</p>	<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Module Type: #####-### Maximum Power(Pm)(±3%): ### Open Circuit Voltage(Voc)(±3%): ### Short Circuit Current(Isc)(±3%): ### Maximum Power Voltage(Vm): ### Maximum Power Current(I m): ### XX/XX PV Changes the World</p>	<p>STC: 1000W/m², 25°C, AM1.5, Positive Test Power Selection: 0~+5W Fire Rating/Module Fire Performance: Class C MAX. System Voltage: 1500V According to: IEC 61215:2016 & IEC 61730:2016 Module Classification: Class II Series Fuse Rating: 30A Add: NO.888 Changning Road, High-tech District, Hefei, Anhui, P.R. China</p>	
<p>Tongwei Solar(Hefei)Co.,Ltd. Made in China</p>	<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Module Type: #####-### Maximum Power (Pm) with tolerance ±3%: ### Open Circuit Voltage(Voc) with tolerance ±3%: ### Short Circuit Current(Isc) with tolerance ±3%: ### Maximum Power Voltage(Vm): ### Maximum Power Current(I m): ### XX/XX PV Changes the World</p>	<p>STC: 1000W/m², 25°C, AM1.5, Positive Test Power Selection: 0~+5W Fire Rating/Module Fire Performance: Class C MAX. System Voltage: 1500V According to: IEC 61215:2016 & IEC 61730:2016 Module Classification: Class II Series Fuse Rating: 30A Add: NO.888, Changning Road, High-tech District, Hefei City, Anhui Province, 230088, P.R. China</p>	
<p>Tongwei Solar(Hefei)Co.,Ltd. Made in China</p>	<p>Crystalline Silicon Terrestrial Photovoltaic (PV) Modules Module Type: #####-### Maximum Power(Pm)(±3%): ### Open Circuit Voltage(Voc)(±3%): ### Short Circuit Current(Isc)(±3%): ### Maximum Power Voltage(Vm): ### Maximum Power Current(I m): ### XX/XX PV Changes the World</p>	<p>STC: 1000W/m², 25°C, AM1.5, Positive Test Power Selection: 0~+5W Fire Rating/Module Fire Performance: Class C MAX. System Voltage: 1500V According to: IEC 61215:2016 & IEC 61730:2016 Module Classification: Class II Series Fuse Rating: 30A Add: NO.888, Changning Road, High-tech District, Hefei, Anhui, P.R. China</p>	

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List of critical materials and components:

Object	Manufacturer	Type	Technical Data	Remark
Components				
6" mono cell 1*	Tongwei Solar (Chengdu) Co., Ltd.	M156 5BB (segmented into 5 pieces)	Dimension (w x l) = 156.75 mm x 31.35 mm Thickness = 190±30 µm Cell area = 48.44 - 49.15 cm ²	Tested with PV modules
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
6" mono cell 2*	Tongwei Solar (Chengdu) Co., Ltd.	M1565B PERC (segmented into 5 pieces)	Dimension (w x l) = 156.75 mm x 31.35 mm Thickness = 160±30 µm Cell area = 48.44 - 49.15 cm ²	Tested with PV modules
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
6" mono cell 3*	Tongwei Solar (Chengdu) Co., Ltd.	M1585B PERC (segmented into 5 pieces)	Dimension (w x l) = 158.75 mm x 31.75 mm Thickness = 160±30 µm Cell area = 50.40 cm ² Front side: busbar width 0.6±0.1 mm Back side: busbar width 0.7±0.2 mm	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
6" mono cell 4*	Tongwei Solar (Chengdu) Co., Ltd.	M1565B PERC bifacial cell (segmented into 5 pieces)	Dimension (w x l) = 156.75 mm x 31.35 mm Thickness = 160±30 µm Cell area = 48.44 - 49.15 cm ² Pattern 1: Front side: busbar width 0.6±0.1 mm Back side: busbar width 1.2±0.1 mm Pattern 2: Front side: busbar width 0.6±0.1 mm Back side: busbar width 0.8±0.1 mm	Tested with PV modules with pattern 1
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type with pattern 2
	Tongwei Solar (Anhui) Co., Ltd.			Tested with PV modules with pattern 2
	Tongwei Solar (Meishan) Co., Ltd.			Covered by main tested type with pattern 1
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
6" mono cell 5*	Tongwei Solar (Chengdu) Co., Ltd.		Dimension (w x l) =	Tested with PV modules

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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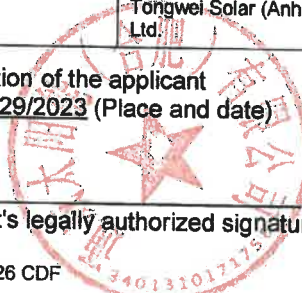
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Object	Manufacturer	Type	Technical Data	Remark
	Tongwei Solar (Hefei) Co., Ltd.	M1585B PERC bifacial cell (segmented into 5 pieces)	158.75 mm x 31.75 mm Thickness = 160±30 µm Cell area = 50.40 cm ² Front side: busbar width 0.6±0.1 mm Back side: busbar width 0.7±0.1 mm	Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
8" mono cell 6"	Tongwei Solar (Chengdu) Co., Ltd.	M2106BPERC BP (segmented into 6 pieces)	Dimension (w x l) = 210±0.25 mm x 35±0.25 mm / 210±0.25 mm x 11.67±0.25 mm Thickness = 160±30 µm Cell area = 73.50 cm ² / 24.51cm ² Front side: busbar width 0.1±0.05 mm & 0.15±0.1 mm Back side: busbar width 1.15±0.15 mm	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
8" mono cell 7"	Tongwei Solar (Chengdu) Co., Ltd.	M2101BTCON BP TOPCON bifacial cell	Dimension (w x l) = 210±3 mm x 105±3 mm Thickness = 170±20 µm Cell area = 220.5 cm ² 18 busbars	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tonghe New Energy(Jintang) Co. Ltd.			Covered by main tested type
8" mono cell 8"	Tongwei Solar (Chengdu) Co., Ltd.	M2101BPERC BP PERC bifacial cell	Dimension (w x l) = 210±3mm x 105±3mm Thickness = 160 (+30/-10) µm Cell area = 220.5 cm ² 18 busbars	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tonghe New Energy(Jintang) Co. Ltd.			Covered by main tested type
7" mono cell 9"	Tongwei Solar (Chengdu) Co., Ltd.	M182ABPERC BP SE PERC bifacial cell	Dimension = 182±3 x 91±3 Thickness = 150±20µm Cell area = 165.62cm ² 10 Busbars	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type

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Object	Manufacturer	Type	Technical Data	Remark
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tonghe New Energy(Jintang) Co. Ltd.			Covered by main tested type
8" mono cell 10*	Tongwei Solar (Chengdu) Co., Ltd.	M210CBPERC BP	Dimension =210±3 x 105±3 Thickness = 150±20µm Cell area = 220.5cm ² 12 Busbars	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.	PERC bifacial cell		Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tonghe New Energy(Jintang) Co. Ltd.			Covered by main tested type
7" mono cell 11*	Tongwei Solar (Chengdu) Co., Ltd.	M182GBPERC BP SE	Dimension =182±3 x 91±3 Thickness = 160±20µm Cell area = 165.62cm ² 16 Busbars	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.	PERC bifacial cell		Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tonghe New Energy(Jintang) Co. Ltd.			Covered by main tested type
7" mono cell 12*	Tongwei Solar (Chengdu) Co., Ltd.	M182GBTCO NBP	Dimension (w x l) = 182±3mm x 91±3mm Thickness = 130±20µm Cell area = 165.62cm ² 16 Busbars	Covered by main tested type
	Tongwei Solar (Hefei) Co., Ltd.	TOPCON bifacial cell		Covered by main tested type
	Tongwei Solar (Anhui) Co., Ltd.			Covered by main tested type
	Tongwei Solar (Meishan) Co., Ltd.			Tested with PV modules
	Tongwei Solar (Jintang) Co., Ltd.			Covered by main tested type
	Tonghe New Energy(Jintang) Co. Ltd.			Covered by main tested type
Front cover 1	Flat Glass Group Co., Ltd.	AR coating tempered glass	Thickness = 2.5±10% mm	Tested with PV modules
Front cover 2			Thickness = 2.0±10% mm	Tested with PV modules
Front cover 3	Shu Yang Xin Da New Material Co., Ltd	AR coating tempered glass	Thickness = 2.0±10% mm	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
Front cover 4	Changzhou Almaden Co., Ltd.	AR coating tempered glass	Thickness = 2.0±10% mm	Tested with PV modules
Front cover 5	CNBM TONGCHENG New Energy Resources Co., Ltd. (China building materials Tong Cheng new energy materials co., Ltd)	AR coating tempered glass	Thickness = 2.5±10% mm	Tested with PV modules
Front cover 6	CNBM(HEFEI) New Energy Resources Co., Ltd. (China National Building Materials (Hefei) New Energy Resources Co., Ltd.)	AR coating tempered glass	Thickness = 2.5±10% mm	Covered by main tested type
Front cover 7	SLT Special Glass (Jiangsu) Co., Ltd.	AR coating tempered glass	Thickness = 2.0±10% mm	Tested with PV modules
Front cover 8	Xinyi PV Products Holding Ltd.	AR Coating Tempered Glass	Thickness = 2.0±10% mm	Tested with PV modules
Front cover 9	Anhui Shengshi New Energy Materials Technology Co., Ltd. CNBM(YIXING) New Energy Resources Co., Ltd. CNBM TONGCHENG New Energy Resources Co., Ltd. CNBM(HEFEI) New Energy Resources Co., Ltd. Triumph (Zigong) New Energy Resources Co., Ltd. TG Fujian Photovoltaic Glass Co., Ltd. Shuyang Xinda New Material Co., Ltd.	AR Coating Tempered Glass	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 1	Flat Glass Group Co., Ltd.	Tempered glass	Thickness = 2.5±10%mm	Tested with PV modules
Rear cover 2			Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 3		Semi tempered glass (white grid)	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 4	Shu Yang Xin Da New Material Co., Ltd	Tempered glass (white grid)	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 5		Tempered glass	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 6	Changzhou Almaden Co., Ltd.	Tempered glass	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 7	CNBM TONGCHENG New Energy Resources Co., Ltd. (China building materials Tong Cheng new energy materials co., Ltd)	Tempered glass	Thickness = 2.5±10% mm	Tested with PV modules

