


CDF (Constructional Data Form) for Electrical Products

Applicant	Tangshan Haitai New Energy Technology Co., Ltd. Yutai Industrial Zone, Yutian, Tangshan City Hebei Province, 064100, P.R. China
Manufacturer	Tangshan Haitai New Energy Technology Co., Ltd. Yutai Industrial Zone, Yutian, Tangshan City Hebei Province, 064100, P.R. China
Factory 1	Tangshan Haitai New Energy Technology Co., Ltd. Yutai Industrial Zone, Yutian, Tangshan City Hebei Province, 064100, P.R. China
Factory 2	HT SOLAR VIETNAM LIMITED COMPANY Factory F3-1 and F3-2, Lot F3, Trang Due Industrial Park, a part of Dinh Vu-Cat Hai economic zone, Hong phong commune, An Duong District, Haiphong city, Vietnam
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; IEC 61730-1:2016 / EN IEC 61730-1:2018; IEC 61730-2:2016 / EN IEC 61730-2:2018.
Trade mark	 海泰新能 HT SOLAR
Module type(s)	Double Glass PV Modules with 6" Mono Solar Cells: 72 cells: HTMxxxDMA-72 (xxx=335-380, in increments of 5) 60 cells: HTMxxxDMA-60 (xxx=280-315, in increments of 5) Double Glass PV Modules with 6" Mono Half-cut Solar Cells: 144 half-cut cells: HTMxxxDMH-72 (xxx=375-395, in increments of 5) 120 half-cut cells: HTMxxxDMH-60 (xxx=315-330, in increments of 5) 144 half-cut cells: HTMxxxDMH2-72 (xxx=385-405, in increments of 5) 120 half-cut cells: HTMxxxDMH2-60 (xxx=320-335, in increments of 5) 144 half-cut cells: HTMxxxDMH3-72 (xxx=435-470, in increments of 5) 120 half-cut cells: HTMxxxDMH3-60 (xxx=365-390, in increments of 5) Double Glass PV Modules with 6" Poly Half-cut Solar Cells: 144 half-cut cells: HTMxxxDPH-72 (xxx=325-355, in increments of 5) 120 half-cut cells: HTMxxxDPH-60 (xxx=270-295, in increments of 5) 144 half-cut cells: HTMxxxDPH2-72 (xxx=325-355, in increments of 5) 120 half-cut cells: HTMxxxDPH2-60 (xxx=270-295, in increments of 5)

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	<p>Double Glass PV Modules with 8" Mono Half-cut Solar Cells: 132 half-cut cells: HTMxxxDMH8-66NH (xxx=670-700, in increments of 5) 120 half-cut cells: HTMxxxDMH8-60NH (xxx=610-635, in increments of 5)</p> <p>Double Glass PV Modules with 6" Mono Half-cut Solar Cells: 144 half-cut cells: HTMxxxDMH3-72NH (xxx=450-475, in increments of 5) 120 half-cut cells: HTMxxxDMH3-60NH (xxx=375-395, in increments of 5)</p> <p>Double Glass PV Modules with 7" Mono Half-cut Solar Cells: 156 half-cut cells: HTMxxxDMH5-78 (xxx=580-605, in increments of 5) 144 half-cut cells: HTMxxxDMH5-72 (xxx=525-555, in increments of 5) 120 half-cut cells: HTMxxxDMH5-60 (xxx=440-460, in increments of 5) 108 half-cut cells: HTMxxxDMH5-54 (xxx=395-415, in increments of 5)</p> <p>Double Glass PV Modules with 8" Mono 1/3 cut Solar Cells: 150 1/3 cut cells: HTMxxxDMT8-50 (xxx=485-510, in increments of 5) 120 1/3 cut cells: HTMxxxDMT8-40 (xxx=390-405, in increments of 5)</p> <p>Double Glass PV Modules with 8" Mono Half-cut Solar Cells: 132 half-cut cells: HTMxxxDMH8-66 (xxx=635-670, in increments of 5) 120 half-cut cells: HTMxxxDMH8-60 (xxx=585-605, in increments of 5) 132 half-cut cells: HTMxxxDMH8-66NT (xxx=660-700, in increments of 5) 120 half-cut cells: HTMxxxDMH8-60NT (xxx=600-635, in increments of 5)</p> <p>Double Glass PV Modules with 7" TOPCon Half-cut Solar Cells: 156 half-cut cells: HTMxxxDMH5-78NT (xxx=605-640, in increments of 5) 144 half-cut cells: HTMxxxDMH5-72NT (xxx=545-590, in increments of 5) 120 half-cut cells: HTMxxxDMH5-60NT (xxx=455-490, in increments of 5) 108 half-cut cells: HTMxxxDMH5-54NT (xxx=410-440, in increments of 5)</p> <p>Remark: The power parameter included in the module types only indicates maximum power output of front side.</p>
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Electrical ratings:

Module type	72 cells: HTMxxxDMA-72 (xxx=335-380, in increments of 5)		
Dimensions [mm] / l x w x h	1975 x 992 x 6 (without frame) 1968 x 992 x 6 (without frame) 1972 x 992 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	335; 340; 345; 350; 355; 360; 365; 370; 375; 380	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	46.41; 46.62; 46.86; 47.02; 47.45; 47.77; 47.96; 48.36; 48.52; 48.82	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	9.37; 9.44; 9.52; 9.59; 9.64; 9.71; 9.78; 9.85; 9.92; 9.99	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	18.25	Fuse rating [A]	20
Design load (positive) [Pa]	1600 (without frame) 3600 (with frame)	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	60 cells: HTMxxxDMA-60 (xxx=280-315, in increments of 5)		
Dimensions [mm] / l x w x h	1658 x 992 x 6 (without frame) 1684 x 998 x 30 / 35 / 40 (with frame) 1655 x 992 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	280; 285; 290; 295; 300; 305; 310; 315	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	38.52; 38.85; 39.15; 39.48; 39.84; 40.15; 40.63; 40.91	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	9.43; 9.51; 9.58; 9.65; 9.72; 9.79; 9.85; 9.91	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	18.25	Fuse rating [A]	20
Design load (positive) [Pa]	1600 (without frame) 3600 (with frame)	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	144 half-cut cells: HTMxxxDMH-72 (xxx=375-395, in increments of 5)		
Dimensions [mm] / l x w x h	2006 x 992 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	375, 380, 385; 390; 395	Tolerance of rated Pmpp [%].....	±3

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Rated Voc [V]..... :	48.75; 49.06; 49.35; 49.65; 49.94	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	9.86; 9.93; 10.00; 10.07; 10.14;	Tolerance of rated Isc [%]..... :	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	15.0	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive)..... :	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

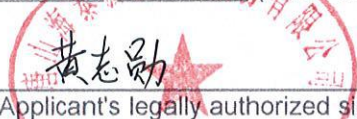
Module type	120 half-cut cells: HTMxxxDMH-60 (xxx=315-330, in increments of 5)		
Dimensions [mm] / l x w x h..... :	1684 x 992 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	315; 320; 325; 330	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	40.99; 41.39; 41.79; 42.18	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	9.85; 9.91; 9.97; 10.03	Tolerance of rated Isc [%]..... :	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	15.0	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive)..... :	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	144 half-cut cells: HTMxxxDMH2-72 (xxx=385-405, in increments of 5)		
Dimensions [mm] / l x w x h..... :	2031 x 1002 x 30 / 35 / 40 (with frame) 2031 x 1008 x 30 / 35 / 40 (with frame) 2031 x 1010 x 30 / 35 / 40 (with frame) 2038 x 1010 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	385; 390; 395; 400; 405	Tolerance of rated Pmpp [%]..... :	±3
Rated Voc [V]..... :	48.35; 48.64; 48.92; 49.21; 49.48	Tolerance of rated Voc [%]..... :	±3
Rated Isc [A]	10.12; 10.15; 10.22; 10.29; 10.36	Tolerance of rated Isc [%]..... :	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140..... :	Class II
Min-creepage distance [mm]	15.0	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive)..... :	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half-cut cells: HTMxxxDMH2-60 (xxx=320-335, in increments of 5)		
Dimensions [mm] / l x w x h..... :	1704 x 1002 x 30 / 35 / 40 (with frame) 1704 x 1008 x 30 / 35 / 40 (with frame)		

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	1704 x 1010 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	320; 325; 330; 335	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	39.91; 40.25; 40.59; 40.93	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	10.15; 10.22; 10.29; 10.36	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	15.0	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	144 half-cut cells: HTMxxxDMH3-72 (xxx=435-470, in increments of 5)		
Dimensions [mm] / l x w x h.....	2094 x 1038 x 30 / 35 / 40 (with frame) 2131 x 1052 x 30 / 35 / 40 (with frame) 2132 x 1048 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	435, 440, 445, 450, 455, 460, 465, 470	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	48.88, 49.08, 49.28, 49.48, 49.68, 49.88, 50.08, 50.28	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	11.32, 11.39, 11.46, 11.53, 11.59, 11.66, 11.72, 11.79	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half-cut cells: HTMxxxDMH3-60 (xxx=365-390, in increments of 5)		
Dimensions [mm] / l x w x h.....	1755 x 1038 x 30 / 35 / 40 (with frame) 1791 x 1052 x 30 / 35 / 40 (with frame) 1792 x 1048 x 30 / 35 / 40 (with frame)		
Rated Pmpp [W]	365, 370, 375, 380, 385, 390	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	40.80, 41.00, 41.20, 41.40, 41.60, 41.80	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	11.37, 11.45, 11.54, 11.60, 11.69, 11.77	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II

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Min-creepage distance [mm]	13	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive)	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5


