

Constructional Data Form for Photovoltaic Modules

License Holder : (full address)	Qinghai Huanghe Hydropower Development CO., Ltd. Xining Solar Power Branch No.4 Jingui Road, Dongchuan Industrial Park, Xining City, Qinghai Province, 810007, P. R. China
Production Factory : (full address)	Qinghai Huanghe Hydropower Development CO., Ltd. Xining Solar Power Branch No.4 Jingui Road, Dongchuan Industrial Park, Xining City, Qinghai Province, 810007, P. R. China
Type of Product..... :	Photovoltaic (PV) Modules
Trademark..... :	

Module type family A (with 4BB/5BB P-type full cell)

Type Name or Model No..... :	SPICM6(MDF)-72-xxx/BP (xxx=355-395, in steps of 5W, 72 cells)	SPICM6(MDF)-60-xxx/BP (xxx=305-325, in steps of 5W, 60 cells)
Maximum System Voltage [V_{DC}] :	1500	1500
Rated Maximum Power [W]..... :	355, 360, 365, 370, 375, 380, 385, 390, 395	305, 310, 315, 320, 325
Tolerance of Rated Maximum Power [%] :	± 3	± 3
Rated Short Circuit Current [A] :	9.69, 9.77, 9.85, 9.93, 10.01, 10.09, 10.16, 10.24, 10.32	9.86, 9.95, 10.04, 10.14, 10.25
Tolerance of Rated Short Circuit Current [%]..... :	± 4	± 4
Rated Open Circuit Voltage [V]..... :	47.6, 47.8, 48.0, 48.2, 48.4, 48.6, 48.8, 49.0, 49.2	40.1, 40.3, 40.5, 40.7, 40.9
Tolerance of Rated Open Circuit Voltage [%]..... :	± 3	± 3
Over-current protection rating [A]:	15 / 20	15 / 20
Number of solar cells	72	60
Number of diodes	3	3
Cells per bypass diode	24	20
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm]..... :	2017×1022×40/30 1984×997×40/30	1670×997×40/30 1670×992×40/30

Shanghai (Place)  (stamp and/or signature of TÜV Rheinland)	12/08/2024 (date)	Xining (Place)  (stamp and/or signature of applicant)	12/08/2024 (date)
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	1984×992×40/30 1992×996×40/30 2008×1008×40/30	1670×996×40/30 1686×1008×40/30
Module area [m²]	2.06 / 1.98 / 1.97 / 2.02	1.66 / 1.70
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	12±1.5(from string to edge)	12±1.5(from string to edge)
Pollution Degree	1	1
Module type family B (with 12BB / 9BB N-type full cell)		
Type Name or Model No.	SPICN6(MDF)-72-xxx/BM (xxx=365-410, in steps of 5W, 72 cells)	SPICN6(MDF)-60-xxx/BM (xxx=305-340, in steps of 5W, 60 cells)
Maximum System Voltage [VDC] ...	1500	1500
Rated Maximum Power [W]	365, 370, 375, 380, 385, 390, 395, 400, 405, 410	305, 310, 315, 320, 325, 330, 335, 340
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	9.94, 10.02, 10.09, 10.17, 10.25, 10.33, 10.41, 10.49, 10.57, 10.65	9.69, 9.78, 9.87, 9.95, 10.05, 10.16, 10.25, 10.35
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	48.0, 48.2, 48.4, 48.6, 48.8, 49.0, 49.2, 49.4, 49.6, 49.8	40.0, 40.2, 40.4, 40.6, 40.8, 41.0, 41.2, 41.4
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	15 / 20	15 / 20
Number of solar cells	72	60
Cells per bypass diode	3	3
Number of diodes	24	20
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	1984×997×40/30 1984×992×40/30 2008×1008×40/30 2017×1022×40/30	1670×997×40/30 1670×992×40/30 1686×1008×40/30 1670×996×40/30

Shanghai (Place) <i>Jiayu Song</i> (stamp and/or signature of TÜV Rheinland)	12/08/2024 (date)	Xining (Place) <i>Li 22</i> (stamp and/or signature of applicant)	12/08/2024 (date)
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	1992×996×40/30	
Module area [m²]..... :	1.98 / 1.97 / 2.02 / 2.06	1.66 / 1.70
Design load/Safety factor..... :	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm] :	12±1.5(from string to edge)	12±1.5(from string to edge)
Pollution Degree	1	1
Module type family C (with 5BB P-type ½ cut cell)		
Type Name or Model No. :	SPICM6(MDF)-72-xxx/BPH (xxx=370-400, in steps of 5W, 144 cells)	SPICM6(MDF)-60-xxx/BPH (xxx=305-330, in steps of 5W, 120 cells)
Maximum System Voltage [VDC] ... :	1500	1500
Rated Maximum Power [W] :	370, 375, 380, 385, 390, 395, 400	310, 315, 320, 325, 330
Tolerance of Rated Maximum Power [%] :	±3	±3
Rated Short Circuit Current [A] :	9.90, 9.98, 10.06, 10.12, 10.20, 10.27, 10.35	9.85, 9.94, 10.03, 10.12, 10.21
Tolerance of Rated Short Circuit Current [%]..... :	±4	±4
Rated Open Circuit Voltage [V]..... :	47.5, 47.7, 47.9, 48.3, 48.5, 48.7, 48.9	39.6, 39.8, 40.0, 40.2, 40.4
Tolerance of Rated Open Circuit Voltage [%] :	±3	±3
Over-current protection rating [A]:	15 / 20	15 / 20
Number of solar cells	144	120
Number of diodes	3	3
Cells per bypass diode	48	40
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm]..... :	2000×997×40/30 2030×1008×40/30 2020×992×40/30 2016×996×40/30 2016×992×40/30	1704×1008×40/30 1696×992×40/30 1690×996×40/30 1690×992×40/30
Module area [m²]..... :	1.99 / 2.05 / 2.00 / 2.01	1.72 / 1.68
Design load/Safety factor..... :	1600/1.5(downward/upward)	1600/1.5(downward/upward)

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Min- creepage distance [mm]	12±1 (from string to edge)	12±1 (from string to edge)
Pollution Degree	1	1
Module type family D (with 12BB / 9BB P-type ½ cut cell)		
Type Name or Model No.	SPICM6(MDF)-72-xxx/BPHM (xxx=375-420, in steps of 5W, 144 cells)	SPICM6(MDF)-60-xxx/BPHM (xxx=315-350, in steps of 5W, 120 cells)
Maximum System Voltage [VDC] ...	1500	1500
Rated Maximum Power [W]	375, 380, 385, 390, 395, 400, 405, 410, 415, 420	315, 320, 325, 330, 335, 340, 345, 350
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	10.11, 10.15, 10.18, 10.26, 10.34, 10.41, 10.49, 10.56, 10.64, 10.71	9.88, 9.97, 10.07, 10.17, 10.27, 10.37, 10.45, 10.55
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	48.2, 48.4, 48.6, 48.8, 49.0, 49.2, 49.4, 49.6, 49.8, 50.0	40.4, 40.6, 40.8, 41.0, 41.2, 41.4, 41.6, 41.8
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	15 / 20	15 / 20
Number of solar cells	144	120
Number of diodes	3	3
Cells per bypass diode	48	40
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	2000×997×40/30 2030×1008×40/30 2020×992×40/30 2016×996×40/30 2016×992×40/30	1704×1008×40/30 1696×992×40/30 1690×996×40/30 1690×992×40/30
Module area [m²]	1.99 / 2.00 / 2.01 / 2.05	1.68 / 1.72
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	12±1 (from string to edge)	12±1 (from string to edge)
Pollution Degree	1	1