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PV-F-026 CDF

Confirmation of TÜV NORD CERT
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Object	Manufacturer	Type	Technical Data	Remark
Rear cover 8	CNBM(HEFEI) New Energy Resources Co., Ltd. (China National Building Materials (Hefei) New Energy Resources Co., Ltd.)	Tempered glass	Thickness = 2.5±10% mm	Covered by main tested type
Rear cover 9	SLT Special Glass (Jiangsu) Co., Ltd.	Tempered glass (white grid)	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 10		Tempered glass	Thickness = 2.0±10% mm	Covered by main tested type
Rear cover 11	Xinyi PV Products Holding Ltd.	Semi tempered glass (white grid)	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 12		Semi tempered glass	Thickness = 2.0±10% mm	Covered by main tested type
Rear cover 13	Anhui Shengshi New Energy Materials Technology Co., Ltd.	Semi tempered glass (white grid)	Thickness = 2.0±10% mm	Tested with PV modules
Rear cover 14	CNBM(YIXING) New Energy Resources Co., Ltd. CNBM TONGCHENG New Energy Resources Co., Ltd. CNBM(HEFEI) New Energy Resources Co., Ltd. Triumph (Zigong) New Energy Resources Co., Ltd. TG Fujian Photovoltaic Glass Co., Ltd. Shuyang Xinda New Material Co. Ltd.	Semi tempered glass	Thickness = 2.0±10% mm	Covered by main tested type
Encapsulation material 1 (Combine with mono cell 1, 2, 3, 4, 5, 6)*	Cybird Technologies Inc.	Cybright T22 (POE)	Thickness = 0.75±0.1mm CTI = 600 (V)	Tested with PV modules CTI report no. 15043899 038 issued by TÜV Rheinland
Encapsulation material 2 (Combine with mono cell 2, 3, 6)*	3M China Limited Zhejiang Sinopont Technology Co., Ltd.	8110 (POE)	Thickness = 0.50 - 0.80mm (0.51mm) PTI = 600 (V)	Tested with PV modules PTI report no. 15104166 001 issued by TÜV Rheinland
Encapsulation material 3 (Combine with mono cell 2, 3)*	HANGZHOU XINFU ENERGY-SAVING MATERIALS CO., LTD.	XF6-1 (POE)	Thickness = 0.50±10% mm CTI = 600 (V)	Tested with PV modules CTI report no. 70.407.18.N/A-00 issued by TÜV SÜD
Encapsulation material 4 (Combine with mono cell 4, 5, 6)* (Combine with mono cell 7, 12)*	Hangzhou First PV Material Co., Ltd. Hangzhou First Applied Material Co., Ltd.	TF4 (POE)	Thickness = 0.4mm - 0.7mm (0.70mm) PTI = 600 (V)	Tested with PV modules PTI report no. 15101259 005 issued by TÜV Rheinland

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Object	Manufacturer	Type	Technical Data	Remark
Encapsulation material 5 (Combine with mono cell 6)* (Combine with mono cell 8, 9, 10, 11)*	Hangzhou First PV Material Co., Ltd. Hangzhou First Applied Material Co., Ltd.	F406P (front side, EVA) EP304 (rear side, EVA-POE multilayer)	F406P Thickness = 0.4mm - 0.7mm PTI = 600 (V) EP304 Thickness = 0.4mm - 0.7mm CTI = 600 (V)	Tested with PV modules PTI report no. 15101259 002 issued by TÜV Rheinland (F406P) CTI report no. 15101259 006 issued by TÜV Rheinland (EP304)
Encapsulation material 6 (Combine with mono cell 6)* (Combine with mono cell 8, 9, 10, 11)*	Changzhou Sveck PV New Material Co., Ltd.	SV-15296P (front side) CO-556 (rear side)	SV-15296P Thickness = 0.4mm - 0.7mm CTI = 600 (V) CO-556 Thickness = 0.4mm - 0.7mm CTI = 600 (V)	Tested with PV modules CTI report no. 70.407.17.118.01-00 issued by TÜV SÜD (SV-15296P) CTI report no. 70.407.20.211.03-00 issued by TÜV SÜD (CO-556)
Encapsulation material 7 (Combine with mono cell 6)* (Combine with mono cell 8, 9, 10, 11)*	3M China Limited Zhejiang Sinopont Technology Co., Ltd.	EVA9110T (front side) PO8110e (rear side)	EVA9110T Thickness = 0.35mm - 0.7mm CTI = 600 (V) PO8110e Thickness = 0.35mm - 0.7mm CTI = 600 (V)	Tested with PV modules CTI report no. CN212VUP 002 issued by TÜV Rheinland
Encapsulation material 8 (Combine with mono cell 7, 12)*	Hangzhou First PV Material Co., Ltd. Hangzhou First Applied Material Co., Ltd.	EP304 (front side, EVA-POE multilayer) F406P (rear side, EVA)	EP304 Thickness = 0.4mm - 0.7mm CTI = 600 (V) F406P: Thickness = 0.4mm - 0.7mm PTI = 600 (V)	Tested with PV modules CTI report no. 15101259 006 issued by TÜV Rheinland (EP304) PTI report no. 15101259 002 issued by TÜV Rheinland (F406P)
Encapsulation material 9 (Combine with mono cell 6)* (Combine with mono cell 8, 9, 10, 11)*	Shanghai HIUV New Materials Co., Ltd	S201MT1 (EVA, front side) P507 (POE, rear side)	S201MT1 Thickness = 0.60±0.1mm CTI = 600 (V) P507 Thickness = 0.60±0.1mm CTI = 600 (V)	Tested with PV modules CTI report no. 15101526 006 issued by TÜV Rheinland (S201MT1) CTI report no. 15101526 007 issued by TÜV Rheinland (P507)

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Object	Manufacturer	Type	Technical Data	Remark
Encapsulation material 10 (Combine with mono cell 6)* (Combine with mono cell 8, 9, 10, 11)*	Cybrid Technologies Inc.	Cybright T11 (EVA, front side) Cybright T22H (POE, rear side)	Cybright T11 Thickness = 0.55±0.1mm CTI = 600 (V) Cybright T22H Thickness = 0.55±0.1mm CTI = 600 (V)	Tested with PV modules CTI report no. 15043899 067 issued by TÜV Rheinland (Cybright T11) CTI report no. 15043899 065 issued by TÜV Rheinland (Cybright T22H)
Frame parts 1	ANHUI FIRST ALUMINUM CO., LTD.	6063-T6	Material: Aluminum Thickness=30 mm Color: silver or black	Tested with PV modules
Frame parts 2			Material: Aluminum Thickness=35 mm Color: silver or black	Tested with PV modules
Frame parts 3	Jiangsu LEAD Aluminum Industry Co., Ltd.	6063-T6	Material: Aluminum Thickness=30 mm Color: silver or black	Tested with PV modules
Frame parts 4	Anhui Xinbo Aluminum Industry Co., Ltd.	6063-T6	Material: Aluminum Thickness=30 mm Color: silver or black	Tested with PV modules
Frame parts 5	JIANGYIN DEGAO NEW ENERGY TECHNOLOGY CO., LTD.	6063-T6	Material: Aluminum Thickness=30 mm Color: silver or black	Covered by main tested type
Frame parts 6	JIANGYIN DEGAO NEW ENERGY TECHNOLOGY CO., LTD.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Tested with PV modules
Frame parts 7			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 8	Anhui Guofei New Energy Technology Co., Ltd.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 9			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 10	Anhui Guangyin Aluminum Co., LTD	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 11			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 12	Hefei Runya New Energy Technology Co., Ltd	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type

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Object	Manufacturer	Type	Technical Data	Remark
Frame parts 13			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 14	ANHUI XINBO Aluminum INDUSTRY SHARE Co., Ltd.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Tested with PV modules
Frame parts 15			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 16	Jiangsu Yuejia Metallic Technology Co., Ltd	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 17			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 18	Jiangsu LEAD Aluminum Industry Co., Ltd.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 19			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 20	ANHUI FIRST ALUMINUM CO., LTD.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 21			Material: Aluminum Thickness=35mm Color: silver or black	Tested with PV modules
Frame parts 22	YongZhen Science and Technology (Changzhou) Co., Ltd.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 23			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 24	Jiangsu Longji Aluminium Co., Ltd.	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 25			Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Frame parts 26	CITIC Bohai Aluminum Industries Holding Company Limited	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Covered by main tested type
Frame parts 27		6005-T6	Material: Aluminum Thickness=35mm Color: silver or black	Tested with PV modules