Module type	144 half-cut cells: HTMxxxDMH3-72NH (xxx=450-475, in increments of 5)		
Dimensions [mm] / l x w x h	2094 x 1038 x 30/35/40 (with frame)		
Rated Pmpp [W]	450, 455, 460, 465, 470, 475	Tolerance of rated Pmpp [%]	±3
Rated Voc [V]	52.89, 53.09, 53.29, 53.49, 53.69, 53.89	Tolerance of rated Voc [%]	±3
Rated Isc [A]	10.83, 10.90, 10.96, 11.03, 11.09, 11.16	Tolerance of rated Isc [%]	±4
Maximum system voltage [V]	1500 / 1000	Safety class acc. to IEC 61140	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive)	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half-cut cells: HTMxxxDMH3-60NH (xxx=375-395, in increments of 5)		
Dimensions [mm] / l x w x h	1755 x 1038 x 30/35/40 (with frame)		
Rated Pmpp [W]	375, 380, 385, 390, 395	Tolerance of rated Pmpp [%]	±3
Rated Voc [V]	44.11, 44.31, 44.51, 44.71, 44.91	Tolerance of rated Voc [%]	±3
Rated Isc [A]	10.81, 10.89, 10.97, 11.05, 11.13	Tolerance of rated Isc [%]	±4
Maximum system voltage [V]	1500 / 1000	Safety class acc. to IEC 61140	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive)	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	132 half-cut cells: HTMxxxDMH8-66NH (xxx=670-700, in increments of 5)		
Dimensions [mm] / l x w x h	2384 x 1303 x 35 / 40 (with frame)		
Rated Pmpp [W]	670, 675, 680, 685, 690, 695, 700	Tolerance of rated Pmpp [%]	±3
Rated Voc [V]	48.76, 48.96, 49.16, 49.36, 49.56, 49.76, 49.96	Tolerance of rated Voc [%]	±3
Rated Isc [A]	17.08, 17.12, 17.15, 17.19, 17.23, 17.26, 17.30	Tolerance of rated Isc [%]	±4

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Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	11.5	Fuse rating [A]	30
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half-cut cells: HTMxxxDMH8-60NH (xxx=610-635, in increments of 5)		
Dimensions [mm] / l x w x h..... :	2172 x 1303 x 35 / 40 (with frame)		
Rated Pmpp [W]	610, 615, 620, 625, 630, 635	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	44.38, 44.58, 44.78, 44.98, 45.18, 45.38	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	17.08, 17.13, 17.17, 17.21, 17.25, 17.29	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	11.5	Fuse rating [A]	30
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	144 half-cut cells: HTMxxxDPH-72 (xxx=325-355, in increments of 5)		
Dimensions [mm] / l x w x h..... :	2000 x 986 x 6 (without frame)		
Rated Pmpp [W]	325; 330; 335; 340; 345; 350; 355	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	45.60; 45.95; 46.30; 46.65; 47.00; 47.35; 47.70	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	9.14; 9.21; 9.28; 9.35; 9.42; 9.49; 9.56	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	15	Fuse rating [A]	20
Design load (positive) [Pa]	1600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half-cut cells: HTMxxxDPH-60 (xxx=270-295, in increments of 5)		
Dimensions [mm] / l x w x h..... :	1674 x 986 x 6 (without frame) 1678 x 986 x 6 (without frame)		
Rated Pmpp [W]	270; 275; 280; 285; 290; 295	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	38.18; 38.54; 38.90; 39.26; 39.68; 39.98	Tolerance of rated Voc [%].....:	±3

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Rated Isc [A]	9.08; 9.15; 9.23; 9.31; 9.39; 9.47	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	15	Fuse rating [A]	20
Design load (positive) [Pa]	1600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5


Module type	144 half-cut cells: HTMxxxDPH2-72 (xxx=325-355, in increments of 5)		
Dimensions [mm] / l x w x h.....	2024 x 1004 x 6 (without frame) 2024 x 1002 x 6 (without frame) 2024 x 996 x 6 (without frame)		
Rated Pmpp [W]	325; 330; 335; 340; 345; 350; 355	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	45.15; 45.46; 45.74; 46.09; 46.44; 46.79; 47.14	Tolerance of rated Voc [%]	±3
Rated Isc [A]	9.23; 9.31; 9.39; 9.46; 9.52; 9.59; 9.65	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	15	Fuse rating [A]	20
Design load (positive) [Pa]	1600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half-cut cells: HTMxxxDPH2-60 (xxx=270-295, in increments of 5)		
Dimensions [mm] / l x w x h.....	1698 x 1004 x 6 (without frame) 1698 x 1002 x 6 (without frame) 1698 x 996 x 6 (without frame)		
Rated Pmpp [W]	270; 275; 280; 285; 290; 295	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	37.84; 38.05; 38.41; 38.77; 39.13; 39.55	Tolerance of rated Voc [%]	±3
Rated Isc [A]	9.15; 9.27; 9.35; 9.42; 9.50; 9.56	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	15	Fuse rating [A]	20
Design load (positive) [Pa]	1600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	150 1/3 cut cells: HTMxxxDMT8-50 (xxx=485-510, in increments of 5)		
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Dimensions [mm] / l x w x h..... :	2187*1102*30/35/40 (with frame)		
Rated Pmpp [W]	485, 490, 495, 500, 505, 510	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	51.09, 51.29, 51.49, 51.69, 51.89, 52.09	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	12.05, 12.13, 12.20, 12.28, 12.35, 12.42	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 1/3 cut cells: HTMxxxDMT8-40 (xxx=390-405, in increments of 5)		
Dimensions [mm] / l x w x h..... :	1754*1096*30/35/40 (with frame)		
Rated Pmpp [W]	390, 395, 400, 405	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	40.79, 40.99, 41.19, 41.39	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	12.14, 12.22, 12.28, 12.36	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	20
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	156 half cut cells: HTMxxxDMH5-78 (xxx=580-605, in increments of 5)		
Dimensions [mm] / l x w x h..... :	2464*1134*30/35/40 (with frame) 2465*1134*30/35/40 (with frame)		
Rated Pmpp [W]	580, 585, 590, 595, 600, 605	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V]..... :	53.52, 53.67, 53.82, 53.97, 54.12, 54.27	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	13.56, 13.64, 13.72, 13.80, 13.88, 13.95	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm]	12.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

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Module type	144 half cut cells: HTMxxxDMH5-72 (xxx=525-555, in increments of 5)		
Dimensions [mm] / l x w x h	2285*1134*30/35/40 (with frame) 2278*1134*30/35/40 (with frame) 2274*1134*30/35/40 (with frame) 2256*1134*30/35/40 (with frame)		
Rated Pmpp [W]	525, 530, 535, 540, 545, 550, 555	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	49.08, 49.23, 49.38, 49.53, 49.68, 49.83, 49.98	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	13.39, 13.46, 13.54, 13.63, 13.71, 13.80, 13.88	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half cut cells: HTMxxxDMH5-60 (xxx=440-460, in increments of 5)		
Dimensions [mm] / l x w x h	1904*1134*30/35/40 (with frame) 1944*1134*30/35/40 (with frame) 1890*1134*30/35/40 (with frame)		
Rated Pmpp [W]	440, 445, 450, 455, 460	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	40.95, 41.10, 41.25, 41.40, 41.55	Tolerance of rated Voc [%].....	±3
Rated Isc [A]	13.41, 13.52, 13.62, 13.72, 13.82	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	12.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	108 half cut cells: HTMxxxDMH5-54 (xxx=395-415, in increments of 5)		
Dimensions [mm] / l x w x h	1722*1134*30/35/40 (with frame)		
Rated Pmpp [W]	395, 400, 405, 410, 415	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	36.81, 36.96, 37.11, 37.26, 37.41	Tolerance of rated Voc [%].....	±3

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Rated Isc [A]	13.50, 13.60, 13.70, 13.79, 13.89	Tolerance of rated Isc [%].....	±5
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	11.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	132 half cut cells: HTMxxxDMH8-66 (xxx=635-670, in increments of 5)		
Dimensions [mm] / l x w x h	2384*1303*35 (with frame)		
Rated Pmpp [W]	635, 640, 645, 650, 655, 660, 665, 670	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	44.69, 44.89, 45.09, 45.29, 45.49, 45.69, 45.89, 46.09	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.29, 18.33, 18.37, 18.43, 18.49, 18.52, 18.58, 18.63	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	30
Design load (positive) [Pa]	3600	Safety factor (positive)	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half cut cells: HTMxxxDMH8-60 (xxx=585-605, in increments of 5)		
Dimensions [mm] / l x w x h	2172*1303*35 (with frame)		
Rated Pmpp [W]	585, 590, 595, 600, 605	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	40.89, 41.09, 41.29, 41.49, 41.69	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.38, 18.43, 18.48, 18.53, 18.58	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	30
Design load (positive) [Pa]	3600	Safety factor (positive)	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	156 half-cut cells: HTMxxxDMH5-78NT (xxx=605-640, in increments of 5)		
Dimensions [mm] / l x w x h	2465*1134*30/35/40 (with frame)		

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Rated Pmpp [W]	605, 610, 615, 620, 625, 630, 635, 640	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V]	55.01, 55.16, 55.31, 55.46, 55.61, 55.76, 55.91, 56.06	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.75, 13.83, 13.90, 13.98, 14.05, 14.13, 14.20, 14.27	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	144 half cut cells: HTMxxxDMH5-72NT (xxx=545-590, in increments of 5)		
Dimensions [mm] / l x w x h.....	2278*1134*30/35/40 (with frame)		
Rated Pmpp [W]	545, 550, 555, 560, 565, 570, 575, 580, 585, 590	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	50.43, 50.58, 50.72, 50.88, 51.03, 51.18, 51.33, 51.48, 51.57, 51.66	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.51, 13.59, 13.68, 13.76, 13.84, 13.92, 14.00, 14.08, 14.18, 14.28	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	11.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half cut cells: HTMxxxDMH5-60NT (xxx=455-490, in increments of 5)		
Dimensions [mm] / l x w x h.....	1904*1134*30/35/40 (with frame)		
Rated Pmpp [W]	455, 460, 465, 470, 475, 480, 485, 490	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	42.03, 42.18, 42.33, 42.48, 42.63, 42.78, 42.93, 43.08	Tolerance of rated Voc [%]	±3
Rated Isc [A]	13.53, 13.63, 13.73, 13.83, 13.93, 14.03, 14.12, 14.22	Tolerance of rated Isc [%].....	±4

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Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	11.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5