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Module type family E (with 9BB / 12BB N-type ½ cut cell)		
Type Name or Model No. :	SPICN6(MDF)-72-xxx/BHM (xxx=370-410, in steps of 5W, 144 cells)	SPICN6(MDF)-60-xxx/BHM (xxx=310-340, in steps of 5W, 120 cells)
Maximum System Voltage [VDC] ... :	1500	1500
Rated Maximum Power [W] :	370, 375, 380, 385, 390, 395, 400, 405, 410	310, 315, 320, 325, 330, 335, 340
Tolerance of Rated Maximum Power [%] :	±3	±3
Rated Short Circuit Current [A] :	10.06, 10.09, 10.12, 10.16, 10.20, 10.24, 10.28, 10.32, 10.36	9.98, 10.04, 10.10, 10.16, 10.22, 10.28, 10.34
Tolerance of Rated Short Circuit Current [%] :	±4	±4
Rated Open Circuit Voltage [V] :	47.4, 47.7, 48.0, 48.3, 48.6, 48.9, 49.2, 49.4, 49.6	40.0, 40.2, 40.4, 40.6, 40.8, 41.0, 41.2
Tolerance of Rated Open Circuit Voltage [%] :	±3	±3
Over-current protection rating [A]:	15 / 20	15 / 20
Number of solar cells	144	120
Number of diodes	3	3
Cells per bypass diode	48	40
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm] :	2016×996×40/30 2030×1008×40/30 2000×997×40/30 2020×992×40/30 2016×992×40/30	1690×996×40/30 1704×1008×40/30 1696×992×40/30 1690×992×40/30
Module area [m²] :	2.01 / 2.05 / 1.99 / 2.00	1.68 / 1.72
Design load/Safety factor :	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm] :	12±1 (from string to edge)	12±1 (from string to edge)
Pollution Degree	1	1
Module type family F (with IBC ½ cut cell)		
Type Name or Model No. :	SPICN6(MDF)-72-xxx/BIH (xxx=400-	SPICN6(MDF)-60-xxx/BIH (xxx=335-

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	410, in steps of 5W, 144 cells)	340, in steps of 5W, 120 cells)
Maximum System Voltage [V _{DC}]	1500	1500
Rated Maximum Power [W]	400, 405, 410	335, 340
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	10.19, 10.24, 10.29	10.19, 10.25
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	49.2, 49.4, 49.6	40.9, 41.1
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	20	20
Number of solar cells	144	120
Number of diodes	3	3
Cells per bypass diode	48	40
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm]	1984×992×40/30 2008×1004×40/30	1665×992×40/30 1685×1004×40/30
Module area [m ²]	1.97 / 2.02	1.65 / 1.69
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	12±1 (from string to edge)	12±1 (from string to edge)
Pollution Degree	1	1

Module type family G (with 9BB P-type full cell)

Type Name or Model No.	SPICM6(MDF)-72-xxx/BPM (xxx=385-405, in steps of 5W, 72 cells)	SPICM6(MDF)-72-xxx/BPM (xxx=320-335, in steps of 5W, 60 cells)
Maximum System Voltage [VDC] ...	1500	1500
Rated Maximum Power [W]	385, 390, 395, 400, 405	320, 325, 330, 335
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	10.30, 10.38, 10.46, 10.53, 10.60	10.29, 10.37, 10.45, 10.53
Tolerance of Rated Short Circuit Current [%]	±3	±3

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Rated Open Circuit Voltage [V]..... :	48.6, 48.8, 49.0, 49.2, 49.4	40.4, 40.6, 40.8, 41.0
Tolerance of Rated Open Circuit Voltage [%]..... :	±3	±3
Over-current protection rating [A]:	15 / 20	15 / 20
Number of solar cells	72	60
Cells per bypass diode	3	3
Number of diodes	24	20
Classification (IEC 61730)..... :	Class II	Class II
Dimensions (l x w x h) [mm]..... :	1984×997×40/30 1984×992×40/30 2008×1008×40/30 2017×1022×40/30 1992×996×40/30	1670×997×40/30 1670×992×40/30 1686×1008×40/30 1670×996×40/30
Module area [m²]..... :	1.98 / 1.97 / 2.02 /2.06	1.66 / 1.70
Design load/Safety factor..... :	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]..... :	12±1(from string to edge)	12±1(from string to edge)
Pollution Degree	1	1
Module type family H (with 182 P-type ½ cut cell)		
Type Name or Model No..... :	SPICM10(LDF)-72-xxx/BPHM (xxx=530-565, in steps of 5W, 144 cells)	SPICM10(LDF)-66-xxx/BPHM (xxx=480-515, in steps of 5W, 132 cells)
Maximum System Voltage [VDC] ... :	1500	1500
Rated Maximum Power [W]..... :	530, 535, 540, 545,550,555,560,565	480, 485, 490, 495, 500,505,510,515
Tolerance of Rated Maximum Power [%]..... :	±3	±3
Rated Short Circuit Current [A]..... :	13.72, 13.79, 13.86, 13.93,14.00,14.07,14.14,14.21	13.59, 13.67, 13.75, 13.83, 13.91,13.99,14.07,14.15
Tolerance of Rated Short Circuit Current [%]..... :	±3	±3
Rated Open Circuit Voltage [V]..... :	49.30, 49.45, 49.60, 49.75,49.90,50.02,50.15,50.28	44.94, 45.10, 45.25, 45.40, 45.55,45.70,45.85,46.00
Tolerance of Rated Open Circuit Voltage [%]..... :	±3	±3

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Over-current protection rating [A]:	25	25
Number of solar cells	144	132
Cells per bypass diode	48	44
Number of diodes	3	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	2285×1134×35/30 2278×1134×35/30 2274×1134×35/30 2256×1133×35/30	2090×1134×35/30 2100×1134×35/30
Module area [m²]	2.59 2.58 2.58 2.56	2.37 2.38
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	12±1	12±1
Pollution Degree	1	1
Module type family H (with 182 P-type ½ cut cell)		
Type Name or Model No.	SPICM10(LDF)-60-xxx/BPHM (xxx=440-470, in steps of 5W, 120 cells)	SPICM10(LDF)-54-xxx/BPHM (xxx=395-420, in steps of 5W, 108 cells)
Maximum System Voltage [VDC] ...	1500	1500
Rated Maximum Power [W]	440, 445, 450, 455, 460,465,470	395, 400, 405, 410, 415,420
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	13.73, 13.79, 13.85, 13.93, 14.01,14.09,14.18	13.58, 13.67, 13.76, 13.85, 13.94,14.03
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	41.02, 41.10, 41.18, 41.33, 41.48,41.63,41.78	37.04, 37.21, 37.38, 37.55, 37.71,37.87
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	25	25

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Number of solar cells	120	108
Cells per bypass diode	40	36
Number of diodes	3	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	1915×1134×35/30 1903×1134×35/30 1891×1133×35/30	1728×1134×35/30 1724×1134×35/30 1722×1134×35/30
Module area [m²]	2.17 2.16 2.14	1.96 1.96 1.95
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	12±1	12±1
Pollution Degree	1	1

Module type family I (with 182 N-type ½ cut cell)

Type Name or Model No.	SPICN10(LDF)-72-XXX/BHM(xxx=550-580, in steps of 5W, 144 cells)	SPICN10(LDF)-66-xxx/BHM (xxx=505-530, in steps of 5W, 132 cells)
Maximum System Voltage [VDC] ...	1500	1500
Rated Maximum Power [W]	550, 555, 560, 565, 570, 575, 580	505, 510, 515, 520, 525, 530
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	14.01, 14.07, 14.13, 14.19, 14.25, 14.31, 14.37	13.99, 14.07, 14.15, 14.23, 14.31, 14.39
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	50.27, 50.47, 50.67, 50.87, 51.07, 51.27, 51.47	45.70, 45.85, 46.00, 46.15, 46.30, 46.45
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	25	25
Number of solar cells	144	132
Cells per bypass diode	48	44
Number of diodes	3	3

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Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	2285×1134×35/30 2278×1134×35/30 2274×1134×35/30 2256×1133×35/30	2090×1134×35/30 2100×1134×35/30
Module area [m²]	2.59 2.58 2.58 2.56	2.37 2.38
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	12±1	12±1
Pollution Degree	1	1
Module type family I (with 182 N-type ½ cut cell)		
Type Name or Model No.	SPICN10(LDF)-60-xxx/BHM (xxx=460-485, in steps of 5W, 120 cells)	SPICN10(LDF)-54-XXX/BHM(xxx=410-435, in steps of 5W, 108 cells)
Maximum System Voltage [VDC] ...	1500	1500
Rated Maximum Power [W]	460, 465, 470, 475, 480, 485	410, 415, 420, 425, 430, 435
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	13.89, 13.94, 14.02, 14.06, 14.14, 14.2	13.82, 13.91, 13.98, 14.05, 14.12, 14.19
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	41.90, 42.20, 42.40, 42.70, 42.90, 43.10	37.50, 37.70, 37.90, 38.10, 38.30, 38.50,
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	25	25
Number of solar cells	120	108
Cells per bypass diode	40	36
Number of diodes	3	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	1915×1134×35/30	1728×1134×35/30