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

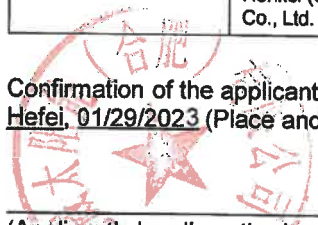
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Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
Frame parts 28	Yingkou Changtai Aluminum Material Co., Ltd	6005-T6	Material: Aluminum Thickness=30mm Color: silver or black	Tested with PV modules
Frame parts 29		6005-T6	Material: Aluminum Thickness=35mm Color: silver or black	Covered by main tested type
Adhesive (frame) 1	Jiangsu Crevo Science & Technology Co., Ltd.	CV709	Silicone Color: white or black	Tested with PV modules
Adhesive (frame) 2	Jiangsu Tianchen Silicon Materials Co., Ltd.	HT-8258	Silicone Color: white or black	Tested with PV modules
Adhesive (frame) 3	Shanghai Huitian New Chemical Co., Ltd.	HT906Z	Silicone Color: white or black	Tested with PV modules
Adhesive (frame) 4	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	Silicone Color: white or black	Tested with PV modules
Adhesive (frame) 5	Suzhou Tonsan Adhesive Co., Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	Silicone Color: white or black	Tested with PV modules
Adhesive (frame) 6	Shanghai Huitian New Chemical Co., Ltd.	9661	Silicone Color: white or black	Tested with PV modules
Adhesive (frame) 7	Chengdu Guibao Science & Technology Co., Ltd.	888A	Silicone Color: white or black	Tested with PV modules
Hook 1*	Jiangsu Yuejia Metallic Technology Co., Ltd (Former name: Jiangsu Davin Solar Aluminum Technology Co., Ltd.)	6063-T5	240 x 30 mm only for 408 6" solar cells 150 x 30 mm only for 340 6" solar cells Color: silver	Tested with PV modules
Hook 2*	Suzhou Sharesun Photovoltaic Technology Co., Ltd.	6005-T5	100 x 48.5 x 19.5 mm only for 6" solar cells Color: silver	Tested with PV modules
Adhesive (hook)*	Guangzhou Baiyun Chemical Industry Co., Ltd.	SS622E-A & SS622E-B	Color: white	Tested with PV modules
Internal wiring (for interconnection cell-to-cell bus bar)	Shanghai Reland Photovoltaic Material Co., Ltd.	MW9031	Electronic conductive adhesive*	Tested with PV modules
	Soltrium Advanced Materials Technology., Ltd. Shenzhen	SCA100-E2	Electronic conductive adhesive*	Tested with PV modules
	Shanghai Reland Photovoltaic Material Co., Ltd.	RELAND 9153	Electronic conductive adhesive*	Tested with PV modules
	Suzhou Rullibo Material Technology Co., Ltd.	RPV-622	Electronic conductive adhesive*	Tested with PV modules
	Darbond Technology Co., Ltd.	DT-93	Electronic conductive adhesive*	Tested with PV modules
	Henkel (China) Investment Co., Ltd.	Loctite Ablestic CA 3556HF	Electronic conductive adhesive*	Tested with PV modules

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	Henkel (China) Investment Co., Ltd.	Loctite Ablestic ICP 8311	Electronic conductive adhesive*	Tested with PV modules
	Zhejiang Xinyu Material Technology Co., Ltd.	SE-2005	Electronic conductive adhesive*	Tested with PV modules
	Shenzhen Earlysun Technology Co., Ltd.	GZ-2030	Electronic conductive adhesive*	Tested with PV modules
	Henkel (China) Investment Co., Ltd.	Loctite Ablestic ICP 8259	Electronic conductive adhesive*	Tested with PV modules
	Shanghai Huitian New Chemical Co., Ltd.	9508	Electronic conductive adhesive*	Tested with PV modules
	Shanghai Reland Photovoltaic Material Co., Ltd.	RELAND 9153	Electronic conductive adhesive*	Tested with PV modules
	Darbond Technology Co., Ltd.	6309	Electronic conductive adhesive*	Tested with PV modules
	Shanghai Huitian New Chemical Co., Ltd.	9508B	High-performance HTV sealants*	Tested with PV modules
	Suzhou SanySolar Material Technology Corporation	Copper belt with tin plated	0.12±10% x 10±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
	Changzhou Greateen New Energy Technology Co., Ltd.	Copper belt with tin plated	0.12±10% x 10±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
			Φ = 0.32mm±10% Sn60%Pb40% Color: silver	
	Suzhou YourBest New Materials Co., Ltd.	Copper belt with tin plated	0.12±10% x 10±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
			Φ = 0.32mm±10% Φ = 0.26mm±10% Sn60%Pb40% Color: silver	
	Jiangsu Sun Technology Corp., Ltd.	Copper belt with tin plated	0.12±10% x 10±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
			Φ = 0.32mm±10% Φ = 0.26mm±10% Sn60%Pb40% Color: silver	
Wuxi Sveck Technology Co., Ltd.	Copper belt with tin plated	0.12±10% x 10±10% mm Sn60%Pb40% Color: silver	Tested with PV modules	
Suzhou Tonyshare Electronic Materials Technology Co., Ltd.	Copper belt with tin plated	Φ = 0.32mm±10% Sn60%Pb40% Color: silver	Tested with PV modules	

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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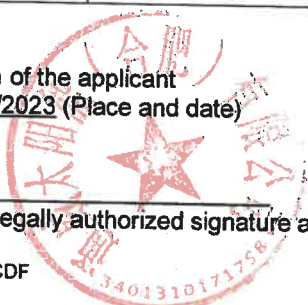
Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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(Signature of authorized TÜV NORD CERT engineer)

Object	Manufacturer	Type	Technical Data	Remark
	Xi'an Telison New Materials Co., Ltd.	Copper belt with tin plated	0.12±10% x 10±10% mm Sn60%Pb40% Color: silver Φ = 0.32mm±10% Φ = 0.26mm±10% Sn60%Pb40% Color: silver	Tested with PV modules
Internal wiring (for inter-string connection)	Suzhou SanySolar Material Technology Corporation	Copper belt with tin plated	0.2±10% x 6.0±10% mm 0.35±10% x 6.0±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
	Changzhou Greateen New Energy Technology Co., Ltd.	Copper belt with tin plated	0.2±10% x 6.0±10% mm 0.13±10% x 4.0±10% mm 0.35±10% x 6.0±10% mm 0.35±10% x 5.4±10% mm Sn60%Pb40% Color: silver 0.32±10% x 4.0±10% mm (both ends) 0.32±10% x 7.0±10% mm (middle) Sn60%Pb40% Color: silver	Tested with PV modules
	Suzhou YourBest New Materials Co., Ltd.	Copper belt with tin plated	0.13±0.02 x 6.0±10% mm 0.13±10% x 4.0±10% mm 0.2±10% x 6.0±10% mm 0.35±10% x 6.0±10% mm 0.085±10% x 6.0±10% mm Sn60%Pb40% Color: silver 0.32±10% x 4.0±10% mm (both ends) 0.32±10% x 7.0±10% mm (middle) 0.25±10% x 7.0±10% mm (middle) Sn60%Pb40% Color: silver	Tested with PV modules
	Jiangsu Sun Technology Corp., Ltd.	Copper belt with tin plated	0.13±0.02 x 6.0±10% mm 0.13±10% x 4.0±10% mm 0.2±10% x 6.0±10% mm 0.35±10% x 6.0±10% mm 0.085±10% x 6.0±10% mm Sn60%Pb40% Color: silver 0.32±10% x 4.0±10% mm (both ends) 0.32±10% x 7.0±10% mm (middle) 0.25±10% x 7.0±10% mm (middle) Sn60%Pb40% Color: silver	Tested with PV modules

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



(Applicant's legally authorized signature and stamp)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

Cara Chen

(Signature of authorized TÜV NORD CERT engineer)

Object	Manufacturer	Type	Technical Data	Remark
	Wuxi Sveck Technology Co., Ltd.	Copper belt with tin plated	0.2±10% x 6.0±10% mm 0.35±10% x 6.0±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
	Xi'an Telison New Materials Co., Ltd.	Copper belt with tin plated	0.2±10% x 6.0±10% mm 0.35±10% x 6.0±10% mm Sn60%Pb40% Color: silver	Tested with PV modules
			0.32±10% x 4.0±10% mm (both ends) 0.32±10% x 7.0±10% mm (middle) Sn60%Pb40% Color: silver	
	Suzhou Tonyshare Electronic Material Technology Co., Ltd.	Copper belt with tin plated	0.13±0.02 x 6.0±10% mm Sn60%Pb40% Color: silver	Covered by main tested type
			0.32±10% x 4.0±10% mm (both ends) 0.32±10% x 7.0±10% mm (middle) Sn60%Pb40% Color: silver	Tested with PV modules
	Qinhuangdao ChanLine Photovoltaic Electronics Co., Ltd.	Copper belt with tin plated	0.13±0.02 x 6.0±10% mm 0.085±10% x 6.0±10% mm Sn60%Pb40% Color: silver	Covered by main tested type
Sanysolar Material Technology Corporation	Copper belt with tin plated	0.13±0.02 x 6.0±10% mm Sn60%Pb40% Color: silver	Covered by main tested type	
Soldering material 1*	Suzhou Vital Electronics Material Technology Co., Ltd.	GW9038-PV	Solder Paste	Tested with PV modules
Soldering material 2*	ShenZhen Earlysun Technology Co., Ltd.	EH-P37	Solder Paste	Tested with PV modules
Soldering material 3*	Beijing RTAX Technology Co., Ltd.	SRT901-ZF-T3-PV183	Solder paste	Tested with PV modules
Fluxing agent 1	Asahi Solder technology (Wuxi) Co., Ltd.	SF56	-	Tested with PV modules
Fluxing agent 2	Suzhou Vital Electronics Material Technology Co., Ltd.	WTO-PV105A	-	Tested with PV modules
Fluxing agent 3	Suzhou Grabble Electronics Technology Co., Ltd.	FA19	-	Tested with PV modules
Fluxing agent 4	Henkel Loctite (China) Co., Ltd.	X33-08i	-	Tested with PV modules
Fluxing agent 5	Asahi Solder technology (Wuxi) Co., Ltd.	SF180	-	Tested with PV modules
Fluxing agent 6	Suzhou Vital Electronics Material Technology Co., Ltd.	WTO-PV302A	-	Tested with PV modules
Fluxing agent 7	Suzhou Vital Electronics Material Technology Co., Ltd.	WTO-PV112B	-	Tested with PV modules