Module type	108 half cut cells: HTMxxxDMH5-54NT (xxx=410-440, in increments of 5)		
Dimensions [mm] / l x w x h	1722*1134*30/35/40 (with frame)		
Rated Pmpp [W]	410, 415, 420, 425, 430, 435, 440	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V].....	37.90, 38.05, 38.20, 38.35, 38.50, 38.65, 38.80	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	13.52, 13.63, 13.74, 13.85, 13.96, 14.07, 14.18	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	11.5	Fuse rating [A]	25
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	132 half cut cells: HTMxxxDMH8-66NT (xxx=660-700, in increments of 5)		
Dimensions [mm] / l x w x h	2384*1303*35 (with frame)		
Rated Pmpp [W]	660, 665, 670, 675, 680, 685, 690, 695, 700	Tolerance of rated Pmpp [%].....:	±3
Rated Voc [V].....	45.76, 45.81, 45.96, 46.11, 46.26, 46.41, 46.56, 46.71, 46.86	Tolerance of rated Voc [%].....:	±3
Rated Isc [A]	18.21, 18.33, 18.41, 18.48, 18.56, 18.64, 18.71, 18.79, 18.86	Tolerance of rated Isc [%].....:	±4
Maximum system voltage [V]..... :	1500 / 1000	Safety class acc. to IEC 61140.....:	Class II
Min-creepage distance [mm] :	13	Fuse rating [A]	30
Design load (positive) [Pa]	3600	Safety factor (positive).....:	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

Module type	120 half cut cells: HTMxxxDMH8-60NT (xxx=600-635, in increments of 5)		
Dimensions [mm] / l x w x h	2172*1303*35 (with frame)		

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Rated Pmpp [W]	600, 605, 610, 615, 620, 625, 630, 635	Tolerance of rated Pmpp [%].....	±3
Rated Voc [V].....	41.55, 41.70, 41.85, 42.00, 42.15, 42.30, 42.45, 42.60	Tolerance of rated Voc [%]	±3
Rated Isc [A]	18.23, 18.32, 18.40, 18.49, 18.57, 18.66, 18.74, 18.82	Tolerance of rated Isc [%].....	±4
Maximum system voltage [V].....	1500 / 1000	Safety class acc. to IEC 61140.....	Class II
Min-creepage distance [mm]	13	Fuse rating [A]	30
Design load (positive) [Pa]	3600	Safety factor (positive)	1.5
Design load (negative) [Pa]	1600	Safety factor (negative)	1.5

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Copy of marking plate:

	Crystalline Silicon Photovoltaic Modules		
Module Type Rated Maximum Power(Pm) Tolerance Voltage at Pmax(Vmp) Current at Pmax (Imp) Open-Circuit Voltage(Voc) Short-Circuit Current(Isc) Nominal Module Operating Temperature(NMOT) Maximum System Voltage Maximum Series Fuse Rating Application Class Safety Class Weight Dimensions	HTMxxxDMA-72(1500) xxxW ±3% xxxV xxxA xxx±3%V xxx±4%A 41±3°C 1500VDC 20A Class A Class II 30.0kg 1972*992*30mm	STC : AM=1.5 E=1000W/m ² TC=25°C Solar modules generate electricity as soon as they are exposed to light. One module on its own is below the safety extra low volt level, but multiple modules connected in series (summing the voltage) represent a danger.	
	Crystalline Silicon Photovoltaic Modules		
Module Type Rated Maximum Power(Pm) Tolerance Voltage at Pmax(Vmp) Current at Pmax (Imp) Open-Circuit Voltage(Voc) Short-Circuit Current(Isc) Nominal Module Operating Temperature(NMOT) Maximum System Voltage Maximum Series Fuse Rating Application Class Safety Class Weight Dimensions	HTMxxxDMH2-72(1600) xxxW ±3% xxxV xxxA xxx±3%V xxx±4%A 41±3°C 1500VDC 20A Class A Class II 28.0kg 2031*1002*30mm	STC : AM=1.5 E=1000W/m ² TC=25°C Solar modules generate electricity as soon as they are exposed to light. One module on its own is below the safety extra low volt level, but multiple modules connected in series (summing the voltage) represent a danger.	
	Crystalline Silicon Photovoltaic Modules		Crystalline Silicon Photovoltaic Modules
Module Type Rated Maximum Power(Pm) Tolerance Voltage at Pmax(Vmp) Current at Pmax (Imp) Open-Circuit Voltage(Voc) Short-Circuit Current(Isc) Nominal Module Operating Temperature Maximum System Voltage Maximum Series Fuse Rating Application Class Safety Class Weight Dimensions	HTMxxxDMH2-72(1500) xxxW ±3% xxxV xxxA xxx±3%V xxx±4%A 41±3°C 1500VDC 20A Class A Class II 28.0kg 2031*1010*30mm	Module Type Rated Maximum Power(Pm) Tolerance Voltage at Pmax(Vmp) Current at Pmax (Imp) Open-Circuit Voltage(Voc) Short-Circuit Current(Isc) Nominal Module Operating Temperature Maximum System Voltage Maximum Series Fuse Rating Application Class Safety Class Weight Dimensions	HTMxxxDMA-72(1500) xxxW ±3% xxxV xxxA xxx±3%V xxx±4%A 41±3°C 1500VDC 20A Class A Class II 28.0kg 1972*992*30mm
STC : AM=1.5 E=1000W/m ² TC=25°C	STC : AM=1.5 E=1000W/m ² TC=25°C		
 Solar modules generate electricity as soon as they are exposed to light. One module on its own is below the safety extra low volt level, but multiple modules connected in series (summing the voltage) represent a danger.	 Solar modules generate electricity as soon as they are exposed to light. One module on its own is below the safety extra low volt level, but multiple modules connected in series (summing the voltage) represent a danger.	Tangshan Haitai New Energy Technology Co., Ltd Add: NO 88 Haomen Road, Yutai Industrial Zone, Yutian County, Tangshan City, China. Web: www.htsolargroup.com E-mail: ht@htsolargroup.com Made in China	Tangshan Haitai New Energy Technology Co., Ltd Add: NO 88 Haomen Road, Yutai Industrial Zone, Yutian County, Tangshan City, China. Web: www.htsolargroup.com E-mail: ht@htsolargroup.com Made in China

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List of critical materials and components:

Object	Manufacturer	Type	Technical Data	Remark
Components				
6" mono cell 1 (bifacial PERC) Only for PV modules: HTMxxxDMA-72 (xxx=345-365), HTMxxxDMA-60 (xxx=290-305)	Guangdong Aiko Solar Energy Technology Co., Ltd.	6M2E514-J1 (Combined with Encapsulation material 1)	Dimension (w x l) = 156.75mm x 156.75mm Cell area = 24431.5mm ² Thickness = 190±20µm 5 busbars	Tested with PV modules
6" mono cell 2 (PERC) Only for PV modules: HTMxxxDMA-72, HTMxxxDMA-60	Tongwei Solar (HEFEI) CO., LTD.	M1565BPERC (Combined with Encapsulation material 1)	Dimension (w x l) = 156.75mm x 156.75mm Cell area = 24431.5mm ² Thickness = 200±30µm 5 busbars	Tested with PV modules
6" half cut mono cell 3 (bifacial PERC) Only for PV modules: HTMxxxDMH2-72, HTMxxxDMH2-60	Tongwei Solar (CHENGDU) CO., LTD.	M1585BPERCB P (Combined with Encapsulation material 1)	Dimension (w x l) = 158.75mm x 79.375mm Cell area = 12600.8mm ² Thickness = 190±30µm 5 busbars	Tested with PV modules
6" half cut mono cell 4 (bifacial PERC) Only for PV modules: HTMxxxDMH-72, HTMxxxDMH-60	Tongwei Solar (ANHUI) CO., LTD.	M1565BPERCB P	Dimension (w x l) = 156.75mm x 78.375mm Cell area = 12215.75mm ² Thickness = 190±30µm 5 busbars	Covered by main tested modules
6" half cut mono cell 5 (bifacial PERC) Only for PV modules: HTMxxxDMH3-72, HTMxxxDMH3-60	Tongwei Solar (CHENGDU) CO., LTD.	M1669BPERCB P SE	Dimension (w x l) = 166mm x 83mm ± 0.25µm Cell area = 13707.5mm ² Thickness = 190±30µm 9 busbars	Tested with PV modules
6" half cut mono cell 6 (bifacial HJT) Only for PV modules: HTMxxxDMH8-66NH. HTMxxxDMH8-60NH	Tangshan Haitai New Energy Technology Co., Ltd.	HTC210DMH12	Dimension (w x l) = 210mm x 105mm ± 0.25µm Cell area = 22048mm ² Thickness = 150±20µm 12 busbars	Tested with PV modules
6" half cut mono cell 7 (bifacial HJT) Only for PV modules: HTMxxxDMH3-72NH, HTMxxxDMH3-60NH	Tangshan Haitai New Energy Technology Co., Ltd.	HTC166DMH09	Dimension (w x l) = 166mm x 83mm ± 0.25µm Cell area = 13707mm ² Thickness = 150±15µm 9 busbars	Tested with PV modules
6" half cut mono cell 8 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	Jiangsu Runergy PV Technology Co., Ltd	PJ310BF47B2	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 10 busbars	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
6" half cut mono cell 9 (bifacial PERC) Only for PV modules: HTMxxxDMH3-72, HTMxxxDMH3-60	Jiangsu Runergy PV Technology Co., Ltd.	PM69BF29B2 (Combined with Encapsulation material 1)	Dimension (w x l) = 166mm x 83mm ± 0.25µm Cell area = 13707mm ² Thickness = 185 ± 18.5 µm 9 busbars	Tested with PV modules
6" half cut mono cell 10 (bifacial PERC) Only for PV modules: HTMxxxDMH2-72, HTMxxxDMH2-60	SHANXI LU'AN PHOTOVOLTAICS CO., LTD.	LA MP 112D-5-DFBP-158.75 (Combined with Encapsulation material 5)	Dimension (w x l) = 158.75mm x 79.375mm Cell area = 12600.8mm ² Thickness = 190±30µm 5 busbars	Tested with PV modules
6" half cut mono cell 11 (bifacial PERC) Only for PV modules: HTMxxxDMH2-72, HTMxxxDMH2-60	Zhejiang Aiko Solar Energy Technology co.Ltd.	6M2E514A-J1 (Combined with Encapsulation material 6)	Dimension (w x l) = 158.75mm x 79.375mm Cell area = 12600.8mm ² Thickness = 190±30µm 5 busbars	Tested with PV modules
6" 1/3 cut mono cell 12 (bifacial PERC) Only for PV modules: HTMxxxDMT8-50, HTMxxxDMT8-40	Tongwei Solar (Meishan) CO., LTD.	M2109BPERCB P SE (Combined with Encapsulation material 1)	Dimension (w x l) = 210mm x 70mm Cell area = 14700mm ² Thickness = 180±18µm 9 busbars	Tested with PV modules
6" half cut mono cell 13 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	SHANXI LU'AN PHOTOVOLTAICS CO., LTD.	LA MP 136D-10BDFBP-182SE (Combined with Encapsulation material 7)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 10 busbars	Tested with PV modules
6" half cut mono cell 14 (bifacial PERC) Only for PV modules: HTMxxxDMH3-72, HTMxxxDMH3-60	Zhejiang Aiko Solar Energy Technology Co.,Ltd.	JACMABP-9 (Combined with Encapsulation material 7)	Dimension (w x l) = 166mm x 83mm ± 0.25µm Cell area = 13707mm ² Thickness = 190 ± 19 µm 9 busbars	Tested with PV modules
6" half cut mono cell 15 (bifacial PERC) Only for PV modules:	Tongwei Solar (Meishan) CO., LTD.	M210CBPERCB P (Combined with Encapsulation material 1)	Dimension (w x l) = 210mm x 105mm Cell area = 22050mm ² Thickness = 180±18µm 12 busbars	Tested with PV modules
6" half cut mono cell 16 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	Zhejiang Aiko Solar Energy Technology Co. Ltd.	7M9E1018A-L1 (Combined with Encapsulation material 11)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 10 busbars	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
6" half cut mono cell 17 (bifacial TOPCon) Only for PV modules: HTMxxxDMH5-72NT, HTMxxxDMH5-60NT, HTMxxxDMH5-54NT	Tangshan Haitai New Energy Technology Co., Ltd.	HTC182DMT16 (Combined with Encapsulation material 12)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 16 busbars	Tested with PV modules
6" half cut mono cell 18 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	Tongwei Solar CO., LTD.	M182ABPERCB P SE (Combined with Encapsulation material 9)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 10 busbars	Tested with PV modules
6" half cut mono cell 19 (bifacial TOPCon) Only for PV modules: HTMxxxDMH8-66NT, HTMxxxDMH8-60NT	Tangshan Haitai New Energy Technology Co., Ltd.	HTC210DMT12 (Combined with Encapsulation material 1)	Dimension (w x l) = 210mm x 105mm Cell area = 22050mm ² Thickness = 170±17µm 12 busbars	Tested with PV modules
6" half cut mono cell 20 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	SolarSpace Technology Co., Ltd.	S18210BB023 (Combined with Encapsulation material 14)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 160 ± 16 µm 10 busbars	Tested with PV modules
6" half cut mono cell 21 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	SHANGRAO JIETAI ENERGY TECHNOLOGY CO.,LTD	JT-182M-10D24 (Combined with Encapsulation material 15)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 10 busbars	Tested with PV modules
6" half cut mono cell 22 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	ZHONGHUAN SEMICODUCTOR TECHNOLOGY Co.,Ltd	M182.2 10BB (Combined with Encapsulation material 16)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 175 ± 17.5 µm 10 busbars	Tested with PV modules
6" half cut mono cell 23 (bifacial PERC) Only for PV modules: HTMxxxDMH5-78, HTMxxxDMH5-72, HTMxxxDMH5-60, HTMxxxDMH5-54	Anhui Yingfa Desheng Technology Co., Ltd	M10-A (Combined with Encapsulation material 17)	Dimension (w x l) = 182mm x 91mm ± 0.25µm Cell area = 16507mm ² Thickness = 170 ± 17 µm 10 busbars	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
6" half cut mono cell 24 (bifacial PERC) Only for PV modules: HTMxxxDMH8-66, HTMxxxDMH8-60	Zhejiang Aiko Solar Energy Technology Co. Ltd.	8S7E1218A-R1 (Combined with Encapsulation material 18)	Dimension (w x l) = 210mm x 105mm Cell area = 22050mm ² Thickness = 165±16.5µm 12 busbars	Tested with PV modules
6" half cut mono cell 25 (bifacial TOPCon) Only for PV modules: HTMxxxDMH8-66NT, HTMxxxDMH8-60NT	Shangrao JieTai New Energy Technology Co.,Ltd.	CZJT-210M-18D1	Dimension (w x l) = 210mm x 105mm Cell area = 22050mm ² Thickness = 130±13µm 18 busbars	Tested with PV modules
6" half cut mono cell 26 (bifacial TOPCon) Only for PV modules: HTMxxxDMH5-72NT, HTMxxxDMH5-60NT, HTMxxxDMH5-54NT	Shangrao JieTai New Energy Technology Co.,Ltd.	CZJT-182M-16D1	Dimension (w x l) = 182mm x 91mm Cell area = 16507mm ² Thickness = 140±14µm 16 busbars	Tested with PV modules
6" half cut mono cell 27 (bifacial TOPCon) Only for PV modules: HTMxxxDMH5-78NT, HTMxxxDMH5-72NT, HTMxxxDMH5-60NT, HTMxxxDMH5-54NT	Jiangsu Runergy PV Technology Co., Ltd.	NM1016BF1B3	Dimension (w x l) = 182mm x 91mm Cell area = 16507mm ² Thickness = 135±13.5µm 16 busbars	Tested with PV modules
6" half cut poly cell 1 Only for PV modules: HTMxxxDPH-72; HTMxxxDPH-60	Tongwei Solar (CHENGDU) CO., LTD.	P1565B (Combined with Encapsulation material 1)	Dimension (w x l) = 156.75mm x 78.375mm Cell area = 12285mm ² Thickness = 210 ± 30µm 5 busbars	Tested with PV modules
6" half cut poly cell 2 Only for PV modules: HTMxxxDPH2-72; HTMxxxDPH2-60	Tongwei Solar (CHENGDU) CO., LTD.	P1585B (Combined with Encapsulation material 1)	Dimension (w x l) = 158.75mm x 79.375mm Cell area = 12600mm ² Thickness = 190±30µm 5 busbars	Covered by main tested modules
Front cover	Xinyi PV Products (Anhui) Holdings Ltd.	AR coating tempered glass	Thickness = 2.5mm / 2.0mm Only for PV modules with 6" cells	Tested with PV modules
	Xinyi PV Products (Anhui) Holdings Ltd.	AR coating tempered glass	Thickness = 1.6mm Only for PV modules with 6" cells & frame (thickness = 35mm / 40mm)	Tested with PV modules
	Zhejiang Ninghai Kibing New Energy Management Co., Ltd.	AR coating tempered glass	Thickness = 2.0mm	Tested with PV modules
	ANHUI CSG NEW ENERGY MATERIAL TECHNOLOGY CO., LTD.	AR coating tempered glass	Thickness = 2.0mm Only for PV modules with 6" cells	Tested with PV modules
	HENAN ANCAI HI TECH CO.,LTD	AR coating tempered glass	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	CAIHONG GROUP NEW ENERGY COMPANY LIMITED	AR coating tempered glass	Thickness = 2.5mm / 2.0mm	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
	Changzhou Almaden Stock Co., Ltd.	AR coating tempered glass	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	Shanxi Rishengda Solar Energy Technology Co., Ltd.	AR coating tempered glass	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	Tangshan Jinxin New Energy Technology Co.,Ltd.	AR coating tempered glass	Thickness = 2.0mm	Tested with PV modules
	Changzhou Huamei Photovoltaic New Materials Co.,Ltd.	AR coating tempered glass	Thickness = 2.0mm	Tested with PV modules
	Tianjin Seed Glass Co., Ltd.	AR coating tempered glass	Thickness = 2.0mm	Tested with PV modules
	NINGXIA JINJING SCIENCE&TECHNOLOGY CO., LTD	AR coating tempered glass	Thickness = 2.0mm	Tested with PV modules
	Flat Glass Group Co., Ltd.	AR coating tempered glass	Thickness = 2.0mm	Tested with PV modules
Rear cover	Xinyi PV Products (Anhui) Holdings Ltd.	Tempered glass	Thickness = 2.5mm / 2.0mm Only for PV modules with 6" cells	Tested with PV modules
	Xinyi PV Products (Anhui) Holdings Ltd.	Tempered glass	Thickness = 1.6mm Only for PV modules with 6" cells & frame (thickness = 35mm / 40mm)	Covered by main tested modules
	Zhejiang Ninghai Kibing New Energy Management Co., Ltd.	Tempered glass	Thickness = 2.0mm Only for PV modules with frame	Covered by main tested modules
	Xinyi PV Products (Anhui) Holdings Ltd.	Tempered glass with white grid-glaze coating	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	Xinyi PV Products (Anhui) Holdings Ltd.	Tempered glass with white grid-glaze coating	Thickness = 1.6mm Only for PV modules with 6" cells & frame (thickness = 35mm / 40mm)	Tested with PV modules
	Zhejiang Ninghai Kibing New Energy Management Co., Ltd.	Tempered glass with white grid-glaze coating	Thickness = 2.0mm	Tested with PV modules
	ANHUI CSG NEW ENERGY MATERIAL TECHNOLOGY CO., LTD.	Tempered glass with white grid-glaze coating	Thickness = 2.0mm Only for PV modules with 6" cells & frame	Tested with PV modules
		AR coating tempered glass		Covered by main tested modules
	Henan Ancai Hight-Tech Co., Ltd.	Tempered glass with white grid-glaze coating	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	CAIHONG GROUP NEW ENERGY COMPANY LIMITED	Tempered glass with white grid-glaze coating	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	Changzhou Almaden Stock Co., Ltd.	Tempered glass with white grid-glaze coating	Thickness = 2.5mm / 2.0mm	Tested with PV modules
	Zhejiang Ninghai Kibing New Energy Management Co., Ltd.	Tempered glass with white grid-glaze Coating	Thickness = 2.5mm / 2.0mm	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
	Shanxi Rishengda Solar Energy Technology Co., Ltd.	Tempered glass with white grid-glaze coating	Thickness =2.5mm / 2.0mm	Tested with PV modules
	Tangshan Jinxin New Energy Technology Co.,Ltd.	Tempered glass with white grid-glaze coating	Thickness =2.0mm	Tested with PV modules
	Changzhou Huamei Photovoltaic New Materials Co.,Ltd.	White grid-glaze coating glass	Thickness =2.0mm	Tested with PV modules
	Tianjin Seed Glass Co., Ltd.	Tempered glass with white grid-glaze coating	Thickness =2.0mm	Tested with PV modules
	NINGXIA JINJING SCIENCE&TECHNOLO GY CO., LTD	Tempered glass with white grid-glaze coating	Thickness =2.0mm	Tested with PV modules
	Flat Glass Group Co., Ltd.	Tempered glass with white grid-glaze coating	Thickness =2.0mm	Tested with PV modules
Encapsulation material 1 (Combined with mono cell 1-5, & poly cell)	Hangzhou First Applied Material Co., Ltd.	TF4(P) (between cell and front cover) & TF4(P) (between rear cover and cell)	Thickness = 0.65 ± 0.1mm PTI = 600 (V)	Tested with PV modules PTI report no. 15101259 005
Encapsulation material 2 (Combined with mono cell 6, 7)	Cybrid Technologies Inc.	C22H (between cell and front cover) & C22H (between rear cover and cell)	Thickness = 0.65 ± 0.1mm CTI = 600 (V)	Tested with PV modules CTI report no. 70.407.20.277.04-00
Encapsulation material 3 (Combined with mono cell 6, 7)	Jiangsu Lushan New Materials Co. ltd	S101	Thickness = 0.65 ± 0.03mm CTI = 600 (V)	Tested with PV modules CTI report no. E344067 issued by UL
Encapsulation material 5 (Combined with mono cell 10)	Hangzhou First Applied Material Co., Ltd.	F406P (between cell and front cover) & TF4 (between rear cover and cell)	Thickness = 0.5-0.7mm (F406P) / 0.65-0.75 mm (TF4)	Tested with PV modules
Encapsulation material 6 (Combined with mono cell 11, 25)	Shanghai HIUV New Materials Co., Ltd.	S201MT1(betwe en cell and front cover) & P507 (between rear cover and cell)	Thickness = 0.4- 0.8mm±0.1mm (S201MT1) / 0.5-0.8 mm±0.1mm (P507)	Tested with PV modules
Encapsulation material 7 (Combined with mono cell 14)	Changzhou Sveck PV New Material Co., Ltd	SV-15296P (between cell and front cover) & CO-556 (between rear cover and cell)	Thickness = 0.45- 0.9mm±0.05mm (SV- 15296P) / 0.45-0.9 mm±0.05mm (CO-556)	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
Encapsulation material 8 (Combined with mono cell 15)	Shanghai HIUV New Materials Co., Ltd.	P507 (between cell and front cover) & P507 (between rear cover and cell)	Thickness = 0.5-0.8mm± 0.1mm for each layer	Tested with PV modules
Encapsulation material 9 (Combined with mono cell 14, 19)	Cybrid Technologies Inc.	T11(between cell and front cover) & T22H(between rear cover and cell)	Thickness =0.45-0.55 mm for each layer	Tested with PV modules
Encapsulation material 10 (Combined with mono cell 14)	Cybrid Technologies Inc.	T22H(between cell and front cover) & T22H(between rear cover and cell)	Thickness =0.45-0.55 mm for each layer	Tested with PV modules
Encapsulation material 11 (Combined with mono cell 17)	Anhui Xinyi New Energy Materials Co., Ltd	XES-811(between cell and front cover) & XES-831(between rear cover and cell)	Thickness =0.45-0.65 mm ±0.1mm(XES-811) / 0.50- 0.65 mm ±0.1mm(XES- 831)	Tested with PV modules
Encapsulation material 12 (Combined with mono cell 18)	Cybrid Technologies Inc.	T22(between cell and front cover) & T22(between rear cover and cell)	Thickness =0.45-0.55 mm for each layer	Tested with PV modules
Encapsulation material 14 (Combined with mono cell 20)	Anhui Keruixin New Material Co., Ltd.	K602 (between cell and front cover) & K202 (between rear cover and cell)	Thickness = 0.4-0.8mm ± 0.03mm for each layer	Tested with PV modules
Encapsulation material 15 (Combined with mono cell 21)	Suzhou YISHENG Optical Material Co., Ltd.	P601 (between cell and front cover) & E701 (between rear cover and cell)	Thickness = 0.4-0.8mm ± 0.1mm for each layer	Tested with PV modules
Encapsulation material 16 (Combined with mono cell 22)	Jiangsu Lushan New Materials Co.,Ltd.	EV1050G2 (between cell and front cover) & S102 (between rear cover and cell)	Thickness =0.5± 0.02mm / 0.40-0.8 mm ±0.03mm	Tested with PV modules
Encapsulation material 17 (Combined with mono cell 23)	Jiangsu Lushan New Materials Co.,Ltd.	S102 (between cell and front cover) & S102(between rear cover and cell)	Thickness =0.4-0.8± 0.03mm / 0.4-0.8± 0.03mm	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
Encapsulation material 18 (Combined with mono cell 24)	ZHEJIANG SINOPONT TECHNOLOGY CO.,LTD.	PO8110 (between cell and front cover) & EVA9110T (between rear cover and cell)	Thickness = 0.45-0.55 mm	Tested with PV modules
Encapsulation material 19 (Combined with mono cell 25)	Jiangsu Lushan New Materials Co., Ltd.	S102 (between cell and front cover) & EV1050G2 (between rear cover and cell)	Thickness =0.5± 0.02mm (S102) Thickness = 0.5± 0.05mm (EV1050G2)	Tested with PV modules
Encapsulation material 20 (Combined with mono cell 26)	Hangzhou First Applied Material Co., Ltd.	EP304(between cell and front cover) &F406P(between rear cover and cell)	Thickness =0. 5± 0.02mm / 0.40-0.8 mm ±0.03mm	Tested with PV modules
Encapsulation material 21 (Combined with mono cell 27)	Shanghai HIUV New Materials Co., Ltd.	P507 (between cell and front cover) & S201MT1 (between rear cover and cell)	Thickness = 0.4- 0.8mm±0.1mm (S201MT1) / 0.5-0.8 mm±0.1mm (P507)	Tested with PV modules
Frame parts	TangShan Jing Tuo Aluminum Products Co., Ltd.	6063-T5	Connected by: corner brace Color: silver Thickness = 30mm / 35mm / 40mm Only for PV modules with 6" cells	Tested with PV modules
	Jiangyin Chuangyue Metal Products Co., Ltd.	6005-T6	Connected by: corner brace Color: silver Thickness = 30mm / 35mm / 40mm Only for PV modules with 6" cells	Tested with PV modules
	Tangshan Haitai New Energy Technology Co., Ltd.	6005-T6	Connected by: corner brace Color: silver Thickness = 30mm/35mm / 40mm	Tested with PV modules
	Jiangyin Xuchu Technology Co., Ltd.	6005-T6	Connected by: corner brace Color: silver Thickness = 30mm/35mm/40mm	Tested with PV modules
	Tangshan Haitai New Energy Technology Co., Ltd	6063-T5	Connected by: corner brace Color: silver Thickness = 30mm/35mm/40mm	Tested with PV modules
	Jiangyin Xuchu Technology Co., Ltd.	6063-T5	Connected by: corner brace Color: silver Thickness = 30mm/35mm/40mm	Tested with PV modules
	Jiangsu Guangzhou Metal Technology Co., Ltd.	6005-T6	Connected by: corner brace Color: silver Thickness = 30mm/35mm/40mm	Tested with PV modules
	Tongwei Solar CO., LTD.	6005-T6	Connected by: corner brace Color: silver Thickness = 30mm/35mm/40mm	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
Adhesive (frame)	Shanghai Huitian New Materials and Technology Co., Ltd.	HT906Z	Color: white	Tested with PV modules
	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	Tested with PV modules
	Chengdu Guibao Science & Technology Co., Ltd.	888A	Color: white	Tested with PV modules
	Hangzhou Zhijiang Silicone Chemicals CO., LTD	JS-606	Color: white	Tested with PV modules
Internal wiring (for interconnection cell-to-cell bus bar)	TaiCang JuRen PV Material Co., Ltd.	Copper belt with tin plated	Width = 1.0mm Thickness = 0.25mm Sn60%Pb40%	Tested with PV modules
	Jiangsu Sun Technology Corp., Ltd.	Copper belt with tin plated	Width = 0.9mm Thickness = 0.25mm Sn60%Pb40%	Tested with PV modules
	Wuxi Sveck Technology Co., Ltd.	Copper belt with tin plated	Width = 0.9mm Thickness = 0.25mm Sn60%Pb40%	Tested with PV modules
	TaiCang JuRen PV Material Co., Ltd.	Copper belt with tin plated	φ0.3mm Sn60%Pb40%	Tested with PV modules
	Tangshan Haitai New Energy Technology Co., Ltd.	Copper belt with tin plated	φ0.32mm, φ0.30mm Sn60%Pb40%	Tested with PV modules
	Jiangsu Sun Technology Corp., Ltd.	Copper belt with tin plated	φ0.30 / 0.32 / 0.35 mm Sn/Pb=60%/40%	Tested with PV modules
	Tangshan Haitai New Energy Technology Co., Ltd.	Copper belt with tin plated	φ0.29/0.25/0.27 mm Sn/Pb=60%/40%	Tested with PV modules
	Jiangsu SUN Technology Corp., Ltd.	Copper belt with tin plated	φ0.25 mm Sn/Pb=60%/40%	Tested with PV modules
	Xi'an Telison New Materials Co.,Ltd.	Copper belt with tin plated	φ0.3 mm Sn/Pb=63%/37%	Tested with PV modules
	Wuxi Sveck Technology Co., Ltd.	Copper belt with tin plated	φ0.3 mm Sn/Pb=60%/40%	Tested with PV modules
Internal wiring (for inter-string connection)	TaiCang JuRen PV Material Co., Ltd.	Copper belt with tin plated	Width = 6.0mm Thickness = 0.3mm Sn60%Pb40%	Tested with PV modules
	Jiangsu Sun Technology Corp., Ltd.	Copper belt with tin plated	Width = 6.0mm Thickness = 0.35mm Sn60%Pb40%	Tested with PV modules
	Wuxi Sveck Technology Co., Ltd.	Copper belt with tin plated	Width = 4.0mm Thickness = 0.35mm Sn60%Pb40%	Tested with PV modules
	Tangshan Haitai New Energy Technology Co., Ltd.	Copper belt with tin plated	Width = 4.0mm/8.0mm Thickness = 0.35mm Sn60%Pb40%	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
	TaiCang JuRen PV Material Co., Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.35mm Sn60%Pb40%	Tested with PV modules
	Jiangsu Sun Technology Corp., Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.35mm Sn60%Pb40%	Tested with PV modules
	Tangshan Haitai New Energy Technology Co., Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.35/0.3mm Sn60%Pb40%	Tested with PV modules
	TaiCang JuRen PV Material Co., Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.3mm Sn60%Pb40%	Tested with PV modules
	Xi'an Telison New Materials Co.,Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.3mm Sn60%Pb40%	Tested with PV modules
	Jiangsu SUN Technology Corp., Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.30mm Sn60%Pb40%	Tested with PV modules
	Wuxi Sveck Technology Co., Ltd.	Copper belt with tin plated	Width = 4.0/6.0mm Thickness = 0.3mm Sn60%Pb40%	Tested with PV modules
Soldering material	N/A	N/A	N/A	N/A
Fluxing agent	Asahi Solder technology (Wuxi) Co., Ltd.	SF56	-	Tested with PV modules
		SF105	-	Tested with PV modules
	Shenzhen Vital New Material Company Limited	PV105A	-	Tested with PV modules
	TONGFANG TECH	TFHF9200	-	Tested with PV modules
	Shenzhen Tong fang Electronic New Material Co., Ltd.	AATF9800-MBB	-	Tested with PV modules
	Asahi Solder technology Co., Ltd. (Sold by CHANGLI SHENGRI CHEMICAL PRODUCTS CO., LTD)	SF-105L	-	Tested with PV modules
	Tong fang Electronic New Material Co., Ltd	TF-6201	-	Tested with PV modules
	Jiangsu Chengrui metal material CO.,LTD.	CR-PV201	-	Tested with PV modules
Fixing tape	3M	UV-100	Width = 8mm	Tested with PV modules
	3M	UV-1	Width = 5mm / 6mm	Tested with PV modules