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	1903×1134×35/30 1891×1133×35/30	1724×1134×35/30 1722×1134×35/30
Module area [m²]..... :	2.17 2.16 2.14	1.96 1.96 1.95
Design load/Safety factor..... :	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm] :	12±1	12±1
Pollution Degree	1	1
Module type family J (with 166 IBC ½ cut cell)		
Type Name or Model No. :	SPICN6(LDF)-72-xxx/BIH (xxx=455-485, in steps of 5W, 144 cells)	SPICN6(LDF)-66-xxx/BIH (xxx=415-440, in steps of 5W, 132 cells)
Maximum System Voltage [VDC] ... :	1500	1500
Rated Maximum Power [W] :	455, 460, 465, 470,475,480,485	415, 420, 425, 430, 435,440
Tolerance of Rated Maximum Power [%] :	±3	±3
Rated Short Circuit Current [A] :	11.61, 11.70, 11.79, 11.88,12.27,12.32,12,37	11.56, 11.66, 11.76, 11.86, 11.96,12.06
Tolerance of Rated Short Circuit Current [%]..... :	±3	±3
Rated Open Circuit Voltage [V]..... :	50.00, 50.10, 50.20, 50.30,49.7,49.8,49.9	45.80, 45.90, 46.00, 46.10, 46.20,46.30
Tolerance of Rated Open Circuit Voltage [%] :	±3	±3
Over-current protection rating [A]:	20	20
Number of solar cells	144	132
Cells per bypass diode	48	44
Number of diodes	3	3
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm] :	2095×1039×35/30 2080×1034×35/30 2060×1039×35/30 2040×1039×35/30	1924×1039×35/30 1912×1034×35/30 1895×1039×35/30 1876×1039×35/30

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Constructional Data Form for Photovoltaic Modules

Module area [m²]..... :	2.18 2.14 2.12	2.00 1.97 1.95
Design load/Safety factor..... :	3600/1600/1.5(downward/ upward) 1600/1600/1.5(downward/ upward)	3600/1600/1.5(downward/ upward) 1600/1600/1.5(downward/ upward)
Min- creepage distance [mm] :	12±1	12±1
Pollution Degree	1	1
Module type family J (with 166 IBC ½ cut cell)		
Type Name or Model No..... :	SPICN6(LDF)-60-xxx/BIH (xxx=375-400, in steps of 5W, 120 cells)	/
Maximum System Voltage [VDC] ... :	1500	/
Rated Maximum Power [W] :	375, 380, 385, 390, 395,400	/
Tolerance of Rated Maximum Power [%] :	±3	/
Rated Short Circuit Current [A] :	11.50, 11.61, 11.72, 11.83, 11.94,12.05	/
Tolerance of Rated Short Circuit Current [%]..... :	±3	/
Rated Open Circuit Voltage [V] :	41.60, 41.70, 41.80, 41.90, 42.00,42.10	/
Tolerance of Rated Open Circuit Voltage [%] :	±3	/
Over-current protection rating [A]:	20	/
Number of solar cells	120	/
Cells per bypass diode	40	/
Number of diodes	3	/
Classification (IEC 61730) :	Class II	/
Dimensions (l x w x h) [mm] :	1727×1039×35/30 1743×1034×35/30 1732×1046×35/30 1756×1039×35/30 1712×1039×35/30	/
Module area [m²]..... :	1.79	/

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Constructional Data Form for Photovoltaic Modules

	1.81 1.82 1.79	
Design load/Safety factor..... :	3600/1600/1.5(downward/ upward) 1600/1600/1.5(downward/ upward)	/
Min- creepage distance [mm] :	12±1	/
Pollution Degree	1	/
Module type family K (with 9BB 166 IBC ½ cut cell)		
Type Name or Model No..... :	SPICN6(LDG)-72-xxx/IH(xxx=410-425, in steps of 5, 144 cells)	SPICN6(LDG)-66-xxx/IH(xxx=380-385, in steps of 5, 132 cells)
Maximum System Voltage [VDC] ... :	1000	1000
Rated Maximum Power [W] :	410,415,420,425	380,385
Tolerance of Rated Maximum Power [%] :	±3	±3
Rated Short Circuit Current [A] :	5.269,5.274, 5.320,5.360	5.258,5.320
Tolerance of Rated Short Circuit Current [%]..... :	±3	±3
Rated Open Circuit Voltage [V] :	99.36,99.79,99.94,100.37	91.476,91.608
Tolerance of Rated Open Circuit Voltage [%] :	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	144	132
Cells per bypass diode	48	44
Number of diodes	3	3
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm] :	2040×1056	1876×1056
Module area [m²]..... :	2.15	1.98
Design load/Safety factor..... :	1600/1.5(downward/upward)	1600/1.5(downward/upward)

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Constructional Data Form for Photovoltaic Modules

Min- creepage distance [mm]	20±1	20±1
Pollution Degree	1	1
Type Name or Model No.	SPICN6(LDG)-60-xxx/IH(xxx=345-350, in steps of 5, 120 cells)	SPICN6(LDG)-54-xxx/IH(xxx=310-315, in steps of 5, 108 cells)
Maximum System Voltage [VDC] ...	1000	1000
Rated Maximum Power [W]	345,350	310,315
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	5.251,5.373	5.243,5.381
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	83.16,83.64	74.844,75.276
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	120	108
Cells per bypass diode	40	36
Number of diodes	3	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	1780×1080 1721×1056	1547×1056
Module area [m²]	1.92 1.82	1.63
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	32±1 20±1	20±1
Pollution Degree	1	1
Type Name or Model No.	SPICN6(LDG)-36-xxx/IH(xxx=205-210, in steps of 5, 72 cells)	SPICN6(LDG)-35-xxx/IH(xxx=200-205, in steps of 5, 70 cells)
Maximum System Voltage [VDC] ...	1000	1000
Rated Maximum Power [W]	205,210	200,205

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Constructional Data Form for Photovoltaic Modules

Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	5.201,5.297	5.342,5.319
Tolerance of Rated Short Circuit Current [%].....	±3	±3
Rated Open Circuit Voltage [V].....	49.896,50.184	48.580,48.790
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	72	70
Cells per bypass diode	24	20/20/20/10
Number of diodes	3	4
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	1050×1050	1250×890
Module area [m²].....	1.10	1.11
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	19.5±1	23.5±1
Pollution Degree	1	1
Type Name or Model No.	SPICN6(LDG)-25-xxx/IH(xxx=145, 50 cells)	SPICN6(LDG)-22.5-xxx/IH(xxx=130, 45 cells)
Maximum System Voltage [VDC] ...	1000	1000
Rated Maximum Power [W]	145	130
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	5.267	5.247
Tolerance of Rated Short Circuit Current [%].....	±3	±3
Rated Open Circuit Voltage [V].....	34.85	31.365
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	50	45

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Constructional Data Form for Photovoltaic Modules

Cells per bypass diode	20/20/10	15
Number of diodes	3	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm].....	935×890	830×960
Module area [m²].....	0.83	0.80
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	23.47±1	34.7±1
Pollution Degree	1	1
Type Name or Model No.....	SPICN6(LDG)-20-xxx/IH(xxx=115, 40 cells)	SPICN6(LDG)-19.5-xxx/IH(xxx=115, 39 cells)
Maximum System Voltage [VDC] ...	1000	1000
Rated Maximum Power [W]	115	115
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	5.221	5.355
Tolerance of Rated Short Circuit Current [%].....	±3	±3
Rated Open Circuit Voltage [V].....	27.880	27.183
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	40	39
Cells per bypass diode	16,16,8	26,13
Number of diodes	3	2
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm].....	770×960	1200×600
Module area [m²].....	0.74	0.72
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	45.8±1	47±1
Pollution Degree	1	1
Type Name or Model No.....	SPICN6(LDG)-18-xxx/IH(xxx=105, 36	SPICN6(LDG)-17.5-xxx/IH(xxx=100, 35

