


Constructional Data Form for Photovoltaic Modules

License Holder.....: (full address)	Sany Silicon Energy (Zhuzhou) Co., Ltd. Room 518-50, Building 1, Longxin International, No.255, Tongxia Road, Tongtangwan Street, Shifeng District, Zhuzhou City, Hunan Province, P.R. China			
Production Factory: (full address)	Sany Silicon Energy (Zhuzhou) Co., Ltd. Sany Energy Equipment Industrial Park, No.320 Qingshui Road, Shifeng District, Zhuzhou City, Hunan Province 412005 P.R. China			
Type of Product.....:	Photovoltaic (PV) Modules			
Trademark.....:				
	Glass-glass module			
	With ½ cut of 182 mono c-Si cell (156pcs):	With ½ cut of 182 mono c- Si cell (144pcs):	With ½ cut of 182 mono c- Si cell (120pcs):	With ½ cut of 182 mono c-Si cell (108pcs):
Type Name or Model No.....:	SYMNI56TBDxxx xxx=power in Wp	SYMNI44TBDxxx xxx=power in Wp	SYMNI20TBDxxx xxx=power in Wp	SYMNI08TBDxxx xxx=power in Wp
Maximum System Voltage [VDC]	1500	1500	1500	1500
Rated Maximum Power [W].....:	615, 620, 625, 630, 635	555, 560, 565, 570, 575, 580, 585	455, 460, 465, 470, 475, 480, 485	415, 420, 425, 430, 435, 440
Tolerance of Rating Pmax / Voc / Isc [%]...:	±3 / ±3 / ±3	±3 / ±3 / ±3	±3 / ±3 / ±3	±3 / ±3 / ±3
Rated Open Circuit Voltage [V].....:	55.53, 55.67, 55.81, 55.95, 56.09	50.98, 51.12, 51.26, 51.40, 51.54, 51.68, 51.82	42.27, 42.41, 42.55, 42.69, 42.83, 42.97, 43.11	37.94, 38.14, 38.34, 38.54, 38.74, 38.94
Rated Short Circuit Current [A].....:	13.72, 13.78, 13.84, 13.90, 13.96	13.60, 13.66, 13.72, 13.78, 13.84, 13.90, 13.96	13.54, 13.60, 13.66, 13.72, 13.78, 13.84, 13.90	13.60, 13.66, 13.72, 13.78, 13.84, 13.90
Over-current protection rating[A]:	30	30	30	30
Classification (IEC 61730).....:	Class II	Class II	Class II	Class II
Fire rating (According to UL 790).....:	Class A	Class A	Class A	Class A
Pollution degree.....:	I	I	I	I
Dimensions (l x w x h) [mm].....:	2465x1134x30	2278x1134x30	1903*1134*30	1722*1134*30
Module area [m²].....:	2.80	2.58	2.16	1.95

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Min- creepage distance [mm].....:	12.3±1	12.3±1	12.3±1	12.3±1
Number of solar cells	156	144	120	108
Cells per bypass diode	52	48	40	36
Serial/parallel connection of cells	SPS	SPS	SPS	SPS
	With ½ cut of 182 mono c-Si cell (144pcs):	With ½ cut of 182 mono c-Si cell (120pcs):	With ½ cut of 182 mono c-Si cell (108pcs):	-
Type Name or Model No.....:	SYMN144R01TBDxxx xxx=power in Wp	SYMN120R01TBDxxx xxx=power in Wp	SYMN108R01TBDxxx xxx=power in Wp	-
Maximum System Voltage [VDC]	1500	1500	1500	-
Rated Maximum Power [W].....:	590, 595, 600, 605, 610, 615, 620	490, 495, 500, 505, 510, 515, 520	440, 445, 450, 455, 460, 465, 470	-
Tolerance of Rating Pmax / Voc / Isc [%].....:	±3 / ±3 / ±3	±3 / ±3 / ±3	±3 / ±3 / ±3	-
Rated Open Circuit Voltage [V].....:	51.20, 51.34, 51.48, 51.62, 51.76, 51.90, 52.04	42.62, 42.76, 42.90, 43.04, 43.18, 43.32, 43.46	38.33, 38.47, 38.61, 38.75, 38.89, 39.03, 39.17	-
Rated Short Circuit Current [A].....:	14.44, 14.50, 14.56, 14.62, 14.68, 14.74, 14.80	14.44, 14.50, 14.56, 14.62, 14.68, 14.74, 14.80	14.44, 14.50, 14.56, 14.62, 14.68, 14.74, 14.80	-
Over-current protection rating[A]:	30	30	30	-
Classification (IEC 61730).....:	Class II	Class II	Class II	-
Fire rating (According to UL 790).....:	Class A	Class A	Class A	-
Pollution degree	I	I	I	-
Dimensions (l x w x h) [mm].....:	2382x1134x30	1994x1134x30	1800x1134x30	-
Module area [m²]	2.70	2.20	2.04	-
Min- creepage distance [mm].....:	12.3±1	12.3±1	12.3±1	-
Number of solar cells	144	120	108	-
Cells per bypass diode	48	40	36	-
Serial/parallel connection of cells	SPS	SPS	SPS	-

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Copy of marking plate:



PV MODULE
Sany Silicon Energy (Zhuzhou) Co., LTD
Sany Energy Equipment Industrial Park,
No.320 Qingshui Road, Shifeng District,
Zhuzhou City, Hunan Province
412005 China
www.sanygroup.com/

SYMN144TBD555
Max. power (P_{max})
Max. power tolerance
Voltage at max. power (V_{mpp})
Current at max. power (I_{mpp})
Open-circuit voltage (V_{oc})
Short-circuit current (I_{sc})
Maximum system voltage