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
Fluxing agent 8	Shenzhen Tong fang Electronic New Material Co., Ltd.	AATF9800-MBB	-	Tested with PV modules
Fixing tape 1	3M	UV-1	Width = 5 / 10mm±10% Thickness = 0.06±10% mm	Tested with PV modules
Fixing tape 2	TERAOKA SEISAKUSHO CO., LTD.	631S	Width = 5 / 10 mm±10% Thickness = 0.05±10% mm	Tested with PV modules
Fixing tape 3	Cybrid Technologies Inc.	FF-3665	Width = 5 / 10 mm±10% Thickness = 0.07±20% mm	Tested with PV modules
Fixing tape 4		FF-3665 (T50)	Width = 5 / 10 mm±10% Thickness = 105±10 μm	Covered by main tested type
Fixing tape 5		FF-3665 (T75)	Width = 5 / 10 mm±10% Thickness = 130±10 μm	Covered by main tested type
Fixing tape 6	Yantai Darbond Technology CO., LTD.	DT-9609	Width = 5 / 10 mm±10% Thickness = 0.064±10% mm	Tested with PV modules
Fixing tape 7	Guangdong SunRui New Materials Co., Ltd.	HZUV-100	Thickness = 0.12±10% mm Transparent	Tested with PV modules
Fixing tape 8	Luqin New Material Technology (Jiangsu) Co., Ltd.	LK-H21353	Width = 5 / 10 / 15 mm Thickness = 85±5 μm Transparent	Tested with PV modules
Insulation tape 1	Jolywood (Suzhou) sunwatt Co., Ltd.	FFC-JW18	Material = Fluorine resin / PET / Fluorine resin Thickness = 10/150/10 μm±10% Color: transparent	Tested with PV modules
Insulation tape 2	Suzhou First PV Material Co., Ltd.	BEC-201T	Thickness = 0.265 or 0.445 or 0.745 mm±10% Color: transparent	Tested with PV modules
Insulation tape 3	Coveme Engineered Films Zhangjiagang Co., Ltd.	dyMat@EPE	Material = Primer / PET / Primer Thickness = 100/235/300 μm±10% Color: transparent	Tested with PV modules
Insulation tape 4	Cybrid Technologies Inc.	115E	Material = EVA / Adhesive / PET / Adhesive / EVA Thickness = 0.325-0.525mm	Tested with PV modules
Insulation tape 5	Changzhou Langrui New Energy Technology Co., Ltd.	APA450	Material = EVA / PET / EVA Thickness = 175 / 100 / 175μm Color: transparent / black / white	Tested with PV modules
Junction box set 1#				
Junction box	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	GF26xy (x=1, 2 or 3; y=G)	Max. Voltage=1500 V (DC) Rated current = 13 A for GF26xy(x=1) Rated current = 15 A for GF26xy(x=2) Rated current = 20 A for GF26xy(x=3) RTI = 110°C Number of diodes: 2	Certificate No. R 50366288
Adhesive (junction box)	Shanghai Huitian New Chemical Co., Ltd.	HT906Z	Silicone Color: black and white	-

 Confirmation of the applicant
 Hefei, 01/29/2023 (Place and date)

(Applicant's legally authorized signature and stamp)

 Confirmation of TÜV NORD CERT
 Shanghai, 01/29/2023 (Place and date)



 (Signature of authorized TÜV NORD CERT engineer)

Object	Manufacturer	Type	Technical Data	Remark
Potting material	Shanghai Huitian New Chemical Co., Ltd.	5299W-S-A & 5299W-S-B	Silicone Color: black and white	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1533	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
Bypass diodes	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	PST6020	Tj max = 200°C If = 20A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	PST4530/T	Tj max = 200°C If = 30A	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x2.5mm ² , 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50318681
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x2.5mm ² , 1x4.0mm ²	Rated voltage = 1500VDC	Certificate no. R 50452023
Connectors	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	05-8	Rated voltage = 1500VDC Rated current = 30A	Certificate no. R 50334688
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR PV-KBT4-EVO 2/xy_UR	Rated Voltage = 1500VDC Rated Current = 45A (4.0mm ²)	Certificate no.: R 60127169
	Stäubli Electrical Connectors AG	PV-KST4-EVO2A/xy PV-KBT4-EVO2A/xy	Rated voltage = 1500VDC Rated current = 45A	Certificate no.: R 60127169
	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCFabcd UTXCMabcd	Rated voltage = 1500VDC Rated current = 35A	Certificate no.: R 50340393
Junction box set 2*				
Junction box	Tongwei Solar (Hefei) Co., Ltd.	PVJB-TW-SDB/001	Rated Voltage = 1500VDC Rated Current = 18A Number of diodes: 2	Certificate no.: R 50431188
Adhesive (junction box)	Suzhou Tonsan New Material and Technology Co., Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	Color: white and black	-
	Jiangsu Crevo Science & Technology Co., Ltd.	CV315	Color: white and black	Tested with PV modules
	Jiangsu Tianchen Silicon Materials Co., Ltd.	HT-8258	Color: white and black	Tested with PV modules
	Shanghai Huitian New Chemical Co., Ltd.	HT906Z	Silicone Color: white or black	Tested with PV modules

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
Potting material	Suzhou Tonsan New Materials Technology Co., Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	Color: white and black	-
	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	Color: white and black	-
	Jiangsu Crevo Science & Technology Co., Ltd.	CV709	Color: white and black	Tested with PV modules
	Jiangsu Tianchen Silicon Materials Co., Ltd.	HT-6360	Color: white and black	Tested with PV modules
Bypass diodes	Yangzhou Yangjie Electronic Technology Co., Ltd.	SB3045DY	Tj max = 200°C	-
	PANJIT ELECTRONICS (WU XI) CO., LTD.	SB3045DY	Tj max = 200°C	-
Cable	Zhejiang Zhonghuan Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50330654
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50318681
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500VDC Rated Current = 30A	Certificate no.: R 50350557
	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR PV-KBT4-EVO 2/xy_UR	Rated Voltage = 1500VDC Rated Current = 45A (4.0mm ²)	Certificate no.: R 60127169
Junction box set 3 (only for PV modules with 7" and 8" mono cells)				
Junction box	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	JB12x (x=S1)	Rated Voltage = 1500VDC Rated Current = 30A Number of diodes: 3	Certificate no.: R 50377301
Adhesive (junction box)	Suzhou TONSAN Adhesive Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Co., Ltd.	HT906Z	-	-
	Jiangsu Tianchen Silicon Materials Co., Ltd.	HT8258	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	-	Tested with PV modules
	GUANGZHOU BAIYUN CHEMICAL INDUSTRY CO., LTD.	SMG533	-	-
Potting material	Jiangsu Tianchen Silicon Materials Co., Ltd.	HT6360	-	-
	Goloho Chemical Industrial Ltd.	GOLOHO-313-AB	-	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

(Applicant's legally authorized signature and stamp)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

(Signature of authorized TÜV NORD CERT engineer)

Object	Manufacturer	Type	Technical Data	Remark
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	-	Tested with PV modules
	Beijing Tonsan New Material Technology Co., Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
	GUANGZHOU BAIYUN CHEMICAL INDUSTRY CO., LTD.	SKF323	-	-
	Shanghai Huitian New Material Co., Ltd.	5299W-S	-	-
	Suzhou TONSAN Adhesive Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1533	-	-
Bypass diodes	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH5045-12/ TM3045-30	Tj max = 200°C	-
Cable	Ningbo Kibor Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50302047
	Wuxi Xinhongye Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC (1x4.0mm ²)	Certificate no.: R 50311889
	Trina Solar Co., Ltd.	62930 IEC 131 1X4.0mm ² HALOGEN FREE LOW SMOKE	Rated Voltage = 1500VDC	Certificate no.: R 50451199
	Trina Solar Co., Ltd.	H1Z2Z2-K 1X4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50426462
	Changshu JHOSIN Communication Technology Co., Ltd.	62930 IEC 131 1X4.0mm ² HALOGEN FREE LOW SMOKE	Rated Voltage = 1500VDC	Certificate no.: R 50413335
Connectors	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	PV-CO02-xy	Rated Voltage = 1500VDC Rated Current = 45A	Certificate no.: R 50390097
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M-2	Rated Voltage = 1500VDC Rated Current = 30A	Certificate no.: R 50318165
	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR PV-KBT4-EVO 2/xy_UR	Rated Voltage = 1500VDC Rated Current = 45A	Certificate no.: R 60127169
	Stäubli Electrical Connectors AG	PV-KST4-EVO2A/xy PV-KBT4-EVO2A/xy	Rated voltage = 1500VDC Rated current = 45A	Certificate no.: R 60127169

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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Shanghai, 01/29/2023 (Place and date)


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Object	Manufacturer	Type	Technical Data	Remark
	Trina Solar Co., Ltd.	TS4-xz (z=2)	Rated Voltage = 1500VDC Rated Current = 41A	Certificate no.: R 50385924
	Trina Solar Co., Ltd.	TS4	Rated Voltage = 1500VDC Rated Current = 41A	Certificate no.: R 50401767
Junction box set 4 (only for PV modules with 7" and 8" mono cells)				
Junction box	QC Solar (Suzhou) Corporation	3Qxy (x=3, 4, 5, y=1, 2, 3, 4)	Rated Voltage = 1500VDC Rated Current = 25A or 30A or 35A Number of diodes: 3	Certificate no.: R 50510013
Adhesive (junction box)	Suzhou TONSAN Adhesive Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Material Co., Ltd.	HT906Z	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	-	-
	Jiangsu Tianchen New Materials Co., Ltd.	HT-8258	-	-
	Jiangsu Minghao New Materials Technology Co., Ltd.	MH-3668	-	-
Potting material	Suzhou TONSAN Adhesive Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
	Suzhou TONSAN Adhesive Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1533	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	-	-
	Shanghai Huitian New Material Co., Ltd.	5299W-S	-	-
	Jiangsu Tianchen New Materials Co., Ltd.	HT-6360	-	-
	Jiangsu Minghao New Materials Technology Co., Ltd.	MH-3667	-	-
	QC Solar (Suzhou) Corporation	QC Solar (Suzhou) Corporation	QCMK5045B	Tj max = 200°C
QC Solar (Suzhou) Corporation		QCM4045	Tj max = 200°C	-
QC Solar (Suzhou) Corporation		QCMK5045	Tj max = 200°C	-
QC Solar (Suzhou) Corporation		QCMK5045B	Tj max = 200°C	-

Confirmation of the applicant.
Hefei, 01/29/2023 (Place and date)