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	cells)	cells)
Maximum System Voltage [VDC] ... :	1000	1000
Rated Maximum Power [W] :	105	100
Tolerance of Rated Maximum Power [%] :	±3	±3
Rated Short Circuit Current [A] :	5.297	5.189
Tolerance of Rated Short Circuit Current [%]..... :	±3	±3
Rated Open Circuit Voltage [V] :	25.092	24.395
Tolerance of Rated Open Circuit Voltage [%] :	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	36	35
Cells per bypass diode	12 24,12	14,14,7
Number of diodes	3,2	3
Classification (IEC 61730) :	Class II	Class II
Dimensions (l x w x h) [mm] :	830×800 1050×680	640×960
Module area [m²]..... :	0.66 0.71	0.61
Design load/Safety factor :	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm] :	34.7±1 21.5±1	21.9±1
Pollution Degree	1	1
Type Name or Model No. :	SPICN6(LDG)-16-xxx/IH(xxx=92, 32 cells)	SPICN6(LDG)-15-xxx/IH(xxx=86, 30 cells)
Maximum System Voltage [VDC] ... :	1000	1000
Rated Maximum Power [W] :	92	86
Tolerance of Rated Maximum Power [%] :	±3	±3
Rated Short Circuit Current [A] :	5.392	5.146

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Tolerance of Rated Short Circuit Current [%]..... :	±3	±3
Rated Open Circuit Voltage [V]..... :	22.304	20.910
Tolerance of Rated Open Circuit Voltage [%]..... :	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	32	30
Cells per bypass diode	16	10
Number of diodes	2	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]..... :	770×800	1050×525
Module area [m²]..... :	0.62	0.55
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	45.8±1	19.5±1
Pollution Degree	1	1
Type Name or Model No..... :	SPICN6(LDG)-13.5-xxx/IH(xxx=77, 27 cells)	SPICN6(LDG)-12-xxx/IH(xxx=70, 24 cells)
Maximum System Voltage [VDC] ... :	1000	1000
Rated Maximum Power [W]	77	70
Tolerance of Rated Maximum Power [%]..... :	±3	±3
Rated Short Circuit Current [A]	5.381	5.297
Tolerance of Rated Short Circuit Current [%]..... :	±3	±3
Rated Open Circuit Voltage [V]..... :	18.819	16.728
Tolerance of Rated Open Circuit Voltage [%]..... :	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	27	24
Cells per bypass diode	18,9	12
Number of diodes	2	2
Classification (IEC 61730)	Class II	Class II

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Constructional Data Form for Photovoltaic Modules

Dimensions (l x w x h) [mm]	830×590	640×800
Module area [m²]	0.49	0.51
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	34.7±1	62±1
Pollution Degree	1	1
Type Name or Model No.	SPICN6(LDG)-9-xxx/IH(xxx=52, 18 cells)	SPICN6(LDG)-7.5-xxx/IH(xxx=43, 15 cells)
Maximum System Voltage [VDC] ...	1000	1000
Rated Maximum Power [W]	52	43
Tolerance of Rated Maximum Power [%]	±3	±3
Rated Short Circuit Current [A]	5.045	4.843
Tolerance of Rated Short Circuit Current [%]	±3	±3
Rated Open Circuit Voltage [V]	12.546	10.455
Tolerance of Rated Open Circuit Voltage [%]	±3	±3
Over-current protection rating [A]:	12	12
Number of solar cells	18	132
Cells per bypass diode	6	5
Number of diodes	3	3
Classification (IEC 61730)	Class II	Class II
Dimensions (l x w x h) [mm]	640×590	525×680
Module area [m²]	0.38	0.38
Design load/Safety factor	1600/1.5(downward/upward)	1600/1.5(downward/upward)
Min- creepage distance [mm]	42±1	46.5±1
Pollution Degree	1	1

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Constructional Data Form for Photovoltaic Modules

Copy of marking plate:

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Rated Maximum Power (P _{max})	430W±3%	Maximum System Voltage	1500V DC																						
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Open Circuit Voltage (V _{oc})	46.1V±3%	Operating Temperature	-40°C~+85°C																						
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Open Circuit Voltage (V _{oc})	50.0V±3%	Operating Temperature	-40°C~+85°C																						
Short Circuit Current (I _{sc})	11.61A±3%	Cell Type	Mono-BI																						
Dimension (mm)	2095x1039x30	Weight (kg)	28.5±0.5																						
 Qinghai Huanghe Hydropower Development CO., Ltd. Xining Solar Power Branch No.4, Jingui Road, Dongchuan Industrial Park, Xining City, Qinghai Province. http://www.spicsolar.com TEL: 0971-7173513 P.C: 810007 Made in China	Model : SPICN6(LDF)-72-470/BIH All technical data at standard test condition (AM1.5, 1000W/m², 25°C) <table border="1"> <tr> <td>Rated Maximum Power (P_{max})</td> <td>470W±3%</td> <td>Maximum System Voltage</td> <td>1500V DC</td> </tr> <tr> <td>Voltage at P_{max} (V_{mp})</td> <td>42.8V</td> <td>Maximum overcurrent protection rating</td> <td>20A</td> </tr> <tr> <td>Current at P_{max} (I_{mp})</td> <td>10.99A</td> <td>PV module classification</td> <td>Class II</td> </tr> <tr> <td>Open Circuit Voltage (V_{oc})</td> <td>50.3V±3%</td> <td>Operating Temperature</td> <td>-40°C~+85°C</td> </tr> <tr> <td>Short Circuit Current (I_{sc})</td> <td>11.88A±3%</td> <td>Cell Type</td> <td>Mono-BI</td> </tr> <tr> <td>Dimension (mm)</td> <td>2095x1039x30</td> <td>Weight (kg)</td> <td>28.5±0.5</td> </tr> </table> CE □ Warning! Module generates DC voltage when exposed to sunlight or other light sources, therefore, the installation and operation require special care, installing, operating or servicing this	Rated Maximum Power (P _{max})	470W±3%	Maximum System Voltage	1500V DC	Voltage at P _{max} (V _{mp})	42.8V	Maximum overcurrent protection rating	20A	Current at P _{max} (I _{mp})	10.99A	PV module classification	Class II	Open Circuit Voltage (V _{oc})	50.3V±3%	Operating Temperature	-40°C~+85°C	Short Circuit Current (I _{sc})	11.88A±3%	Cell Type	Mono-BI	Dimension (mm)	2095x1039x30	Weight (kg)	28.5±0.5
Rated Maximum Power (P _{max})	470W±3%	Maximum System Voltage	1500V DC																						
Voltage at P _{max} (V _{mp})	42.8V	Maximum overcurrent protection rating	20A																						
Current at P _{max} (I _{mp})	10.99A	PV module classification	Class II																						
Open Circuit Voltage (V _{oc})	50.3V±3%	Operating Temperature	-40°C~+85°C																						
Short Circuit Current (I _{sc})	11.88A±3%	Cell Type	Mono-BI																						
Dimension (mm)	2095x1039x30	Weight (kg)	28.5±0.5																						

Shanghai
(Place)

12/08/2024
(date)

Jiayu Song

(stamp and/or signature of TÜV Rheinland)

Xining
(Place)

12/08/2024
(date)

Li 22

(stamp and/or signature of applicant)

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Constructional Data Form for Photovoltaic Modules

 Qinghai Huanghe Hydropower Development CO., Ltd. Xining Solar Power Branch No.4, Jingui Road, Dongchuan Industrial Park, Xining City, Qinghai Province. http://www.spicsolar.com TEL: 0971-7178513 RC: 810007 Made in China	Model : SPICN6(LDG)-72-425/IH		All technical data at standard test condition (AM1.5, 1000W/m², 25°C)
	Rated Maximum Power (P_{max}) 425W±3% Voltage at P_{max} (V_{mp}) 85.54V Current at P_{max} (I_{mp}) 4.97A Open Circuit Voltage (V_{oc}) 99.94V±3% Short Circuit Current (I_{sc}) 5.38A±3% Dimension (mm) 2040x1056x14	Maximum System Voltage 1000V DC Maximum overcurrent protection rating 12A PV module classification Class II Operating Temperature -40°C~+85°C Cell Type Mono-Si Weight (kg) 70.0±0.5	
CE    Warning! Module generates DC voltage when exposed to sunlight or other light sources. Read the installation and operation manual before installing, operating or servicing this			