555W
±3%
41.84V
13.29A
50.47V±3%
14.07A±3%
1500VDC

bifaciality
Series Fuse Rating
operating temperature range
protect rage
module wprotecteigh
module size
STC

80±5%
30A
40°C ~ +85°C
II
32.0(kg)
2278×1134×30(mm)
1000W/m², AM1.5, 25°C



warning

Only the professionals can install and
maintain the components Be careful of the
dangerous high DC voltage when connecting
the components Never damage or scratch the
back of the assembly



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SYMN156TBD635
Max. power (P_{max})
Max. power tolerance
Voltage at max. power (V_{mpp})
Current at max. power (I_{mpp})
Open-circuit voltage (V_{oc})
Short-circuit current (I_{sc})
Maximum system voltage

635W
±3%
47.47V
13.38A
56.09V±3%
13.96A±3%
1500VDC

bifaciality
Series Fuse Rating
operating temperature range
protect rage
module wprotecteigh
module size
STC

80±5%
30A
40°C ~ +85°C
II
34.3(kg)
2465×1134×30(mm)
1000W/m², AM1.5, 25°C



warning

Only the professionals can install and
maintain the components Be careful of the
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List of Critical Components (add lines for multiple material sources)					
Object	Manufacturer / trademark	Type / model	Technical data / ratings	Standard (if applicable)	Certificates (if applicable)
Front cover	Hunan Kibing Solar Technology Co., Ltd.	Semi-tempered AR coated glass	Thickness =2.0mm	—	—
Rear cover	Hunan Kibing Solar Technology Co., Ltd.	Semi-Tempered back glass	Thickness =2.0mm	—	—
Encapsulation material	HANGZHOU FIRST APPLIED MATERIAL CO., LTD	EP304 (near glass)	Thickness = 0.5mm gram weight: 400 g/m ²	—	—
		F406PS (near back glass)	Thickness = 0.5mm gram weight:400 g/m ²		
Solar cell 1	Sany Silicon Energy (Zhuzhou) Co., Ltd.	SYCN182T16	N type mono c-Si cell with 16 dotted busbars 182mm×91mm, Thickness=155µm±20µm	—	—
Solar cell 2	Sany Silicon Energy (Zhuzhou) Co., Ltd.	SYCN18AT16	N type mono c-Si cell with 16 dotted busbars 182.2mm×95.8mm±0.25mm Thickness=130µm±15µm	—	—
Cell connectors 1	Changzhou Sheng Yue metal new material Co., Ltd.	Sn60Pb40	Ø= 0.26±0.01mm	—	—
Cell connectors 2	Suzhou YourBest New-type Materials Co., Ltd.	Sn60Pb40	Ø= 0.26±0.01mm	—	—
String connectors 1	Changzhou Sheng Yue metal new material Co., Ltd.	Sn60Pb40	T(mm) x L(mm): 0.3mm x 6.0mm 0.3mm x 4.0mm	—	—
String connectors 2	Suzhou YourBest New-type Materials Co., Ltd.	Sn60Pb40	T(mm) x L(mm): 0.3mm x 6.0mm 0.3mm x 4.0mm	—	—
Frame parts	CHANGSHU DONGNENG SOLAR TECHNOLOGY CO., LTD	Anodized Aluminium Alloy 6005-T6 (Silver)	H(mm) x W(mm): 30x33mm (long frame) 30x18mm (short frame)	—	—
Adhesive (frame)	Shanghai Huitian New Material Co., Ltd.	HT906Z	Color: White	—	—

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Object	Manufacturer / trademark	Type / model	Technical data / ratings	Standard (if applicable)	Certificates (if applicable)
Fluxing agent 1	Zhuhai Changxian New Materials Technology Co., Ltd	CX700	—	—	—
Fluxing agent 2	ASAHI SOLDER TECHNOLOGY(WUXI) CO., LTD	SF180	—	—	—
Fixing tape 1	SuZhou Rongzhi Electronic Technology Co., Ltd	D60F6-2	Thickness= 100µm±40µm	—	—
Fixing tape 2	Guangdong Sunrui New Material Co., Ltd.	HZ UV-100	Thickness= 100µm±40µm	—	—
Insulation tape	—	—	—	—	—
(Optional) Accessories	—	—	—	—	—
Junction box	QC Solar (Suzhou) Corporation	3Qxy (x=1 or 2 or 3 or 4; y=1 or 2 or 3 or 4)	Rated voltage =1500VDC Rated current =20A (x=1; y=1 or 2 or 3 or 4) Rated current =22A (x=2; y=1 or 2 or 3) Rated current =25A (x=3; y=1 or 2 or 3 or 4) Rated current =30A (x=4; y=1 or 2 or 3 or 4) Reverse current=40A IP68	IEC 62790: 2020 EN IEC 62790: 2020	R 50510013
Cable	QC Solar (Suzhou) Corporation	62930 IEC 131 1 x 2,5mm ² / 1 x 4,0mm ² / 1 x 6,0mm ² / 1 x 10,0mm ² HALOGEN FREE LOW SMOKE	Max. Voltage = 1500VDC	IEC 62930	R 50447239
Connector	QC Solar (Suzhou) Corporation	QC4.10-cds	Max. Voltage = 1500VDC Max. Current = 41A	IEC 62852	R 50505605
Bypass diode	QC Solar (Suzhou) Corporation	QCM4045	T _j max =200 °C;	—	—
Adhesive	Shanghai Huitian New Material Co., Ltd.	HT906Z	Color: White	—	—

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List of Critical Components (add lines for multiple material sources)

Object	Manufacturer / trademark	Type / model	Technical data / ratings	Standard (if applicable)	Certificates (if applicable)
Potting (junction box)	Shanghai Huitian New Material Co., Ltd.	5299W-S	Color: White	—	—

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