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	QC Solar (Suzhou) Corporation	30SQ050A	Tj max = 200°C	-
	QC Solar (Suzhou) Corporation	40SQ045	Tj max = 200°C	-
	QC Solar (Suzhou) Corporation	QCMK6045	Tj max = 200°C	-
Cable	QC Solar (Suzhou) Corporation	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50348871
	QC Solar (Suzhou) Corporation	62930 IEC 131 1x4.0 / 6.0mm ² HALOGEN FREE LOW SMOKE	Rated Voltage = 1500VDC	Certificate no.: R 50447239
Connectors	QC Solar (Suzhou) Corporation	QC4.10-cds (c=3 or 4; d=4 or 5 or 6 or 7 or 8; s=blank or 1)	Rated Voltage = 1500VDC Rated Current = 41A	Certificate no.: R 50505605
	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR (male) PV-KBT4-EVO 2/xy_UR (female)	Rated Voltage = 1500VDC Rated Current = 45A	Certificate no.: R 60127169
	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCFabcde; UTXCMabcde (a=A, b=4, c=A to Z, e=Blank or A or Z)	Rated Voltage = 1500VDC Rated Current = 35A	Certificate no.: R 50340393
	Tyco Electronics Austria GmbH	PV4-S1yx	Rated Voltage = 1500VDC Rated Current = 40A	Certificate no.: R 60148776
Junction box set 5 (only for PV modules with 7" and 8" mono cells)				
Junction box	Jiangxi Jinko PV Material Co., Ltd.	PV-JK09Lxy (x=2, y=2)	Rated Voltage = 1500VDC Rated Current = 30A Number of diodes: 3	Certificate no.: R 50354415
Adhesive (junction box)	Jiangsu Tianchen New Materials Co., Ltd	HT-8258	-	-
	JIANGSU MINGHAO NEW MATERIAL SCI-TECH CORPORATION	MH-3668	-	-
	Shanghai Huitian New Material Co., Ltd.	HT906Z	-	-
Potting material	Shanghai Huitian New Chemical Materials Co., Ltd	5299W-S	-	-
	Jiangsu Tianchen New Materials Co., Ltd	HT-6360A / HT-6360B	-	-
	JIANGSU MINGHAO NEW MATERIAL SCI-TECH CORPORATION	MH-3667	-	-
	Shanghai Huitian New Chemical Materials Co., Ltd.	HT5299W-S (black)	-	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

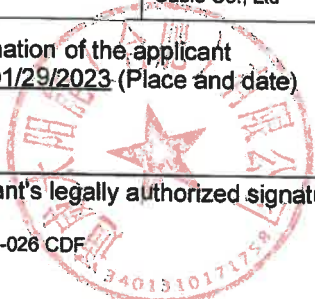
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Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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(Signature of authorized TÜV NORD CERT engineer)

Object	Manufacturer	Type	Technical Data	Remark
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	-	-
Bypass diodes	Jiangxi Jinko PV Material Co., Ltd.	TPA6050-T	Tj max=200°C	-
Cable	Ningbo Kibor Wire&Cable Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50302047
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50319823
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50334783
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50347607
	Jiangxi Hejia Technology Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50346833
	YushanXinzhuan Industrial Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50345549
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50367004
	DONGGUAN XINBEISEN WIRE AND CABLE CO LTD	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50355846
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50380780
	Suzhou Baohing Electric Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50310426
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50380522
	Jiangxi Han Guang Cable Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50390363
	Jiangxi Jinko PV Material Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Max. Voltage=1500V	Certificate no. R 50393550
	Jiangxi Hejia Technology Co., Ltd.	H1Z2Z2-K 1x6.0...25mm ²	Max. Voltage=1500V 1x6mm ²	Certificate no. R 50346833
	Suzhou Baohing Electric Wire&Cable Co., Ltd.	62930 IEC 131 1x1.5...35mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50464210
	Ningbo Kibor Wire&Cable Co., Ltd.	62930 IEC 131 1x1.5...10mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50413678
	Wuxi Xinhongye Wire & Cable Co., Ltd	H1Z2Z2-K 1x1.5...35mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50311889
	Wuxi Xinhongye Wire & Cable Co., Ltd	62930 IEC 131 1x1.5...35mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50439595

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	Jiangxi Jinko PV Material Co., Ltd.	H12222-K 1x2.5...35mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50463891
	SUZHOU YONGHAO CABLE CO., LTD.	H12222-K 1x2.5...35mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50379270
	SUZHOU YONGHAO CABLE CO., LTD.	62930 IEC 131 1x2.5...35mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50401233
	RUIXU INDUSTRY CO., LTD.	H12222-K 1x2.5...10mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50479665
	RUIXU INDUSTRY CO., LTD.	62930 IEC 131 1x2.5...10mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50467836
	Jiangxi Jinko PV Materials Co., Ltd.	H12222-K 1x2.5...10mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50479666
	Jiangxi Jinko PV Materials Co., Ltd.	62930 IEC 131 1x2.5...10mm ²	Max. Voltage=1500V 1x4mm ² , 1x6mm ²	Certificate no. R 50479664
Connectors	Staubli Electrical Connectors AG	PV-KST4-EVO2/xy_UR; (male) PV-KBT4-EVO2/xy_UR (female)	Rated Voltage=1500V Rated Current=45A for 4mm ²	Certificate no. R 60127169
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M/xy (Plug+Socket)(x=2,y =B)	Rated Voltage=1500V Rated Current=45A for 4mm ²	Certificate no. R 50318165
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M1/xy (Plug+Socket)(x=2,y =B)	Rated Voltage=1500V Rated Current=45A for 4mm ²	Certificate no. R 50318165
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M2/xy (Plug+Socket)(x=2,y =B)	Rated Voltage=1500V Rated Current=45A for 4mm ²	Certificate no. R 50318165
Junction box set 6 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	JM37xy (x=A, y=A or B or C)	Rated Voltage = 1500VDC Rated Current = 20A or 25A or 30A Number of diodes: 3	Certificate no.: R 50541405
Adhesive (junction box)	Beijing Tonsan New Material Technology Co., Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	TS1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	Momentive	TSE382-(W/B/C)	-	-
Potting material	Beijing Tonsan New Material Technology Co., Ltd. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
Bypass diodes (y=A)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	MK3050	Tj max = 200°C	-
Bypass diodes (y=B)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	MK4050	Tj max = 200°C	-
Bypass diodes	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	MK5050	Tj max = 200°C	-
Cable	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	62930 IEC 131 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50507377
Connectors	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	PV-JM601A	Rated Current = 41A	Certificate no.: R 50332967
	Staubli Electrical Connectors AG	PV-KST4-EVO2/xy_UR (male); PV-KBT4-EVO2/xy_UR (female)	Rated Current = 45A (4mm ²)	Certificate no.: R 60127169
	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	PV-JM608	Rated Current = 41A	Certificate no.: R 50374980
	Amphenol Technology (Shenzhen) Co., Ltd.	H4Cabcodef(c=4) (b=B, M or N)	Rated Current = 35A	Certificate no.: R 50388083
Junction box set 7 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH011C-3K PV-ZH011C-3H PV-ZH011C-5	Rated Voltage = 1500VDC Rated Current = 18A (for PV-ZH011C-5); 22A (for PV-ZH011C-5); 25A (for PV-ZH011C-5); 30A (for PV-ZH011C-3K, PV-ZH011C-3H, PV-ZH011C-5) Number of diodes: 3	Certificate no.: B 082630 0028 Rev. 00
Adhesive (junction box)	BEIJING TONSAN New Material Technology Co., LTD.	TS1527	-	-
	H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD			
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	Goloho Chemical Industry Ltd.	GOLOHO-63	-	-
	Jiangsu Tiancheng Silicon Co., LTD.	TS-688	-	-
	Jiangsu Tianshun new Material Technology Co., Ltd	TS6568	-	-
	HangZhou Zhijiang Silicone Chemicals CO.,LTD	JS606	-	-

Confirmation of the applicant
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Object	Manufacturer	Type	Technical Data	Remark
	Jiangsu CREVO Science&Technology Co., Ltd	CV709	-	-
	Jiangsu CREVO Science&Technology Co., Ltd	CREVO709	-	-
	Tonsan Adhesive, Inc H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Sika India Pvt. Ltd.	Sika AS 60 CN	-	-
	DOW CORNING	PV804	-	-
	Jiangsu Tianchen silison/con material Co., Ltd	HT-8258	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd	SMG533	-	-
	CHENDU GUIBAO SCIENCE&TECHNOLOGY CO., LTD.	888A	-	-
	Suzhou Datong Advanced Material Co., Ltd.	TT600	-	-
Potting material	Hultian New Chemical Material Co., Ltd.	5299W-S	-	-
	BEIJING TONSAN New Material Technology Co., LTD. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1533	-	-
	BEIJING TONSAN New Material Technology Co., LTD. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
	Jiangsu CREVO Science&Technology Co., Ltd	CV315	-	-
	Hangzhou Zhijiang Silicone Co., Ltd.	JS-1184	-	-
	DOW Corning Corporation	PV-7326	-	-
	JIANGSU TIANCHEN SILICON MATERIALS CO., LTD	HT-6360A/B	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd.	SKF323	-	-
	CHENDU GUIBAO SCIENCE&TECHNOLGY CO., LTD.	4808	-	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