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Constructional Data Form for Photovoltaic Modules

List of Critical Components (add lines for multiple material sources; indicate applicable combination)

Object	Manufacturer / trademark	Type / model	Technical data / ratings	Standard (if applicable)	Certificates (if applicable)
Front cover 1	Xinyi PV Products (Anhui) Holdings Ltd.	Semi-tempered glass with external AR coating	Thickness = 2.5mm / 2.0mm	—	—
Front cover 2	Changzhou Almarden Co., Ltd.	Semi-tempered glass with external AR coating	Thickness = 2.5mm	—	—
Front cover 3	CAI HONG GROUP NEW ENERGY COMPANY LIMITED	Semi-tempered glass with external AR coating	Thickness = 2.5mm / 2.0mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Front cover 4	HENAN ANCAI HI-TECH CO.,LTD	Semi-tempered glass with external AR coating	Thickness = 2.5mm / 2.0mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Front cover 5	Qinghai Qingbo Industrial Co.,Ltd	Super white tempered float-glass	Thickness = 6.0mm	—	—
Rear cover 1	Xinyi PV Products (Anhui) Holdings Ltd.	Semi-tempered glass with external AR coating	Thickness = 2.5mm	—	—
Rear cover 2	Xinyi PV Products (Anhui) Holdings Ltd.	Semi-tempered glass with internal glazing coating	Thickness = 2.5mm / 2.0mm	—	—
Rear cover 3	Changzhou Almarden Co., Ltd.	Semi-tempered glass with internal glazing coating	Thickness = 2.5mm	—	—
Rear cover 4	CAI HONG GROUP NEW ENERGY COMPANY LIMITED	Semi-tempered glass with internal glazing coating Color 1: Black Color 2: White	Thickness = 2.5mm / 2.0mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					

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Constructional Data Form for Photovoltaic Modules

Rear cover 5	HENAN ANCAI HI-TECH CO.,LTD	Semi-tempered glass with internal glazing coating	Thickness = 2.5mm / 2.0mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Rear cover 6	Qinghai Qingbo Industrial Co.,Ltd	White tempered float-glass	Thickness = 6.0mm	—	—
Encapsulation material 1 (POE)	Cybrid Technology Inc.	Cybright T22	Thickness = 0.50mm (for 4BB/5BB cells) Thickness = 0.60/0.65mm (for MBB cells) Density = 0.88 g/cm ³ Weight: 430g/m ² ; 520g/m ² ; 530g/m ² ; 560g/m ²	—	—
Encapsulation material 2 (POE&EVA)	HANGZHOU FIRST APPLIED MATERIAL CO., LTD.	TF4	Thickness = 0.70mm Weight: 480g/m ² ;	—	—
		F406PS	Thickness = 0.70mm Weight: 480g/m ² ;	—	—
Encapsulation material 3 (POE)	Changzhou Sveck PV New Material Co., Ltd	SE-556+SE-556	Weight: 390g/m ² for front side 550g/m ² for rear side	—	—
Encapsulation material 4 (PVB)	ZHEJIANG DECENET NEW MATERIAL CO.,LTD	BL201A	Color:black Thickness = 0.76mm for front side Thickness = 0.38mm for rear side	—	—

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Constructional Data Form for Photovoltaic Modules

Frame parts 1	Zhangjiagang Hanlong New Energy Technology Co., Ltd.(Processor) Jiangyin Chenlong Aluminum Co., Ltd. (raw material)	Anodized Aluminium Alloy (6063T5)	Thickness: 40/35/30mm	—	—
	Zhangjiagang Hanlong New Energy Technology Co., Ltd.	Anodized Aluminium Alloy (6005T6)	Thickness: 30mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Frame parts 2	Wuxi Haiyuan New Energy Material Technology Co., Ltd	Anodized Aluminium Alloy (6005T6)	Thickness: 30mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Frame parts 3	Magic Green Energy (SuZhou),LTD.	Anodized Aluminium Alloy	Material / hardness: 6063-T5 Coating: AA10 (Silver white) Thickness of longerside= 30mm Thickness of shorterside= 21.5mm	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Adhesive (frame) 1	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	—	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Adhesive (frame) 2	Jiangsu Tiansheng New Materials Technology Co., Ltd.	TS-688	—	—	—
Adhesive (frame) 3	Jiangsu Tianchen New Materials Co., Ltd.	HT-8258	—	—	—
Adhesive (frame) 4	Suzhou Tonsan New Material Technology Co., Ltd.	TS1527	—	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					

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Constructional Data Form for Photovoltaic Modules

Solar cell 1 (full size and with ½ cut size used)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-M-5/B	6" Mono c-Si P type perc bifacial solar cell with 5BB dotted busbars L x W x T (± %): 156.75mm x 156.75mm x (190µm±18µm) Area: 244.32 cm ² L x W x T (± %): 157.35mm x 157.35mm x (190µm±18µm) Area: 246.21 cm ² L x W x T (± %): 158.75mm x 158.75mm x (190µm±18µm) Area: 251.99 cm ²	—	—
Solar cell 2	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-M-4/B	6" Mono c-Si P type perc bifacial solar cell with 4BB dotted busbars L x W x T (± %): 156.75mm x 156.75mm x (200µm±20µm) Area: 244.32 cm ² L x W x T (± %): 157.35mm x 157.35mm x (200µm±20µm) Area: 246.21 cm ² L x W x T (± %): 158.75mm x 158.75mm x (200µm±20µm) Area: 251.99 cm ²	—	—
Solar cell 3 (full size and with ½ cut cell)	Qinghai Huanghe Hydropower Development Co., Ltd. Xi'an Solar Power Branch	SPIC-N-M/B	6" Mono c-Si N type pert bifacial solar cell with 12BB dotted busbars L x W x T (± %): 157.35mm x 157.35mm x (180µm+20/-10µm) / Area: 246.21 cm ² L x W x T (± %): 158.75mm x 158.75mm x (180µm+20/-10µm) / Area: 251.99 cm ²	—	—

Shanghai (Place) <i>Jiayu Song</i> (stamp and/or signature of TÜV Rheinland)	12/08/2024 (date)	Xining (Place) <i>Li 22</i> (stamp and/or signature of applicant)	12/08/2024 (date)
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Constructional Data Form for Photovoltaic Modules

Solar cell 4 (used with ½ cut cell)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-MM-M/BPH	6" Mono c-Si P type perc bifacial solar cell with 12BB dotted busbars L x W x T (± %): 157.35mm x 157.35mm x (180µm+20/- 10µm) / Area: 246.21 cm² L x W x T (± %): 158.75mm x 158.75mm x (180µm+20/- 10µm) / Area: 251.99 cm²	—	—
Solar cell 5 (full size and with ½ cut cell)	Qinghai Huanghe Hydropower Development Co., Ltd. Xi'an Solar Power Branch	SPIC-NM-M/BH	6" Mono c-Si N type TOPCon bifacial solar cell with 9BB dotted busbars L x W x T (± %): 158.75mm x 158.75mm x (170µm±17µm) / Area: 251.99 cm²	—	—
Solar cell 6 (used with ½ cut cell)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-NM-BB	6" Mono c-Si N type bifacial IBC solar cell with 4 pairs of continuous busbars on the rearside L x W x T (± %): 156.75mm x 156.75mm x (180µm±18µm) / Area: 244.32 cm² L x W x T (± %): 158.75mm x 158.75mm x (180µm±18µm) / Area: 251.99 cm²	—	—
Solar cell 7 (full size and with ½ cut size use)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-MZ-M/BPH	6" Mono c-Si P-Perc bifacial solar cell with 9BB dotted busbars L x W x T (± %): 158.75mm x 158.75mm x (170µm±17µm) / Area: 251.99 cm²	—	—
Solar cell 8 (only ½ cut size use)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-M-L-M/BPH	Mono c-Si P-Perc bifacial solar cell with 11BB dotted busbars L x W x T (± %): 182mm x 182mm (180µm±18 µm) Area: 331.24 cm²	—	—