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Object	Manufacturer	Type	Technical Data	Remark
	TERAOKA	631S	Width = 5mm / 6mm	Tested with PV modules
	LONGSHENG	LS8860	Width = 8mm	Tested with PV modules
Accessory	3M	T81X	Thickness = 0.068-0.077mm Width = 1.0mm	Tested with PV modules
Markings	Tianjin Heng Qi packaging products Co.,Ltd.	PET	Color: white	-
Ink	CWS Electronic Technology CO.,LTD	CWS-820	-	-
Junction box set 1				
Junction box	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FT50xy	Rated voltage = 1500VDC Rated current = 16A for FT50xy(x=1); 18A for FT50xy(x=2); 20A for FT50xy(x=3); 25A for FT50xy(x=4); 28A for FT50xy(x=5) Number of diodes: 3	Certificates R 50415465
Adhesive (junction box)	Shanghai Huitian New Materials and Technology Co., Ltd.	HT906Z	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	TONSAN ADHESIVE	TS 1527	Color: white	-
	Dow Corning	PV804	Color: white	-
	Chengdu Guibao Science and Technology Co., Ltd.	888A	Color: white	-
Potting material	Shanghai Huitian New Materials and Technology Co., Ltd.	5299W-S	Color: white	-
	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1533	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1521	Color: white	-
Bypass diodes	Changzhou Starsea Electronic Co., Ltd.	FMK4530T	Tj max = 200°C If = 30A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK4525A	Tj max = 200°C If = 16A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK4530A	Tj max = 200°C If = 18A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK4530B	Tj max = 200°C If = 20A	-