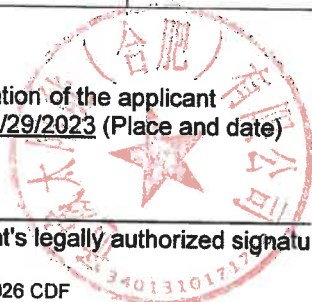
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Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	Suzhou Datong Advanced Material Co., Ltd.	TT700J	-	-
Bypass diodes (for PV-ZH011C-3K; PV-ZH011C-3H)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	SKT5045F	Tj max = 200°C Rated current = 30A	-
Bypass diodes (for PV-ZH011C-5)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	25SQ045	Tj max = 200°C Rated current = 18A	-
Bypass diodes (for PV-ZH011C-5)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	30SQ045	Tj max = 200°C Rated current = 22A	-
Bypass diodes (for PV-ZH011C-5)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	35SQ045	Tj max = 200°C Rated current = 25A	-
Bypass diodes (for PV-ZH011C-5)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	40SQ045	Tj max = 200°C Rated current = 30A	-
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	62930 IEC 131 1x4.0mm ² , 1x6.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50436635
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500VDC Rated Current = 40A	Certificate no.: R 50350557
	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated Voltage = 1500VDC Rated Current = 45A (4mm ²)	Certificate no.: R 60127169
	Staubli Electrical Connectors AG	PV-KST4-EVO 2A/xy; PV-KBT4-EVO 2A/xy	Rated Voltage = 1500VDC Rated Current = 45A (4mm ²)	Certificate no.: R 60127169
	Jiangxi Jinko PV Material Co., Ltd.	PV- JK03M2/xy(Plu g+Socket)	Rated Voltage = 1500VDC Rated Current = 45A (4mm ²)	Certificate no.: B 112370 0005 Rev.01
Junction box set 8 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FT60xy (x=1 or 2, y=B or D)	Rated Voltage = 1500VDC Rated Current = 30A for (x=2), 32A for (x=1) Number of diodes: 3	Certificate no.: R 50497914
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	TS1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	DOW CORNING	PV8101F	-	-
	Jiangsu MingHao New Mstar Technology Ltd.	MH-3668	-	-
	Goloho Chemical Industrial Co., Ltd.	GOLOHO63	-	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	JIANGSU TIANSHENG NEW MATERIALS SCIENCE AND TECHNOLOGY CO., LTD.	TS-688	-	-
	DOW CORNING	PV-804	-	-
	DOW CORNING	PV-8007	-	-
	Momentive Performance Materials	RTV 3642	-	-
	Hangzhou Zhijiang Silicone Chemicals CO., LTD.	JS-606	-	-
	Chengdu Guibao Science and Technology Co., Ltd.	888A	-	-
	LIYANG KANGDAWEI INDUSTRIAL CO., LTD	KDW1536	-	-
	Otto Hermann GmbH	Novasil SP 5728/S-CA2105	-	-
	Jiangsu tiancheng New materials PLC.	HT8258	-	-
	Jiangsu Crevo Science & Technology Co., Ltd.	CV709	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd.	SMG533	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	TONSAN ADHESIVE, INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	TS1521	-	-
	TONSAN ADHESIVE, INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	TS1533	-	-
Bypass diodes	Zhejiang Renhe Photovoltaic Technology Co., Ltd. OEM: ChangZhou Star Sea Electronics Co., Ltd.	RMK4560D (for FT60xy (x=1))	Tj max = 200°C	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd. OEM: ChangZhou Star Sea Electronics Co., Ltd.	RMK4555D (for FT60xy (x=2))	Tj max = 200°C	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50318681
	Trina Solar Co., Ltd.	H1Z2Z2-K 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50426462
	Trina Solar Co., Ltd.	62930 IEC 131 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50451199

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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PV-F-026 CDF

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50452023
Connectors	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	05-8	Rated Voltage = 1500VDC Rated Current = 30A	Certificate no.: R 50334688
	Amphenol Technology (Shenzhen) Co.,Ltd.	UTXCFabcd; UTXCMabcd	Rated Voltage = 1500VDC Rated Current = 35A	Certificate no.: R 50340393
	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated Voltage = 1500VDC Rated Current = 45A (4mm ²)	Certificate no.: R 60127169
	Tyco Electronics (Shanghai) Co., Ltd.	PV4-S1yx (y=F or M; x=4.0)	Rated Voltage = 1500VDC Rated Current = 40A (x=4.0)	Certificate no.: R 50372137
	Trina Solar CO., Ltd.	TS4-xz(x=1, z=2)	Rated Voltage = 1500VDC Rated Current = 41A (4mm ²)	Certificate no.: R 50385924
	Phoenix Contact GmbH & Co.KG	PV-CF-C-2,5- 4-SETxxxx; PV-CM-C-2,5- 4-SETxxxx	Rated Voltage = 1500VDC Rated Current = 30A (4mm ²)	Certificate no.: R 60126961
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RHC2xyzu	Rated Voltage = 1500VDC Rated Current = 35A (4mm ²)	Certificate no.: R 50473621
Junction box set 9 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FT70xy (x = 1, 2, 3 or 4, y = B D, F or H)	Rated Voltage = 1500VDC Rated current = 25A for (x = 1), 28A for (x = 2), 30A for (x = 3), 35A for (x=4) Reverse current = 54A RTI = 110°C Number of diodes: 3 for (y=B or D); 2 for (y=F or H)	Certificate no. R 50527912
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	TS1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	DOW CORNING	PV8101F	-	-
	Jiangsu MingHao New Mstar Technology Ltd.	MH-3668	-	-
	GOLOHO Chemical Industrial Limited	GOLOHO63	-	-
	JIANGSU TIANSHENG NEW MATERIALS SCIENCE AND TECHNOLOGY CO., LTD.	TS-688	-	-
	DOW CORNING	PV-804	-	-
	DOW CORNING	PV-8007	-	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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PV-F-026 CDF

Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

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Cara Chen

Object	Manufacturer	Type	Technical Data	Remark
	Momentive Performance Materials	RTV 3642	-	-
	Hangzhou Zhijiang Silicone Chemicals CO., LTD.	JS-606	-	-
	Chengdu Guibao Science and Technology Co., Ltd.	888A	-	-
	LIYANG KANGDAWEI INDUSTRIAL CO., LTD	KDW 1536	-	-
	Otto Hermann GmbH	Novasil SP 5728/S-CA2105	-	-
	Jiangsu Tianchen New Materials Co., Ltd	HT8258	-	-
	Jiangsu Crevo Science & Technology Co., Ltd. Sika (Jiangsu) Industrial Material Ltd.	CV709	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd.	SMG533	-	-
	Shanghai Huitian New Chemical Co., Ltd.	9661	-	Tested with PV modules
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1533	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd	SKF323	-	-
	Liyang Kangdawei Industrial Co., Ltd	KDW-3582	-	-
	Jiangsu Tianchen New Materials Co., Ltd	HT6360	-	-
	Shen Zhen Evopute Industry Material Co., Ltd.	OPT3155-1	-	-
	Jiangsu Crevo Science & Technology Co., Ltd. Sika (Jiangsu) Industrial Material Ltd.	CV315	-	Tested with PV modules
Bypass diodes (for x=1)	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	PS35TA	Tj max = 200°C If = 35A	-
Bypass diodes (for x=2)	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	PS40TA	Tj max = 200°C If = 40A	-
Bypass diodes (for x=3)	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	PS50TA	Tj max = 200°C If = 50A	-

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

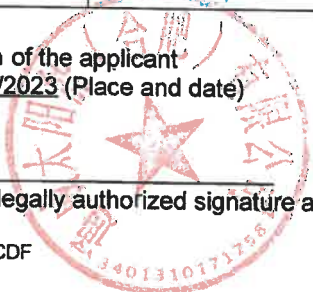
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Object	Manufacturer	Type	Technical Data	Remark
Bypass diodes (for x=4)	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	PS50TD	Tj max = 200°C If = 50A	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50452023
Connectors	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	05-8	Rated current = 30 A	Certificate no.: R 50334688 Certificate no.: R 50512443
	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCFabcd; UTXCMabcd	Rated current = 35A	Certificate no.: R 50340393
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 45A (4.0mm ²)	Certificate no.: R 60127169
	Stäubli Electrical Connectors AG	PV-KST4-EVO2A/xy PV-KBT4-EVO2A/xy	Rated voltage = 1500VDC Rated current = 45A	Certificate no.: R 60127169
	Tyco Electronics (Shanghai) Co., Ltd.	PV4-S1yx (y=F or M; x=4.0)	Rated current = 40A (x=4.0)	Certificate no.: R 60148776
	Trina Solar Co., Ltd.	TS4-xz(x=1, z=2)	Rated current = 41A (4.0mm ²)	Certificate no.: R 50385924
	Phoenix Contact GmbH & Co.KG	PV-CF-C-2,5-4-SETxxxx PV-CM-C-2,5-4-SETxxxx	Rated current = 30A (4.0mm ²)	Certificate no.: R 60126961
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RHC2xyzu	Rated current = 35A (4.0mm ²)	Certificate no.: R 50473621
Junction box set 10 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Jianning Tianheyuan Photovoltaics Technology Co., Ltd.	JM07w (w=Blank, L, R, S, 6, 7, 8, 9, 10 or 11)	Rated Voltage = 1500VDC Rated current = 20A for (x = blank, L, 6, 9), 25A for (x = R, S, 7, 10), 30A for (x = 8, 11) Reverse current = 41A Number of diodes: 3 or 2	Certificate no. R 50529604
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	Jiangsu Crevo Science & Technology Co., Ltd.	CV709	-	-
	Hangzhou Zhejiang Silicone Chemicals Co., Ltd.	JS-606		
	Jiangsu Tianchen Silicon Materials Co., Ltd.	HT8258		

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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Confirmation of TÜV NORD CERT
Shanghai, 01/29/2023 (Place and date)

Cara Chen

(Signature of authorized TÜV NORD CERT engineer)

Object	Manufacturer	Type	Technical Data	Remark
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521 1533	-	-
	Jiangsu Crevo Science & Technology Co., Ltd.	CV315	-	-
	CHENGDU GUIBAO SCIENCE&TECHNOLOGY CO., LTD	4808	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd	SKF323	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	-	-
	DOW CORNING	PV-7326	-	-
Bypass diodes (for x=blank, L)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	THY2550(3) THY2550(1) THY2550(4)	Tj max = 200°C If = 25A	-
Bypass diodes (for x=R, S)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	THY4050 SBT4050DY	Tj max = 200°C If = 40A	-
Bypass diodes (for x=6)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	RT3050	Tj max = 200°C If = 30A	-
Bypass diodes (for x=7)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	RT3550	Tj max = 200°C If = 35A	-
Bypass diodes (for x=8)	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	RT4550	Tj max = 200°C If = 45A	-
Cable	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50507377
Connectors	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	PV-JM601A	Rated current = 41A	Certificate no.: R 50332967
	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	PV-JM608	Rated current = 41A	Certificate no.: R 50374980
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 45A (4.0mm ²)	Certificate no.: R 60127169
Junction box set 11 (only for PV modules with 7" and 8" mono cells)				