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Solar cell 9 (only ½ cut size use)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-N-L-M/BH	Mono c-Si bifacial M10 N-TOPCon solar cell L x W x T (± %): 182mm x 182mm (165µm±15 µm)	—	—
Solar cell 10 (used with ½ cut cell)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-M6-6BB	Bifacial IBC solar cell with 0.8mm, 6 pairs of busbars on the rear side, front without grid line L x W x T : (166±0.25mm) x(166±0.25mm) x(170±17µm)	—	—
Solar cell 11 (used with ½ cut cell)	Qinghai Huanghe Hydropower Development Co., Ltd. Xining Solar Power Branch	SPIC-M6-9BB	Bifacial IBC solar cell with 0.2mm, 9 pairs of busbars on the rear side, front without grid line L x W x T : (166±0.25mm) x(166±0.25mm) x(170±17µm)	—	—
Remark: Design load is 3600Pa/1600Pa/1.5(downward/ upward) for SPICN6(LDF)-xx-xxx/BIH series.					
Serial/parallel connection of cells (S,SP,SPS)	S for full cell; SPS for ½ cut cell				
Cell connectors 1	Suzhou YourBest New-type Materials Co., Ltd.	Sn63Pb37	0.9mmx0.25/0.23mm (for 5BB cell)	—	—
Cell connectors 2	Guangde Electronic Material	Sn63Pb37	1.2mmx0.25mm (for 4BB cell)	—	—
Cell connectors 3	Guangde Electronic Material	Sn60Pb40	Φ = 0.4mm (for 12BB cell)	—	—
Cell connectors 4	Suzhou YourBest New-type Materials Co., Ltd.	Sn60Pb40	Φ = 0.35mm (for 12BB cell & 9BB cell)	—	—
Cell connectors 5 (only combined with IBC cell)	Jiangsu Sun Technology Corp. Ltd	Sn53Bi10Pb37	1.5x0.2mm	—	—
Cell connectors 6	Jiangsu Sun Technology Corp. Ltd.	Sn63Pb37	Φ = 0.35mm (for 9BB cell) Φ = 0.3mm (for 11BB cell)	—	—
Cell connectors 7	Xi'an Telison New Materials Co., Ltd.	Sn60Pb40	0.5/0.6x0.18mm 1.0x0.18mm	—	—

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Constructional Data Form for Photovoltaic Modules

String connectors 1	Suzhou YourBest New-type Materials Co., Ltd.	Sn63Pb37	For module with full cell: 8.0mmx0.25mm For module with ½ cut cell: 8.0mmx0.25mm (use in the middle of module) 4.0mmx0.25mm (use at 2 ends of module)	—	—
String connectors 2	Guangde Electronic Material	Sn63Pb37	6.0mmx0.25mm	—	—
String connectors 3	Guangde Electronic Material	Sn60Pb40	6.0mmx0.25mm	—	—
String connectors 4	Suzhou YourBest New-type Materials Co., Ltd.	Sn60Pb40	For module with ½ cut cell: 8.0mmx0.3mm (use in the middle of module) 6.0mmx0.3mm (use at 2 ends of module) 7.0mmx0.3mm (use in the middle of module) 4.0mmx0.3mm (use at 2 ends of module)	—	—
String connectors 5 (only combined with IBC cell)	Jiangsu Sun Technology Corp. Ltd	Sn53Bi10Pb37	8.0mmx0.25mm (use in the middle of module) 4.0mmx0.25mm (use at 2 ends of module)	—	—
String connectors 6	Jiangsu Sun Technology Corp. Ltd.	Sn63Pb37	7.0x0.3mm (used in the middle of module) 4.0x0.3mm (used at ends of module)	—	—
String connectors 7	Xi'an Telison New Materials Co., Ltd	Sn60Pb40	7.0x0.3mm (used in the middle of module) 4.0x0.3mm (used at ends of module)	—	—
Soldering material	—	—	alloy: N/A	—	—
Fluxing agent 1	Asahi Solder Technology (Wuxi) Co., Ltd.	SF56	—	—	—

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Constructional Data Form for Photovoltaic Modules

Fluxing agent 2	Suzhou Grabble Electronics Technology Co., Ltd.	FA19	—	—	—
Fluxing agent 3 (Only combined with Encapsulation material 1,3&4)	Suzhou Costar Electronic Material Co., Ltd.	FD-309	—	—	—
Fixing tape	3M	UV-1	Width = 5.0mm	—	—
Insulation tape (Only combined with Encapsulation material 1&3)	Suzhou First PV Material Co., Ltd	BEC-201B	Thickness = 0.265±0.13mm	—	—
Accessories Solar Light Redirecting Film (LRF) (Used with Solar cell 4, ½ cut cell)	3M	T80-X	Thickness = 0.115mm	—	—

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Constructional Data Form for Photovoltaic Modules

Combination 1					
Junction box	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH011C-1	Rated Voltage = 1500V Rated Current = 15A Reverse Current = 30A	IEC 62790:2014	R 50379204
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50330654
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50350557
Bypass diode	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	20SQ045 (3 pcs)	T _{j max} =200°C	—	—
Adhesive (junction box) 1	Shanghai Huitian New Chemical Material Co., Ltd.	HT-906Z	—	—	—
Adhesive (junction box) 2	Jiangsu Tiansheng New Materials Technology Co., Ltd.	TS-688	—	—	—
Adhesive (junction box) 3	Jiangsu Tianchen New Materials Co., Ltd.	HT-8258	—	—	—
Potting material 1	Shanghai Huitian New Chemical Material Co., Ltd.	HT-5299W-S	—	—	—
Potting material 2	Chengdu Guibao Science and Technology Co., Ltd.	4808	—	—	—
Potting material 3	Jiangsu Tianchen New Materials Co., Ltd.	HT-6330	—	—	—
Combination 2					
Junction box	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH011C-2	Rated Voltage = 1500V Rated Current = 15A Reverse Current = 30A	IEC 62790:2014	R 50379204
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50330654

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Constructional Data Form for Photovoltaic Modules

Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50350557
Bypass diode	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	20SQ045 (3 pcs)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Adhesive (junction box) 1	Jiangsu Tiansheng New Materials Technology Co., Ltd.	TS-688	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Chemical Material Co., Ltd.	HT-906Z	—	—	—
Adhesive (junction box) 3	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	—	—	—
Potting material 1	Chengdu Guibao Science and Technology Co., Ltd.	4808	—	—	—
Potting material 2	Shanghai Huitian New Chemical Material Co., Ltd.	HT-5299W-S	—	—	—
Potting material 3	Beijing Tonsan New Material Technology Co., Ltd.	TS1521	—	—	—
Potting material 4	Tonsan Adhesive Inc	1533	—	—	—

Combination 3

Junction box	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH011C-2X	Rated Voltage = 1500V Rated Current = 20A Reverse Current = 30A	IEC 62790:2014	R 50379204
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50330654
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50350557
Bypass diode	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	SB3045DY (3 pcs)	$T_{j\max} = 200^{\circ}\text{C}$	—	—

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Constructional Data Form for Photovoltaic Modules

Adhesive (junction box) 1	Shanghai Huitian New Chemical Material Co., Ltd.	HT-906Z	—	—	—
Adhesive (junction box) 2	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	—	—	—
Potting material 1	Shanghai Huitian New Chemical Material Co., Ltd.	HT-5299W-S	—	—	—
Potting material 2	Beijing Tonsan New Material Technology Co., Ltd.	TS1521	—	—	—
Potting material 3	Tonsan Adhesive Inc	1533	—	—	—

Combination 4

Junction box	QC Solar (Suzhou) Corporation	171721-abc (a=1; b=4; c=1 or 2)	Rated Voltage = 1500V Rated Current = 20.2A Reverse Current = 30A	EN 62790:2015 IEC 62790:2014	R 50378787
Cable	QC Solar (Suzhou) Corporation	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50348871
Connectors	QC Solar (Suzhou) Corporation	QC 4.10-cd	Rated Voltage = 1500V Rated Current = 41A	IEC 62852:2014	R 50353779
Bypass diode	QC Solar (Suzhou) Corporation	SB3050DY (3 pcs)	T _{j max} = 200°C	—	—
Adhesive (junction box) 1	Suzhou TONSAN Adhesive Ltd.	1527	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Material Co., Ltd.	HT906Z	—	—	—
Potting material	Suzhou TONSAN Adhesive Ltd.	1521	—	—	—