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Object	Manufacturer	Type	Technical Data	Remark
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK4530T	Tj max = 200°C If = 20A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK5040D	Tj max = 200°C If = 25A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FMK3040P	Tj max = 200°C If = 28A	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50318681
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificates R 50318681
	Trina Solar Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificates R 50426462
Connectors	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	05-8	Rated voltage = 1500VDC Rated current = 30A	Certificate no. R 50334688
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RHC2xyzu	Rated voltage = 1500VDC Rated current = 35A	Certificates R 50473621
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated voltage = 1500VDC Rated current = 45A	Certificates R 60127169
Junction box set 2				
Junction box	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	PV-XT1609Nxyz	Rated voltage = 1500VDC Rated current = 20A for PV XT1609Nxyz (x=1 or 2 or 3;y=2;z=1 or 3 or 4 or 5); 17A for PV-XT1609Nxyz (x=1;y=1;z=2); Number of diodes: 3	Certificates R 50359250
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	-
Pott5ing material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS1521	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS1533	Color: white	-
Bypass diodes	Panjit Electronics(Wuxi) CO.,LTD.	SB3050DC	If = 30A	-
	Panjit Electronics(Wuxi) Co.,Ltd	SB3050DC	Tj max = 200°C If = 20A	-

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Object	Manufacturer	Type	Technical Data	Remark
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	SB3050S	If = 30A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	SB3050B	Tj max = 200°C If = 17A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	GFS2545	If = 25A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	GFS2545	Tj max = 200°C If = 20A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	XT3050	If = 30A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	XT3050	Tj max = 200°C If = 20A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	XT3050M	If = 30A	-
	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	XT3050M	Tj max = 200°C If = 20A	-
Cable	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50358893
	Wuxi Xinhongye Wire & Cable Co., Ltd	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50311889
Connectors	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	PV-XT101.1	Rated voltage = 1500VDC Rated current = 35A	Certificate no. R 50385354
	Stäubli 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
Junction box set 3				
Junction box	Jiangsu Tiansheng PV Technology Co., Ltd.	PV-TS11-20A	Rated voltage = 1500VDC Rated current = 20A, 25A Number of diodes: 3	Certificate no. B 095207 0015
Adhesive (junction box)	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
Potting material	Beijing Tonsan New Material Technology Co., Ltd.	TS1521	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT5299W-S	Color: white	-
Bypass diodes	Wuxi Panjit Technology Development Co., Ltd	SBT3045KF	Tj max = 200°C If = 30A	-
	PAN JIT INTERNATIONAL INC.	GF4045	Tj max = 200°C If = 25A	-
Cable	Wuxi Xinhongye Wire & Cable Co., Ltd	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50311889

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Object	Manufacturer	Type	Technical Data	Remark
	Huzhou Shangfu Wire & Cable Hight Technology Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50334055
Connectors	Jiangsu Tiansheng PV Technology Co., Ltd.	PV-TS02	Rated voltage = 1500VDC Rated current = 30A	Certificate no. B 16 06 95207 005
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	Rated voltage = 1500VDC Rated current = 45A	Certificates R 60127169
Junction box set 4				
Junction box	Jiangsu Holysun Electronics Technology Co., Ltd.	S2N	Rated voltage = 1500VDC Rated current = 20A Number of diodes: 3	Certificate no. R 50400306
Adhesive (junction box)	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	Dow Corning	PV804	Color: white	-
Potting material	Shanghai Huitian New Chemical Material Co., Ltd.	5299W	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS1533	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS1521	Color: white	-
Bypass diodes	PAN JIT INTERNATIONAL INC.	SB3045DY	If = 30A	-
	Jiangsu Holysun Electronics Technology Co., Ltd.	HD3045	If = 30A	-
Cable	Ningbo Kibor Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50302047
	Changshu JHOSIN Communication Technology Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50325448
	Changzhou Chaoyue Special Cable Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50419838
	Jiangsu Holysun Electronics Technology Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50432749
Connectors	Jiangsu Holysun Electronics Technology Co., Ltd.	C1	Rated voltage = 1500VDC Rated current = 30A	Certificate no. R 50462216
	Jiangsu Holysun Electronics Technology Co., Ltd.	C2 and LJ-01	Rated voltage = 1500VDC Rated current = 30A	Certificate no. R 50435943

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Object	Manufacturer	Type	Technical Data	Remark
	Stäubli Electrical Connectors AG	PV-KST4/xy-UR; PV-KBT4/xy-UR	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 5				
Junction box	Dongguan Zerun Electronics Technology Co., Ltd.	Z8-abcde	Rated voltage = 1500VDC Rated current = 25A Number of diodes: 3	Certificate no. R 50359034
Adhesive (junction box)	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
Potting material	Beijing Tonsan New Material Technology Co., Ltd.	TS1521	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT5299W-S	Color: white	-
Bypass diodes	Yangzhou Yangjie Electrics Technology Co. Ltd.	20SQ045	Tj max = 200°C If = 20A	-
	Dongguan Zerun Electronics Technology Co., Ltd.			-
	Yangzhou Yangjie Electrics Technology Co. Ltd.	20SQ100	Tj max = 200°C If = 20A	-
	Yangzhou Yangjie Electrics Technology Co. Ltd.	25SQ045	Tj max = 200°C If = 25A	-
	Dongguan Zerun Electronics Technology Co., Ltd.			-
	Yangzhou Yangjie Electrics Technology Co. Ltd.	30SQ045	Tj max = 200°C If = 30A	-
	Dongguan Zerun Electronics Technology Co., Ltd.			-
	Yangzhou Yangjie Electrics Technology Co. Ltd.	SL2020A	Tj max = 200°C If = 20A	-
Lite-On Semiconductor Corp	SL20U50R6	Tj max = 200°C If = 20A	-	
Cable	Dongguan Zerun Electronics Technology Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50354353
	SUZHOU BAOHING ELECTRIC WIRE & CABLE CO., LTD.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50310426
	Wuxi Xinhongye Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50311889
	Changshu Honglin Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50325448
Connectors	Dongguan Zerun Electronics Technology Co., Ltd.	Z4S-abcde	Rated voltage = 1500VDC Rated current = 40A	Certificate no. R 50363877

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Object	Manufacturer	Type	Technical Data	Remark
	Stäubli Electrical Connectors AG	PV-KST4-EVO2/xy; PV-KBT4-EVO2/xy;	Rated voltage = 1500VDC Rated current = 45A	Certificate no. R 60127169
	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCFabcd; UTXCMabcd	Rated voltage = 1500VDC Rated current = 42A	Certificate no. R 50340393
	Multi-Contact Essen GmbH	PV-KBT4-EVO2/xy; PV-KST4-EVO2/xy	Rated voltage = 1500VDC Rated current = 45A	Certificates R 60098495
Junction box set 6				
Junction box	Jiangsu Tiansheng PV Technology Co., Ltd.	PV-TS11-20A	Rated voltage = 1500VDC Rated current = 30A Number of diodes: 3	Certificate no. B 095207 0015
Adhesive (junction box)	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	-
Potting material	Beijing Tonsan New Material Technology Co., Ltd.	TS1533	Color: white	-
Bypass diodes	Wuxi Panjit Technology Development Co. Ltd.	GF6045	Tj max = 200°C If = 60A	-
Cable	Huzhou Shangfu Wire & Cable Co., Ltd	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50444396
	Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50439595
Connectors	Jiangsu Tiansheng PV Technology Co., Ltd.	PV-TS02	Rated voltage = 1500VDC Rated current = 30A	Certificate no. B 095207 0016
	Stäubli Electrical Connectors AG	PV-KST4-EVO2/xy; PV-KBT4-EVO2/xy;	Rated voltage = 1500VDC Rated current = 45A	Certificate no. R 60127169
Junction box set 7				
Junction box	ZHEJIANG FORSOL ENERGY CO., LTD.	F303x (x=D or F or G)	Rated voltage = 1500VDC Rated current = 20A (x=D) 25A (x=F), 30A (x=G) Number of diodes: 3	Certificate no. R 50488820
Adhesive (junction box)	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	Color: white	-
	Shanghai Huitian New Materials and Technology Co., Ltd.	HT906Z	Color: white	-
Potting material	TONSAN ADHESIVE INC.	TS1533	Color: white	-
	Jiangsu Minghao New Material Technology Co.,Ltd.	MH-3667	Color: white	-
	Shanghai Huitian New Materials and Technology Co., Ltd.	5299W-S	Color: white	-