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PV-F-026 CDF

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Object	Manufacturer	Type	Technical Data	Remark
Junction box	Ningbo Minghe New Energy Technology Co., Ltd.	MH2z (z=3 or 4)	Rated Voltage = 1500VDC Rated current = 25A for (z=3), 30A for (z=4) Reverse current = 41A Number of diodes: 3	Certificate no. R 50527916
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	Sika (Jiangsu) Industrial Material Ltd.	CV709	-	-
	Jiangsu Tianchen Silicon Material Co., Ltd.	HT-8258	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	-	-
Bypass diodes (for z=3)	Yangzhou Yangjie Electronic Co., Ltd.	30SQ045-SL	Tj max = 200°C If = 30A	-
Bypass diodes (for z=4)	Yangzhou Yangjie Electronic Co., Ltd.	40SQ045	Tj max = 200°C If = 40A	-
Cable	Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50439595
	Ningbo Kibor Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50413678
Connectors	Ningbo Minghe New Energy Technology Co., Ltd.	PV-MH5	Rated current = 41A	Certificate no.: R 50528808
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 41A	Certificate no.: R 60127169
Junction box set 12 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FT50xy (x=4, 5, 6, 8, 9 or B, y=B, D, F, H or K)	Rated Voltage = 1500VDC Rated current = 25A for (x=4 or 8), 28A for (x=5), 30A for (x=6 or 9), 35A for (x=B) Reverse current = 48A Number of diodes: 3	Certificate no. R 50415465
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-

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Hefei, 01/29/2023 (Place and date)

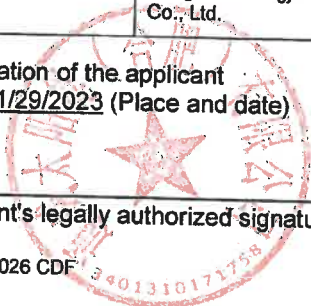
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Object	Manufacturer	Type	Technical Data	Remark
	DOW CORNING	PV810F PV804 PV-8007	-	-
	Jiangsu Minghao New Mstar Technology Ltd.	MH-3668		
	Goloho Chemical Industrial Co., Ltd.	GOLOHO63	-	-
	Jiangsu Tiansheng New Materials Science and Technology Co., Ltd.	TS-688	-	-
	Momentive Performance Materials	RTV 3642	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	-	-
	Chengdu Guibao Science and Technology Co., Ltd.	888A	-	-
	Liyang Kandawei Industrial Co., Ltd.	KDW1536	-	-
	Jiangsu Crevo Science & Technology Co., Ltd.	CV709	-	-
	Jiangsu Tianchen Silicon Material Co., Ltd.	HT-8258	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd.	SMG533	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521 1533	-	-
	Guangzhou Baiyun Chemical Industry Co., Ltd.	SKF323	-	-
	Liyang Kandawei Industrial Co., Ltd.	Kdw-3582	-	-
	Jiangsu Tianchen Silicon Material Co., Ltd.	HT6360	-	-
Bypass diodes (for x=4)	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK5040D FMK4545D FMK4560T	Tj max = 200°C	-
Bypass diodes (for x=5)	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK3040P	Tj max = 200°C	-
Bypass diodes (for x=6)	Yangzhou Yangjie Electronic Co., Ltd.	FMK5060D	Tj max = 200°C	-
Bypass diodes (for x=8)	Yangzhou Yangjie Electronic Co., Ltd.	MK4045	Tj max = 200°C	-
Bypass diodes (for x=9)	Yangzhou Yangjie Electronic Co., Ltd.	MK5045	Tj max = 200°C	-

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Object	Manufacturer	Type	Technical Data	Remark
Bypass diodes (for x=B)	Yangzhou Yangjie Electronic Co., Ltd.	MK6045	T _J max = 200°C	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50452023
	Trina Solar Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50451199
Connectors'	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	05-8	Rated current = 30A	Certificate no.: R 50334688
	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCFabcd; UTXCMabcd	Rated current = 35A	Certificate no.: R 50340393
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2A/xy_UR; PV-KBT4-EVO 2A/xy_UR	Rated current = 41A	Certificate no.: R 60127169
	Trina Solar Co., Ltd.	TS4-xz	Rated current = 41A	Certificate no.: R 50385924
	Phoenix Contact GmbH & Co., KG	PV-CF-C-2, 5- 4-SETxxxx PV-CM-C-2, 5- 4-SETxxxx	Rated current = 30A	Certificate no.: R 6126961
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RHC2xyzu	Rated current = 35A	Certificate no.: R 50473621
Junction box set 13 (only for PV modules with 7" and 8" mono cells)				
Junction box	Jiangsu Tongling Electric Co., Ltd.	TL-BOX022.3-A-2-1xyzF TL-BOX022.3-A-2-2xF TL-BOX022.3-A-2-3xyzF TL-BOX022.3-B-2-1xyzF TL-BOX022.3-B-2-2xF TL-BOX022.3-B-2-3xyzF	Rated Voltage = 1500VDC Rated current = 25A for (x=4) Reverse current = 41A Number of diodes: 3	Certificate no. R 50539999
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521 1533	-	-

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Hefei, 01/29/2023 (Place and date)

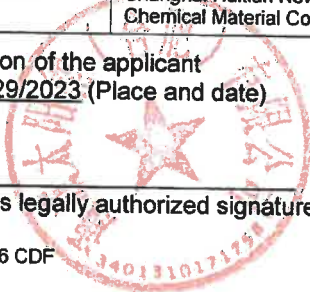
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Object	Manufacturer	Type	Technical Data	Remark
	Jiangsu Tianchen New Material Co., Ltd.	HT-6360AB	-	-
Bypass diodes (for x=4)	Jiangsu Tongling Electric Co., Ltd.	PT001B-HS	Tj max = 200°C	-
Cable	Suzhou Baohing Electric Wire & Cable Manufacturer Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50464210
	Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50439595
	Changshu JHOSIN Communication Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50413335
	Jiangsu Tongling Electric Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50462100
Connectors	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCFabcd; UTXCMabcd	Rated current = 42A	Certificate no.: R 50340393
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 35A	Certificate no.: R 60127169
	Jiangsu Tongling Electric Co., Ltd.	TL-CABLE01S-F TL-CABLE01S	Rated current = 41A	Certificate no.: R 50514839
		BIGabc4efgh	Rated current = 41A	Certificate no.: R 50524455
	Hanwha Q CELLS (Qidong) Co., Ltd.	HQC4	Rated current = 30A	Certificate no.: R 50385866
	Trina Solar Co., Ltd.	TS4	Rated current = 41A	Certificate no.: R 50508240
Junction box set 14 (only for PV modules with 7" and 8" mono cells)				
Junction box	Tongwei Solar (Hefei) Co., Ltd.	PVJB-TW-ab (a=2 or 3, b=2or 3)	Rated Voltage = 1500VDC Rated current = 25A for (b=2), 30A for (b=3) Reverse current = 54A Number of diodes: 3	Certificate no. R 50559635
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	Jiangsu Tianchen New Material Co., Ltd.	HT8258	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-

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Object	Manufacturer	Type	Technical Data	Remark
	TONSAN ADHESVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521 1533	-	-
	Jiangsu Tianchen New Material Co., Ltd.	HT-6360	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	-	-
Bypass diodes (b=2)	Changzhou Star Sea Electric Co., Ltd. Yangzhou Yangjie Electric Technology Co., Ltd. Hangzhou Daoming Microelectronics Technology Co., Ltd. Anhui Juxin Semiconductor Technology Co., Ltd. Yangzhou Hongyang Electronics Co., Ltd.	35SQ045	Tj max = 200°C	-
Bypass diodes (b=3)	Changzhou Star Sea Electric Co., Ltd. Yangzhou Yangjie Electric Technology Co., Ltd. Hangzhou Daoming Microelectronics Technology Co., Ltd. Anhui Juxin Semiconductor Technology Co., Ltd. Yangzhou Hongyang Electronics Co., Ltd.	40SQ045	Tj max = 200°C	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50452023
	Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50439595
	Ninbo Kibor Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50413678
	Zhejiang Jiaming Tianheyuan Photovoltaics Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50507377
	Zhejiang Zhonghuan Sunter PV Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50436635
Connectors	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RHC2xyzu	Rated current = 35A	Certificate no.: R 50473621
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 45A	Certificate no.: R 60127169

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Object	Manufacturer	Type	Technical Data	Remark
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2A/xy_UR; PV-KBT4-EVO 2A/xy_UR	Rated current = 45A	Certificate no.: R 60127169
	Ningbo Minghe New Energy Technology Co., Ltd.	PV-MH5	Rated current = 41A	Certificate no.: R 50528808
	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	PV-JM608	Rated current = 41A	Certificate no.: R 50374980
	Zhejiang Zhonghuan Sunter PV Photovoltaic Technology Co., Ltd.	PV-ZH202B	Rated current = 40A	Certificate no.: R 50350557
Junction box set 15 (only for PV modules with 7" and 8" mono cells)				
Junction box	Suzhou Xietong Photovoltaic Technology Co., Ltd.	PV-XT1609Nxyz	Rated Voltage = 1500VDC Rated current = 25A or 30A or 35A Reverse current = 48A Number of diodes: 3	Certificate no. B 076061 Rev.04
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
	Liyang Kangdawei Industry Co., Ltd.	KDW-1536	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	TONSAN ADHESIVE INC H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
	Liyang Kangdawei Industry Co., Ltd.	KDW-3582	-	-
Bypass diodes	Suzhou Xietong Photovoltaic Technology Co., Ltd.	XT3050A	Tj max = 200°C	-
		XT4050M-A	Tj max = 200°C	-
		XT4050M-B	Tj max = 200°C	-
		XT4550M-A	Tj max = 200°C	-
		XT4550M-B	Tj max = 200°C	-
		XT5050M-A	Tj max = 200°C	-
		XT5050M-B	Tj max = 200°C	-
Cable	Suzhou Xietong Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50453577
	Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50439595