Combination 5

Junction box	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	PV-XT1690Nxyz (x=2; y=2; z=3)	Rated Voltage = 1500V Rated Current = 20A Reverse Current = 30A	EN 62790:2020 IEC 62790:2020	R 50524457
Cable	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	H1Z2Z2-K 1x1.5..35mm ²	Rated Voltage = 1500V, 1 x 4mm ²	EN 50618:2014	R 50358893

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Constructional Data Form for Photovoltaic Modules

Connectors	Suzhou Xtong Photovoltaic Technologies Co.,Ltd.	PV-XT101.1	Rated Voltage = 1500V Rated Current = 35A	EN 62852:2015 IEC 62852:2014	R 50385354
Bypass diode	Suzhou Xtong Photovoltaic Technologies Co.,Ltd.	GFS2545 (3 pcs)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Adhesive (junction box)	Shanghai Huitian New Chemical Material Co.,Ltd.	HT906Z	—	—	—
Potting material 1	Shanghai Huitian New Chemical Material Co.,Ltd.	5299W-S	—	—	—
Potting material 2	Beijing Tonsan New Material Technology Co., Ltd.	TS1533	—	—	—
Combination 6					
Junction box	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd	PV-ZH011C-3	Rated Voltage = 1500V Rated Current = 15A Reverse Current = 30A	IEC 62790:2014	R 50379204
Cable	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50330654
Connectors	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50350557
Bypass diode	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd	20SQ045 (3 pcs)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Adhesive (junction box) 1	Jiangsu Tiansheng New Materials Technology Co., Ltd	TS-688(white)	—	—	—
Adhesive (junction box) 2	Beijing Tonsan New Material Technology Co., Ltd.	TS 1527 (white)	—	—	—
Adhesive (junction box) 3	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z (white)	—	—	—

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Constructional Data Form for Photovoltaic Modules

Potting material 1	Chengdu Guibao Science	4808 (white)	—	—	—
Potting material 2	Shanghai Huitian New Chemical Material Co., Ltd.	HT-5299W-S (white)	—	—	—
Potting material 3	Beijing Tonsan New Material Technology Co., Ltd.	TS1521 (white)	—	—	—
Potting material 4	Tonsan Adhesive, Inc.	1533 (white)	—	—	—
Combination 7					
Junction box	Dongguan Zerun Electronics Technology Co., Ltd.	Z8-abcd (a=4; b=S,T,U,V, W or X; c=G, I or W; d=O; e= 1 or 2)	Rated Voltage = 1500V Rated Current : 16A for Z8-abcd (c=G) ; 18A for Z8-abcd (c=I) ; 20A for Z8-abcd (c=W) ; Reverse Current = 25A	IEC 62790:2020 EN 62790:2020	R 50537484
Cable 1	Dongguan Zerun Electronics Technology Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50354353
Cable 2	Wuxi Xinhongye Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50311889
Cable 3	SUZHOU BAOHING ELECTRIC WIRE & CABLE CO., LTD.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50310426
Cable 4	Changshu Honglin Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50325448
Connectors 1	Dongguan Zerun Electronics Technology Co., Ltd.	Z4S-abcde	Rated Voltage = 1500V Rated Current = 40A	IEC 62852:2014	R 50363877
Connectors 2	Tyco Electronics (Shanghai) Co., Ltd.	PV4-S 1yx	Rated Voltage = 1500V Rated Current = 35A	IEC 62852:2014	R 50372137
Connectors 3	Amphenol Industrial Operations	H4-abcdef	Rated Voltage = 1500V Rated Current = 35A	IEC 62852:2014	R 50388083
Connectors 4	Amphenol Technology (Shenzhen) Co., Ltd.	UTXCF abcd; UTXCM abcd;	Rated Voltage = 1500V Rated Current = 42A	IEC 62852:2014	R 50340393

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Constructional Data Form for Photovoltaic Modules

Bypass diode 1	Yangzhou Yangjie Electronic Technology Co., Ltd. (one piece diode per single box)	20SQ045 (3pcs) (for c=G, 16A)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Bypass diode 2		20SQ100 (3pcs) (for c=G, 16A)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Bypass diode 3		25SQ045 (3pcs) (for c=W, 20A)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Bypass diode 4		SL2020A (3pcs) (for c=I, 18A)	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Adhesive (junction box) 1	Beijing Tonsan Adhesive Co., Ltd.	TS1527	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Material Co., Ltd.	HT906Z	—	—	—
Potting material 1	Beijing Tonsan Adhesive Co., Ltd.	TS 1521	—	—	—
Potting material 2	Shanghai Huitian New Material Co., Ltd.	HT5299W-S	—	—	—
Combination 8					
Junction box	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	PV-XT1609Nxyz (x=1 or 2; y=2; z=1 or 3)	Rated Voltage = 1500V Rated Current = 20A Reverse Current = 30A	EN 62790:2020 IEC 62790:2020	R 50524457
Cable 1	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50358893
Cable 2	Wuxi Xinhongye Wire & Cable Co., Ltd.	H1Z2Z2-K 1x4mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50311889
Connectors 1	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	PV-ST101.1	Rated Voltage = 1500V Rated Current = 35A	IEC 62852:2014	R 50385354
Connectors 2	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR;	Rated Voltage = 1500V Rated Current = 45A	IEC 62852:2014	R 60127169
Bypass diode 1	Panjit Electronics (Wuxi) CO., LTD.	SB3050DC (3 pcs) For PV-XT1609N121	$T_{j\max} = 200^{\circ}\text{C}$	—	—

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Bypass diode 2	Suzhou Xtong Photovoltaic Technologies Co., Ltd.	GFS2545 (3pcs) For PV-XT1609N223	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Adhesive (junction box) 1	Beijing Tonsan New Material Technology Co., Ltd.	TS1527	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Material Co., Ltd.	HT906Z	—	—	—
Potting material 1	Beijing Tonsan New Material Technology Co., Ltd.	1521	—	—	—
Potting material 2	Beijing Tonsan New Material Technology Co., Ltd.	1533	—	—	—
Potting material 3	Shanghai Huitian New Material Co., Ltd.	5299W-S	—	—	—
Combination 9					
Junction box	Zhejiang Rehhe Photovoltaic Technology Co., Ltd.	FT50xy (x=4)	Rated Voltage = 1500V Rated Current = 25A Reverse Current = 41A	IEC 62790:2020 EN 62790:2020	R 50415465
Cable 1	Zhejiang Rehhe Photovoltaic Technology Co., Ltd.	H1Z2Z2-K	Rated Voltage = 1500V	EN 50618:2014	R 50318681
Connectors 1	Zhejiang Rehhe Photovoltaic Technology Co., Ltd.	05-8	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50334688
Bypass diode 1	Zhejiang Rehhe Photovoltaic Technology Co., Ltd.	FMK5040D	$T_{j\max} = 200^{\circ}\text{C}$	—	—
Adhesive (junction box) 1	Jiangsu Tiansheng New Materials Technology Co., Ltd.	TS-688	—	—	—
Potting material 1	Chengdu Guibao Science and Technology Co., Ltd.	4808	—	—	—

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Combination 10					
Junction box	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	JM07w(w=R, S)	Rated Voltage = 1500V Rated Current = 20A Reverse Current = 41A	IEC 62790:2020 EN 62790:2020	R 50529604
Cable 1	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	62930 IEC 131 1x2,5...6mm ²	Rated Voltage = 1500V	EN 50618:2014	R 50507377
Connectors 1	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	PV-JM601A	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50332967
Connectors 2	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	PV-JM601	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50372259
Connectors 3	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR (male) PV-KBT4-EVO 2/xy_UR (female)	Rated Voltage = 1500V Rated Current = 45A	IEC 62852:2014	R 60127169
Bypass diode 1	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	THY4050	T _{j max} =200°C	—	—
Bypass diode 2	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	SBT4050DY	T _{j max} =200°C	—	—
Bypass diode 3	Zhejiang Jiaming Tianheyuan Photovoltaic Technology Co., Ltd.	RT3550	T _{j max} =200°C	—	—
Adhesive (junction box) 1	TOONSAN ADHESIVE, INC	1527	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	—	—	—

Shanghai
(Place)

12/08/2024
(date)



(stamp and/or signature of TÜV Rheinland)

Xining
(Place)

12/08/2024
(date)



