

Technical Specifications of Rooftop Solar PV

No	Descriptions of the Technical Requirement			Quantity	
	Material	UoM	Specifications		
PV MODULE					
Mechanical Characteristics					
1	Solar Cells		N-type Monocrystalline	1 Lot	
2	Number of Cells	cells	132		
3	Module Dimensios	mm	2384x1303x33		
4	Weight	kg	38.3		
5	Front Glass	mm	2		
6	Module Efficiency STC (%)	%	22.54		
7	Operrating Temperature (°C)	°C	-40°C~+85		
8	Maximum System Voltage	VDC (IEC)	1500		
9	Maximum Series Fuse Rating	A	30		
10	Power Tolerance	%	0~+3		
Electrical Data					
11	Peak Power Watts (NOCT)	Wp	531	1 Lot	
12	Power Tolerance	W	0 ~ +5		
13	Maximum Power Voltage	V	37.9 V		
14	Maximum Power Current	A	14		
15	Open Circuit Voltage	V	45.9		
16	Short Circuit Current	A	14.72		
17	Module Efficiency	%	22.4		
Temperature Ratings					
18	Nominal Operating Cell Temperature (NOCT)	°C	43 (±2)	1 Lot	
19	Temperature Coefficient of Pmax	%/°C	-0.29		
20	Temperature Coefficient of Voc		-0.24		
21	Temperature Coefficient of Isc		0.04		
INVERTER					
Efficiency					
21	Max Efficiency	%	≥ 98.8	1 Lot	
22	European Efficiency	%	≥ 98.6		
Input					
23	Max. Input Voltage	V	1,100		
24	Max. Current per MPPT	A	30		
25	Max. Current per Input	A	20		
26	Max. Short Circuit Current per MPPT	A	40		
27	Start Voltage	V	200		
28	MPTT Operating Voltage Range	V	200 ~ 1,000		
29	Nominal Input Voltage	V	500 ~ 1,500		
30	Number of MPP Trackers		10		
31	Max. Input Number per MPP Tracker		2		
Output					
32	Nominal AC Active Power	W	115,000	1 Lot	
33	Max. AC Apparent Power	VA	125,000		
34	Max. AC Active Power (cosφ=1)	W	125,000		
35	Nominal Output Voltage	V	400 V / 480 V, 3W+(N)+PE		
36	Rated AC Grid Frequency		50 Hz / 60 Hz		
37	Nominal Output Current	A	166 A @400 V, 138.4 A @480 V		
38	Max. Output Current	A	182.3 A @400 V, 151.9 A @480 V		
39	Adjustable Power Factor Range		0.8 Leading ... 0.8 Lagging		
40	Max. Total Harmonic Distortion	%	<3%		
Protection					
41	Input-side Disconnection Device		Yes	1 Lot	
42	Anti-islanding Protection		Yes		
43	AC Overcurrent Protection		Yes		
44	DC Reverse-polarity Protection		Yes		
45	PV-array String Fault Monitoring		Yes		
46	DC Surge Arrester		Type II		
47	AC Surge Arrester		Type II		
48	DC Insulation Resistance Detection		Yes		
49	Residual Current Monitoring Unit		Yes		
50	Smart String Level Disconnecter		Yes		
Communication					
51	Display		LED Indicators, WLAN Adaptor + FusionSolar APP	1 Lot	
52	RS485		Yes		
53	USB		Yes		
54	Smart Dongle-4G		4G/3G/2G via Smart Dongle		
55	Monitoring BUS (MBUS)		Yes (isolation transformer required)		
General					
56	Dimensions (W X H X D)	mm	1,035 x 700 x 365	1 Lot	
57	Weight (With mounting plate)	kg	93		
58	Operating Temperature Range	°C	-25 ~ 60		
59	Cooling Method		Smart Air Cooling		
60	Max. Operating Altitude	m	4,000		
61	Relative Humidity	%	0 ~ 100		
62	DC Connector		Amphenol		
63	AC Connector		Waterproof Connector + OT/DT Terminal		
64	Protection Degree		IP66		
65	Topology		Transformerless		
66	Nighttime Power Consumption	W	< 3.5		
CABLE					
67	AC/DC Cable follow SNI 0225:2020		Top 5 Cable Manufacture	1 Lot	
SWITCH					
68	Switch follow follow SNI 0225:2020		Top 3 Switch Manufacture		