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)

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Object	Manufacturer	Type	Technical Data	Remark
Connectors	Suzhou Xietong Photovoltaic Technology Co., Ltd.	PV-XT101.1	Rated current = 35A	Certificate no.: R 50385354
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 45A	Certificate no.: R 60127169
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2A/xy_UR; PV-KBT4-EVO 2A/xy_UR	Rated current = 45A	Certificate no.: R 60127169
Junction box set 16 (only for PV modules with 7" and 8" mono cells)				
Junction box	Jiangsu Tongling Electric Co., Ltd.	TL-BOX022.3-A-2-1xyzF TL-BOX022.3-A-2-2xF TL-BOX022.3-A-2-3xyzF TL-BOX022.3-B-2-1xyzF TL-BOX022.3-B-2-2xF TL-BOX022.3-B-2-3xyzF	Rated Voltage = 1500VDC Rated current = 20A or 25A or 30A Reverse current = 41A Number of diodes: 3	Certificate no. B 079881 0008
Adhesive (junction box)	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1527	-	-
Potting material	TONSAN ADHESIVE INC. H.B. FULLER (SUZHOU) ADVANCED MATERIAL CO., LTD	1521	-	-
Bypass diodes (for x=4)	Jiangsu Tongling Electric Co., Ltd.	PT001B-SH	Tj max = 200°C	-
	Jiangsu Tongling Electric Co., Ltd.	PT001B-SHL	Tj max = 200°C	-
	Jiangsu Tongling Electric Co., Ltd.	PT001B-HS	Tj max = 200°C	-
	Jiangsu Tongling Electric Co., Ltd.	PT001B-HS-25	Tj max = 200°C	-
	Jiangsu Tongling Electric Co., Ltd.	PT001B-HS-30	Tj max = 200°C	-
Cable	Jiangsu Tongling Electric Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no.: R 50462100
Connectors	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 35A	Certificate no.: R 60127169
	Jiangsu Tongling Electric Co., Ltd.	TL-CABLE01S-F TL-CABLE01S	Rated current = 41A	Certificate no.: R 50514839

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Hefei, 01/29/2023 (Place and date)

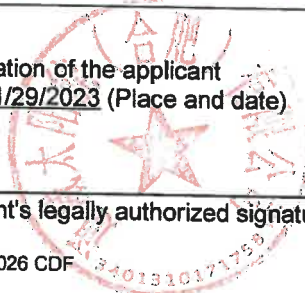
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Object	Manufacturer	Type	Technical Data	Remark
Junction box set 17 (only for PV modules with 7" and 8" mono cells)				
Junction box	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH011C-5xyz (x = 1 or 2, y = B, z= 2 or 3)	Rated Voltage = 1500VDC Rated current = 25A for (z = 2), 30A for (z = 3) Reverse current = 45A RTI = 110°C Number of diodes: 3 for (x=1); 2 for (x=2)	Certificate no. R 50505349
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co., Ltd.	9661	-	-
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	-	-
	Sika (Jiangsu) Industrial Material Ltd.	CREVO709	-	-
	H.B. Fuller (Suzhou) Advanced Material Co., Ltd.	1527	-	--
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	-	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	-	-
	H.B. Fuller (Suzhou) Advanced Material Co., Ltd.	1533	-	-
Bypass diodes (for z=2)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	35SQ045	Tj max = 200°C If = 35A	-
Bypass diodes (for z=3)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	40SQ045	Tj max = 200°C If = 40A	-
Bypass diodes (for z=2)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	35SQ045-ST	Tj max = 200°C If = 35A	-
Bypass diodes (for z=3)	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	40SQ045-ST	Tj max = 200°C If = 40A	-
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	62930 IEC 131 1x4.0mm ² , 1x6.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50436635
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated current = 40A	Certificate no.: R 50350557
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 45A (4.0mm ²)	Certificate no.: R 60127169
	Stäubli Electrical Connectors AG	PV-KST4-EVO2A/xy PV-KBT4-EVO2A/xy	Rated voltage = 1500VDC Rated current = 45A	Certificate no.: R 60127169
	Hanwha Q CELLS (Qidong) Co., Ltd.	HQC4	Rated current = 30A	Certificate no.: R 50385866
Junction box set 18 (only for PV modules with 7" and 8" mono cells)				

Confirmation of the applicant
Hefei, 01/29/2023 (Place and date)



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Object	Manufacturer	Type	Technical Data	Remark
Junction box	Tongwei Solar (Hefei) Co., Ltd.	TW-PVJB01-ab	Rated Voltage = 1500VDC Rated current = 25A or 30A Reverse current = 40A Number of diodes: 3	Certificate no. B 090075 0017
Adhesive (junction box)	H.B. Fuller (Suzhou) Advanced Material Co., Ltd. Beijing TONSAN New Material Technology Co., Ltd	TS1527		
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z		
	Goloho Chemical Industry Ltd.	GOLOHO-63		
	Jiangsu Tiancheng Silicon Co., Ltd.	TS-688		
	Jiangsu Tianshun New Material Technology Co., Ltd.	TS6568		
	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS606		
	Sika (Jiangsu) Industrial Material Ltd.	CV709		
	Sika India Pvt. Ltd.	Sika AS 60 CN		
	DOW CORNING	PV804		
	Jiangsu Tianchen Silicon Material Co., Ltd.	HT-8258		
	CHENGDU GUIBAO SCIENCE & TECHNOLOGY CO., LTD.	888A		
	Suzhou Datong Advanced Material Co., Ltd.	TT600		
	Shanghai Huitian New Chemical Material Co., Ltd.	9661		
	H.B. Fuller (Suzhou) Advanced Material Co., Ltd. Tonsan Adhesive, Inc.	1527		
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S		
	H.B. Fuller (Suzhou) Advanced Material Co., Ltd. Beijing TONSAN New Material Technology Co., Ltd	1533 1521		
	Sika (Jiangsu) Industrial Material Ltd.	CV315		
	Hangzhou Zhijiang Silicone Co., Ltd.	JS-1184		
	DOW Corning Corporation	PV-7326		

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Cara Chen

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Object	Manufacturer	Type	Technical Data	Remark
	JIANGSU TIANCHEN SILICON MATERIALS CO., LTD	HT-6380A/B		
	Guangzhou Baiyun Chemical Industry Co., Ltd.	SKF323		
	Suzhou Dajiang Advanced Material Co., Ltd.	TT700J		
	CHENGDU GUIBAO SCIENCE & TECHNOLOGY CO., LTD	4808		
Bypass diodes	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	35SQ045	Tj max = 200°C If = 35A	
	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	40SQ045	Tj max = 200°C If = 40A	
	Panjit Electronics (Wuxi) Co., Ltd.	35SQ045	Tj max = 200°C If = 35A	
	Panjit Electronics (Wuxi) Co., Ltd.	40SQ045	Tj max = 200°C If = 40A	
	Yangzhou Yangjie Electronic Technology Co., Ltd.	35SQ045	Tj max = 200°C If = 35A	
	Yangzhou Yangjie Electronic Technology Co., Ltd.	40SQ045	Tj max = 200°C If = 40A	
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	62930 IEC 131 1x4.0mm ²	Rated Voltage = 1500VDC	Certificate no.: R 50436835
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated current = 40A	Certificate no.: R 50350557
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated current = 45A (4.0mm ²)	Certificate no.: R 60127169
	Stäubli Electrical Connectors AG	PV-KST4-EVO2A/xy PV-KBT4-EVO2A/xy	Rated voltage = 1500VDC Rated current = 45A	Certificate no.: R 60127169
	Tongwei Solar (Hefei) Co., Ltd.	TW-PVCON-01	Rated current = 40A	Certificate no.: B 090075 0002

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Remark:

- (1) Fire test Class C according to ANSI/UL 1703-2018 (MST 23 of IEC / EN 61730-2) has been evaluated on all the raw materials listed above, except encapsulation material 7 and adhesive (frame) 6.
- (2) Pollution degree I (Sequence B1 of IEC / EN 61730-2) has been evaluated on all the raw materials listed above.
- (3) Details for design loads (unit: Pa):

Mounting method		Design load (positive / negative)
6 hooks installed on flexible system with supporting beams (Positive / Negative)	6" mono cell 1, 2 Front and rear cover 1 Hook 1 Adhesive (hook)	Round 1: 2400 / 2400
	6" mono cell 4, 5 Front and rear cover 4, 5 Hook 2 Adhesive (hook)	Round 1: 2400 / 2400 Round 2: 3600 / 3600
4 screw installed (Positive / Negative)	Frame parts 6005-T6 (for PV modules with 8" solar cells)	Round 1: 3600 / 1600 Only for frame parts 6005-T6 with 35mm thickness
8 clamps installed (Positive / Negative)	Frame part 6063-T6 (for PV modules with 6" solar cells)	Round 1: 1600 / 1600 Round 2: 3600 / 1600
	Frame part 6063-T6 (for PV modules with half-cut 7" and 8" solar cells)	3600 / 1600
	Frame parts 6005-T6 (for PV modules with 8" solar cells)	Round 1: 2400 / 1600 Round 2: 3600 / 1600
	Front and rear cover 6 Frame part 3 (for PV modules with 6" solar cells)	Round 1: 1600 / 1600
4 clamps installed (Positive / Negative)	Frame part 6063-T6 (for PV modules with half-cut 7" and 8" solar cells)	3600 / 1600

- (4) Those materials marked in blue are added in most recent project.
- (5) Those materials marked with * represents for the materials only for PV modules with half-cut solar cells, # represents for the materials only for PV modules with segmented solar cells.

----- End of CDF -----

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PV-F-026 CDF

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