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Potting material 1	Chengdu Guibao Science and Technology Co., Ltd.	4808	—	—	—
Potting material 2	Beijing Tonsan New Material Technology Co., Ltd.	1521	—	—	—
Potting material 3	Beijing Tonsan New Material Technology Co., Ltd.	1533	—	—	—
Combination 11					
Junction box	Baoding Yitong PV Science & Technology Co., Ltd.	PV-YT10s(s=1 or 2)	Rated Voltage = 1500V Rated Current = 10A for PV-YT10s(s=1) ; 15A for PV-YT10s(s=2) Reverse Current = 48A	IEC 62790:2020 EN 62790:2020	R 50563855
Cable 1	Wuxi Xinhongye Wire & Cable Co., Ltd.	62930 IEC 131 1X1,5...35mm ²	1x4,0mm ²	EN 50618:2014	R 50439595
Cable 2	Changzhou Chaoyue Special Cable Co., Ltd.	62930 IEC 131 1X1,5...35mm ²	1x4,0mm ²	EN 50618:2014	R 50419842
Cable 3	JIANGSU JIANGYANG SPECIAL CABLE CO., LTD.	62930 IEC 131 1X1,5...35mm ² HALOGEN FREE LOW SMOKE	1x4,0mm ²	EN 50618:2014	R 50513094
Cable 4	Shuangdeng cable Co., Ltd.	62930 IEC 131 1x4,0mm ² HALOGEN FREE LOW SMOKE	1x4,0mm ²	EN 50618:2014	R 50535274
Connectors 1	Baoding Yitong PV Science & Technology Co., Ltd.	YT08-1A	Rated current: 41A	IEC 62852:2014	R 50371702
				IEC 62852:2014	R 50515783
Connectors 2	Baoding Yitong PV Science & Technology Co., Ltd.	18-01	Rated current: 41A	IEC 62852:2014	R 50414794
Bypass diode 1	Yangzhou Hongyang Electronics Co., Ltd	PD2045	Tj max =200°C For PV-YT10s(s=1)	—	—

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Bypass diode 2	Nantong Gaoxin Science And Technology Development Co., Ltd.	15SQ045	Tj max =200°C For PV-YT10s(s=2)	—	—
Adhesive (junction box) 1	Beijing Tonsan New Materials and Technology Co., Ltd	1527	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Chemical Material Co., Ltd.	HT906Z	—	—	—
Potting material 1	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	—	—	—
Potting material 2	Beijing Tonsan New Material Technology Co., Ltd.	1521	—	—	—

Combination 12

Junction box	Zhejiang Zhonghuan Sunter PV Technology Co.,LTD	PV-ZH011C-5xyz	Rated Voltage : 1500V for PV-ZH011C-5xyz(y=B); 1000V for PV-ZH011C-5xyz(y=A); Rated Current : 20A for PV-ZH011C-5xyz(z=1); 25A for PV-ZH011C-5xyz(z=2); 30A for PV-ZH011C-5xyz(z=3); Reverse Current = 45A	IEC 62790:2020	R 50505349
Cable 1	Zhejiang Zhonghuan Sunter PV Technology Co.,LTD	62930 IEC 131 1X4mm ²	1x4,0mm ²	IEC 62930:2017	R 50436635
Cable 2	Changshu Friends Connector Technology Co.,Ltd.	62930 IEC 131 1X1,5...35mm ²	1x4,0mm ²	IEC 62930:2017	R 50538772
Connectors 1	Zhejiang Zhonghuan Sunter PV Technology Co., Ltd.	PV-ZH202B	Rated Voltage = 1500V Rated Current = 40A	IEC 62852:2014	R 50350557

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Connectors 2	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR; PV-KST4-EVO2A/xy ; PV-KBT4-EVO2A/xy	Rated Voltage = 1500V Rated Current = 45A	IEC 62852:2014	R 60127169
		PV-KST4/xy-UR ; PV-KBT4/xy-UR ;	Rated Voltage = 1000V Rated Current = 39A	IEC 62852:2014	R 60127190
Connectors 3	Hanwha Q Cells(Qidong)Co.,Ltd	HQC4	Rated Voltage = 1500V Rated Current = 30A	IEC 62852:2014	R 50385866
Bypass diode 1	Zhejiang Zhonghuan Sunter PV Technology Co.,Ltd.	40SQ045 (3 pcs)	T _{j max} =200°C	—	—
		35SQ045 (3 pcs)	T _{j max} =200°C	—	—
		30SQ045 (3 pcs)	T _{j max} =200°C	—	—
Adhesive (junction box) 1	Shanghai Huitian New Chemical Material Co., Ltd.	HT-906Z	—	—	—
Adhesive (junction box) 2	Hangzhou Zhijiang Silicone Chemicals Co.,Ltd	JS-606	—	—	—
Adhesive (junction box) 3	Guangzhou Baiyun Chemical Industry Co.,L td	SMG533	—	—	—
Potting material 1	Shanghai Huitian New Chemical Materal Co., Ltd.	5299W-S	—	—	—
Potting material 2	Hangzhou Zhijiang Silicone Chemicals Co.,Ltd	JS-1184	—	—	—
Potting material 3	H.B.Fuller(Suzhou) Advanced Material Co., LTD	1521 or 1533	—	—	—
Combination 13					

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Junction box	QC Solar (Suzhou) Corporation	181821-xyz (x=1 or 2; b=1 or 3; z=1 or 2)	Rated Voltage = 1500V for 181821-xyz (x=2; y=1 or 3; z=1 or 2); 1000V for 181821-xyz (x=1; y=1 or 3; z=1 or 2) Rated Current = 20.2A for 181821-xyz (x=1 or 2; y=1; z=1 or 2); 25A for 181821-xyz (x=1 or 2; y=3; z=1 or 2) Reverse Current = 30A for 181821-xyz (x=1 or 2; y=1; z=1 or 2); 40A for 181821-xyz (x=1 or 2; y=3; z=1 or 2);	EN 62790:2020 IEC 62790:2020	R 50514936
Cable	QC Solar (Suzhou) Corporation	62930 IEC 131 1X2.5mm ² ...10.0 mm ²	1x4,0mm ²	IEC 62930:2017	R 50447239
Connectors	QC Solar (Suzhou) Corporation	QC 4.10-ab	Rated Voltage = 1000V Rated Current = 35A	IEC 62852:2014	R 50330619
		QC 4.10-cd	Rated Voltage = 1500V Rated Current = 41A	IEC 62852:2014	R 50353779
		QC 4.10-cds	Rated Voltage = 1500V Rated Current = 41A	IEC 62852:2014	R 50505605
Connectors 2	Staubli Electrical Connectors AG	PV-KST4-EVO 2/xy_UR; PV-KBT4-EVO 2/xy_UR; PV-KST4-EVO2A/xy ; PV-KBT4-EVO2A/xy	Rated Voltage = 1500V Rated Current = 45A	IEC 62852:2014	R 60127169
		PV-KST4/xy-UR ; PV-KBT4/xy-UR ;	Rated Voltage = 1000V Rated Current = 39A	IEC 62852:2014	R 60127190
Connectors 3	Amphenol Technology(Shenzhen)Co.,LTD	H4Labcdef	Rated Voltage = 1100V Rated Current = 35A	IEC 62852:2014	R 50388083
		UTXCFabcde; UTXCMabcde	Rated Voltage = 1500V Rated Current = 35A	IEC 62852:2014	R 50340393

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Bypass diode	QC Solar (Suzhou) Corporation	30SQ050 (3 pcs);	$T_{j\max} = 200^{\circ}\text{C}$ Rated Current = 20.2A	—	—
		30SQ050A (3 pcs);	$T_{j\max} = 200^{\circ}\text{C}$ Rated Current = 25A	—	—
Adhesive (junction box) 1	Suzhou TONSAN Adhesive Ltd.	1527	—	—	—
Adhesive (junction box) 2	Shanghai Huitian New Material Co., Ltd.	HT906Z	—	—	—
Adhesive (junction box) 3	Hangzhou Zhijiang Silicone Chemicals Co.,Ltd	JS-606	—	—	—
Potting material 1	Shanghai Huitian New Chemical Material Co., Ltd.	5299W-S	—	—	—
Potting material 2	Hangzhou Zhijiang Silicone Chemicals Co.,Ltd	JS-1184	—	—	—
Potting material 3	Suzhou TONSAN Adhesive Ltd.	1521	—	—	—
		1533	—	—	—

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