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Object	Manufacturer	Type	Technical Data	Remark
Bypass diodes	ZHEJIANG FORSOL ENERGY Co.,Ltd.(OEM:Nantong Homby Electronic Co.,Ltd.	FSL-3050	Tj max = 200°C If = 30A	-
	ZHEJIANG FORSOL ENERGY Co.,Ltd.(OEM:Nantong Homby Electronic Co.,Ltd.	FSL-4050	Tj max = 200°C If = 40A	-
	ZHEJIANG FORSOL ENERGY Co.,Ltd.(OEM:Nantong Homby Electronic Co.,Ltd.	FSL-5050	Tj max = 200°C If = 50A	-
Cable	Wuxi Xinghongye 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
	ZHEJIANG FORSOL ENERGY CO., LTD.	H1Z2Z2-K 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50412016
	ZHEJIANG FORSOL ENERGY CO., LTD.	62930 IEC 131 1x4.0 mm ²	Rated voltage = 1500VDC	Certificate no. R 50515986
Connectors	ZHEJIANG FORSOL ENERGY CO., LTD.	SIKE6	Rated voltage = 1500VDC Rated current = 30A	Certificate no. R 50340749
		FC4-4	Rated voltage = 1500VDC Rated current = 41A	Certificate no. R 50513372
	Stäubli Electrical Connectors AG	PV-KST4-EVO2/xy_UR; PV-KBT4-EVO2/xy_UR;	Rated voltage = 1500VDC Rated current = 45A	Certificate no. R 60127169
Junction box set 8				
Junction box	Jiangsu Holysun Electronics Technology Co.,Ltd.	S4xy	Rated voltage = 1500VDC Rated current = 20A for S4xy (x=C); 25A for S4xy (x=G); 30A for S4xy (x=K) 35A for S4xy (x=L;y=blank or S) Number of diodes: 3	Certificates R 50400306
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co.,Ltd.	HT906Z	-	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1527	-	-
	Dow Corning	PV804	-	-
	Chengdu Guibao Science and Technology Co.,Ltd.	888A	-	-
Potting material	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	-	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1533	-	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1521	-	-

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Object	Manufacturer	Type	Technical Data	Remark
	Chengdu Guibao Science and Technology Co.,Ltd.	4808	-	-
Bypass diode	SUZHOU GOOD-ARK ELECTRONIC CO., LTD /Jiangsu Holysun Electronics Technology Co.,Ltd.	GFT3050SM	Tj max = 200°C If = 30A	-
	SUZHOU GOOD-ARK ELECTRONIC CO., LTD /Jiangsu Holysun Electronics Technology Co.,Ltd.	GFT4050SM	Tj max = 200°C If = 40A	-
	SUZHOU GOOD-ARK ELECTRONIC CO., LTD /Jiangsu Holysun Electronics Technology Co.,Ltd.	GFT5050CT	Tj max = 200°C If = 50A	-
Cable	Jiangsu Holysun Electronics Technology Co., Ltd.	62930 IEC 131 1X4mm² HALOGEN GREE LOW SMOKE	Rated voltage = 1500VDC	Certificates R 50481494
	Jiangsu Holysun Electronics Technology Co., Ltd.	62930 IEC 131 1X4mm² HALOGEN GREE LOW SMOKE	Rated voltage = 1500VDC	Certificates R 50483180
Connectors	Jiangsu Holysun Electronics Technology Co., Ltd.	C1xyz (x=blank or S; y= blank; z=blank)	system voltage:1500V(x=blank); 1000V(x=S); rated current: 30A	Certificates R 50462216
	Jiangsu Holysun Electronics Technology Co., Ltd.	C2xyz(x=blank;y =blank;z =blank); LJ-01x (x=blank)	system voltage =1500V; rated current= 30A	Certificates R 50488696
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV- KBT4-EVO 2/xy_UR	system voltage= 1500V; rated current= 45A	Certificates R 60127169
Junction box set 9				
Junction box	Zerun Co., LTD	Z8-abcd	Rated voltage = 1500VDC Rated current = 20A for Z8-abcd(c=W;)22A for Z8-abcd (b=E or F,c=D); 25A for Z8-abcd (c=P); 27A for Z8-abcd (b=E or F,c=K); 30A for Z8-abcd (c=N); 32A for Z8- abcd (b=E or F,c=Q) Number of diodes: 3	Certificates R 50494837
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	TONSAN ADHESIVE, INC.	1527	Color: white	-
	Chengdu Guibao Science and Technology Co.,Ltd.	888A	-	-
Potting material	Shanghai Huitian new chemical material Co., Ltd.	5299W-S	Color: white	-

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Object	Manufacturer	Type	Technical Data	Remark
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1533	Color: white	-
	Chengdu Guibao Science and Technology Co.,Ltd.	4808	Color: white	-
Bypass diode	Zerun Co., LTD	30SQ045	Tj max = 200°C If = 30A	-
	Zerun Co., LTD	35SQ045	Tj max = 200°C If = 35A	-
	Zerun Co., LTD	40SQ045	Tj max = 200°C If = 40A	-
	Zerun Co., LTD	40SQ045B(only for c=N)	Tj max = 200°C If = 40A	-
Cable	Wuxi Xinhongye Wire & Cable Co.,Ltd.	62930 IEC 131 1 x 4mm ²	System voltage= 1500VDC,	Certificates R 50439595
	Zerun Co., LTD	62930 IEC 131 1 x 4mm ²	System voltage= 1500VDC,	Certificates R 50354353
	Suzhou BAOHING Electric Wire% Cable Co.,LTD.	62930 IEC 131 1 x 4mm ²	System voltage= 1500VDC,	Certificates R 50464210
	Changshu Jhosin Communication Technology Co.,LTD.	62930 IEC 131 1 x 4mm ²	System voltage= 1500VDC,	Certificates R 50413335
Connectors	Zerun Co., LTD	Z4S-abcd	System voltage= 1500VDC, rated current= 41A	Certificates R 50556260
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	system voltage= 1500V; rated current= 45A	Certificates R 60127169
Junction box set 10				
Junction box	Jiangsu Tonglin Electric Co., Ltd.	TL-BOX030-Bx(x=F or T)	Rated voltage = 1000VDC for TL BOX030-Bx(x=T); 1500VDC for TL BOX030-Bx(x=F) Rated current = 30A Number of diodes: 3	Certificates R 50493623
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	TONSAN ADHESIVE, INC.	1527	Color: white	-
Potting material	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	Color: white	-
Bypass diode	Jiangsu Tonglin Electric Co., Ltd.	PT001C	Tj max = 200°C If = 30A	-
Cable	Jiangsu Tonglin Electric Co., Ltd.	62930 IEC 131 1x4mm ²	System voltage= 1500VDC	Certificates R 50462100
Connectors	Jiangsu Tonglin Electric Co., Ltd.	TL-CABLE01S-F;TLCABLE01S; TLCABLE01SFR	Rated voltage= 1500V Rated current= 30A	Certificates R 50332964

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Object	Manufacturer	Type	Technical Data	Remark
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	System voltage= 1500V; Rated current= 45A	Certificates R 60127169
Junction box set 11				
Junction box	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	PV-JB12x(x=A or B or C or D or E or F or H or A-1 or T or A-25 or B-25 or L or M or N1 or N2 or S1 or S2)	Rated voltage = 1500VDC for PV JB12x(x=A or C or E or H or A-1 or T or A- 25 or L or N1 or S1); 1000VDC for PVJB12x(x=B or D or F or B-25 or M or N2 or S2) Rated current =30A for PV-JB12x(x=S1 or S2); 25A for PV JB12x(x=A-25 or B- 25); 20A for PV JB12x(x=N1 or N2); 18A for PV-JB12x(x=A or B or C or D or E or F or T or L or M); 15A for PV JB12x(x=A-1); 13A for PV JB12x(x=H) Number of diodes: 3	Certificates R 50377301
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	TONSAN ADHESIVE, INC.	1527	Color: white	-
Potting material	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	Color: white	-
	TONSAN ADHESIVE, INC.	1533	Color: white	-
Bypass diode	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH3045-12	Tj max = 200°C If = 18A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH3045-16 / TM3045-20	Tj max = 200°C If = 20A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH30100-12	Tj max = 200°C If = 15A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH3045-14	Tj max = 200°C If = 18A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH4545-12 / TM3045-25	Tj max = 200°C If = 25A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH3045-15	Tj max = 200°C If = 18A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH3045-15	Tj max = 200°C If = 13A	-
	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	UKTH5045-12 / TM3045-30	Tj max = 200°C If = 30A	-
Cable	Ningbo Kibor Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4.0mm²	System voltage= 1500V	Certificates R 50302047

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Object	Manufacturer	Type	Technical Data	Remark
	Changshu JHOSIN Communication Technology Co., Ltd.	62930 IEC 131 1x4,0mm²HALO GEN FREE LOW SMOKE	System voltage= 1500V	Certificates R 50413335
Connectors	SUZHOU UKT NEW ENERGY TECHNOLOGY CO., LTD	PV-CO02-xy	Rated Voltage= 1500V Rated Current= 45A	Certificates R 50390097
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	system voltage= 1500V; rated current= 45A	Certificates R 60127169
Junction box set 12				
Junction box	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	FT60xy	Rated voltage = 1500VDC Rated current = 30A for FT60xy(x=2); 32A for FT60xy(x=1);	Certificates R-50497914
Adhesive (junction box)	Chengdu Guibao Science and Technology Co., Ltd.	888A	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	TONSAN ADHESIVE,INC	TS 1527	Color: white	-
	Dow Corning	PV804	Color: white	-
Potting material	Chengdu Guibao Science and Technology Co., Ltd.	4808	Color: white	-
	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd	TS 1533	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1521	Color: white	-
Bypass diode	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RMK4560D	Tj max = 200°C If = 32A	-
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RMK4555D	Tj max = 200°C If = 30A	-
Cable	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K 1x4mm²	System voltage= 1500V	Certificates R 50318681
	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x4mm²	System voltage= 1500V	Certificates R 50452023
Connectors	Zhejiang Renhe Photovoltaic Technology Co., Ltd.	RHC2xyzuz	System voltage= 1500V; Rated current= 35A	Certificates R 50473621
	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	System voltage= 1500V; Rated current= 45A	Certificates R 60127169
Junction box set 13				

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Object	Manufacturer	Type	Technical Data	Remark
Junction box	Jiangxi Jinko PV Material Co., Ltd.	JK09Exy	Rated voltage =1000VDC for PV JK09Exy(x=M, y=1 or 2); 1500VDC for PV JK09Exy(x=M2 or L, y=1 or 2); Rated current= 18A for PV-JK09Exy(x= M or M2 or L, y=2);20A for PV-JK09Exy(x= M or M2 or L, y=1);	Certificates R 50354415
Adhesive (junction box)	Chengdu Guibao Science and Technology Co., Ltd.	888A	Color: white	-
	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	Color: white	-
	TONSAN ADHESIVE,INC	TS 1527	Color: white	-
	Dow Corning	PV804	Color: white	-
Potting material	Chengdu Guibao Science and Technology Co., Ltd.	4808	Color: white	-
	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1533	Color: white	-
	Beijing Tonsan New Material Technology Co., Ltd.	TS 1521	Color: white	-
Bypass diode	Jiangxi Jinko PV Material Co., Ltd.	TPA3045	Tj max = 200°C If = 18A	-
	Jiangxi Jinko PV Material Co., Ltd.	TPA3045A	Tj max = 200°C If = 20A	-
	Jiangxi Jinko PV Material Co., Ltd.	TPA3045B	Tj max = 200°C If =20A	-
Cable	RUIXU INDUSTRY CO., LTD.	H1Z2Z2-K 1X4.0/6.0mm ²	System voltage= 1500V	Certificates R 50479665
	RUIXU INDUSTRY CO., LTD.	62930 IEC 131 1X4/6mm ²	System voltage= 1500V	Certificates R 50467836
	SUZHOU YONGHAO CABLE CO., LTD.	H1Z2Z2-K 1X4.0/6.0mm ²	System voltage= 1500V	Certificates R 50379270
	SUZHOU YONGHAO CABLE CO., LTD.	62930 IEC 131 1X4/6mm ²	System voltage= 1500V	Certificates R 50401233
	Ningbo Kibor Wire&Cable Co., Ltd.	H1Z2Z2-K 1X4.0mm ²	System voltage= 1500V	Certificates R 50302047
	Ningbo Kibor Wire&Cable Co., Ltd.	62930 IEC 131 1X4/6mm ²	System voltage= 1500V	Certificates R 50413678
Connectors	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03Mxy	system voltage= 1500V; rated current= 45A	Certificates R 50318165
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M2xy	system voltage= 1500V; rated current= 45A	Certificates R 50318165

Junction box set 14

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Object	Manufacturer	Type	Technical Data	Remark
Junction box	Jiangxi Jinko PV Material Co., Ltd.	PV-JK09ESxy	Rated voltage: 1000VDC for x=N1; 1500VDC for x=N2 or W Rated current: 20A for y=1; 25A for y=2; 30A for y=3; 35A for y=4 Reverse current: 39A for x=N1; 45A for x=N2 or W	Certificates R 50354415
Adhesive (junction box)	JIANGSU TIANCHEN NEW MATERIALS CO LTD	TS 1527	Color: white	-
	JIANGSU MINGHAO NEW MATERIAL SCI-TECH COEPORARION	MH-3668	Color: white	-
	Shanghai Huitian New Material Co., Ltd.	HT906Z	Color: white	-
Potting material	Shanghai Huitian New Material Co., Ltd.	5299W-S	Color: white	-
	Shanghai Huitian New Material Co., Ltd.	5299W-S RTV	Color: white	-
Bypass diode	Jiangxi Jinko PV Material Co., Ltd.	TPA3045S-1	for PV-JK09ESxy (x=N1 or N2 or W, y=1) Rated current: 20A	-
	Jiangxi Jinko PV Material Co., Ltd.	TPA4050S-2	for PV-JK09ESxy (x=N1 or N2 or W, y=2) Rated current: 25A	-
	Jiangxi Jinko PV Material Co., Ltd.	PA4050S-3	for PV-JK09ESxy (x=N1 or N2 or W, y=3) Rated current: 30A	-
	Jiangxi Jinko PV Material Co., Ltd.	TPA4050S-4	Bypass-Diode for PVJK09ESxy (x=N1 or N2 or W, y=4) Rated current: 35A	-
Cable	Ningbo Kibor Wire&Cable Co., Ltd.	H1Z2Z2-K 1X4mm ²	System voltage= 1500V	Certificates R 50302047
	Ningbo Kibor Wire&Cable Co., Ltd.	62930 IEC 131 1 X 4/6mm ²	System voltage= 1500V	Certificates R 50413678
	RUIXU INDUSTRY CO., LTD.	H1Z2Z2-K 1X4/6mm ²	System voltage= 1500V	Certificates R 50479665
	RUIXU INDUSTRY CO., LTD.	62930 IEC 131 1 X 4/6mm ²	System voltage= 1500V	Certificates R 50467836
	SUZHOU YONGHAO CABLE CO., LTD.	H1Z2Z2-K 1X4/6mm ²	System voltage= 1500V	Certificates R 50379270
	SUZHOU YONGHAO CABLE CO., LTD.	62930 IEC 131 1 X 4/6mm ²	System voltage= 1500V	Certificates R 50401233
Connectors	Stäubli Electrical Connectors AG	PV-KST4-EVO2/xy_UR (male); PV-KBT4-EVO2/xy_UR (female)	System voltage= 1500V rated current= 45A for 4.0mm ² ; 53A for 6.0mm ²	Certificates R 60127169

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Object	Manufacturer	Type	Technical Data	Remark
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M/xy (Plug+Socket) (x=2, y=B)	System voltage= 1500V rated current= 45A for 4.0mm ² ; 53A for 6.0mm ²	Certificates R 50318165
	Jiangxi Jinko PV Material Co., Ltd.	PV-JK03M2/xy (Plug+Socket) (x=2, y=B)	System voltage= 1500V rated current= 45A for 4.0mm ² ; 53A for 6.0mm ²	Certificates R 50318165
Junction box set 15				
Junction box	Suzhou Bright Photovoltaic Electronic Technology Co.,Ltd.	BET2101-abc BET1901-abc	Rated voltage: 1500VDC Rated current: 25A for BET2101-abc(a=1); 30A for BET2101- abc(a=2); 20A for BET1901- abc(a=1); 25A for BET1901- abc(a=2); Reverse current: 40.5A	Certificates R 50513413
Adhesive (junction box)	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-606	Color: white	-
	GUANGZHOU BAIYUN CHEMICAL INDUSTRY CO.,LTD.	SMG533	Color: white	-
Potting material	Hangzhou Zhijiang Silicone Chemicals Co., Ltd.	JS-1184	Color: white	-
	GUANGZHOU BAIYUN CHEMICAL INDUSTRY CO.,LTD.	SKF323	Color: white	-
Bypass diode	Yangzhou Yangjie Electronic Technology Co.,Ltd	MK3045	for BET2101-abc(a=1) Rated current: 25A	-
	Panjit Electronics(Wuxi) Co.,Ltd.	MK3045	Tj max = 200°C If = 20A	-
	Panjit Electronics(Wuxi) Co.,Ltd.	GF3545	Tj max = 200°C If = 25A	-
	Yangzhou Yangjie Electronic Technology Co.,Ltd	MK6045	for BET2101-abc(a=2) Rated current: 30A	-
Cable	Shanghai Jinyou Jinhong Intelligent Electric Co.,Ltd	62930 IEC 131 1 X4mm ²	System voltage= 1500V	Certificates R 50482064
	SUZHOU YONGHAO CABLE CO.,LTD	62930 IEC 131 1 X4mm ²	System voltage= 1500V	Certificates R 50401233
Connectors	Stäubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR	System voltage= 1500V Rated current:45A	Certificates R 60127169
	Suzhou Bright Photovoltaic Electronic Technology Co.,Ltd.	B01	System voltage= 1500V Rated current:30A	Certificates R 50483303
Junction box set 16				

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Object	Manufacturer	Type	Technical Data	Remark
Junction box	Tangshan Haitai New Energy Technology Co., Ltd.	HT-06xy(x=A or B;y=D or E)	Rated voltage: 1500VDC for HT-06xy(x= B); 1000VDC for HT-06xy(x= A) Rated current: 20A for HT-06xy(y= D); 25A for HT-06xy(y= E)	Certificates R 50598136
Adhesive (junction box)	Shanghai Huitian New Materials and Technology Co., Ltd.	HT906Z	-	-
Potting material	Shanghai Huitian new chemical material Co.,Ltd.	5299W-S	-	-
Bypass diode	Tangshan Haitai New Energy Technology Co., Ltd. (OEM:Suzhou UKT New Energy Technology Co., Ltd)	TM3045-20	Tj max = 200°C If = 20A	-
		TM3045-25	Tj max = 200°C If = 25A	-
Cable	Tangshan Haitai New Energy Technology Co., Ltd.	62930 IEC 131 1X4.0mm ²	System voltage= 1500V	Certificates R 50594807
Connectors	Tangshan Haitai New Energy Technology Co., Ltd.	HT-x1(x=A or B)	System voltage= 1500V Rated current=30A	Certificates R 50495771

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.
- (2) Pollution degree I (Sequence B1 of IEC / EN 61730-2) has been evaluated on all the raw materials listed above.
- (3) Those materials marked in blue are added in most recent project.

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

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