at S Series

0W/545W/550W/555W/560W

MBB HALF-CELL MONO PV MOD 182MM CELLS



SUNERGY USA WORKS LLC

Founded in 2008, Sunergy is a manufacturer of high-performance photovoltaic products. With 12 manufacturing bases and more than 20 branches around the world, the company's business covers modules, photovoltaic power stations and EPC. Sunergy products are available in over 120 countries and regions and are used extensively in ground-mounted power plants, commercial & industrial rooftop PV systems and residential rooftop PV systems.

QUALIFICATIONS AND CERTIFICATES













COMPREHENSIVE CERTIFICATES

IEC61215 / IEC61730 / IEC61701 / IEC62716 / IEC62804 ISO 9001: 2015 Quality management

systems;

ISO 14001: 2015 Environmental management systems;

ISO 45001:2018 Occupational

health and safety management systems;

Sunergy Advantages



Power attenuation rate surpass than industry standards

As the CTC randomization test, our attenuation rate is 1.81%, 0.31% and 0.34% in the 1st,2nd and 3rd year, which is much less than the national standard value of 2% and 0.55%



Overflow tank can be waterproof

The excess silicone will flow into the overflow tank, can reduce 3% water vapor entering the panels



Stronger frame

The C side of the frame contains curved hook reinforcement, enhanced the mechanical load strength by 10%



Current grading

Current classification effectively avoids 2% power loss caused by current mismatch during installation, achieving max output power

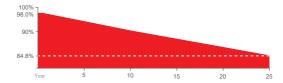


IP68 junction box

IP68 junction box offer perfect waterproof performance

LINEAR PERFORMANCE WARRANTY

- 12 Years Manufacturing Warranty
- 12 Years 92.0% Power Output
- 25 Years 84.8% Power Output

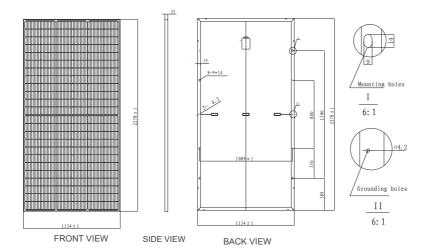








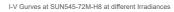
MECHANICAL DRAWINGS

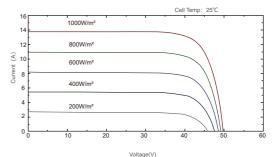


MECHANICAL SPECIFICATION

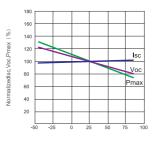
Cell Type	Mono Crystalline 182x91mm
Number Of Cells	144 (6x24)
Dimensions(AxBxC)	2278x1134x35mm
Weights	27.0kg
Glass	3.2mm Tempered Low Iron Glass
Aluminium Frame	Anodised Aluminium
Junction Box	Split Junction Box (IP68 ,three diode)
Connector	Mc4 Compatible
Output Cables	4.0mm²,+300mm,-300mm Customized Length

I-V CURVES





Power voltage current curve at different temperature



Cell Temperature(°C)

PACKING CONFIGURATION

Container	40' HQ
Pieces Per Pallet	31
Pallets Per Container	20
Pieces Per Container	620

ELECTRICAL CHARACTERISTICS

Module Type	540W	545W	550W	555W	560W	
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT	
Maximum Power At STC(Pmax)	540W 406.8W	545W 410.5W	550W 414.3W	555W 418.1W	560W 421.8W	
Short Circuit Current(Isc)	13.70A 11.07A	13.76A 11.12A	13.82A 11.17A	13.88A 11.22A	13.94A 11.26A	
Open Circuit Voltage(Voc)	49.8V 46.5V	50.0V 46.7V	50.2V 46.9V	50.5V 47.2V	50.7V 47.4V	
Maximum Power Current(Impp)	12.86A 10.49A	12.92A 10.54A	12.98A 10.58A	13.03A 10.63A	13.09A 10.68A	
Maximum Power Voltage(Vmpp)	42.0V 38.8V	42.2V 39.0V	42.4V 39.1V	42.6V 39.3V	42.8V 39.5V	
Module Efficiency	20.90%	21.10%	21.29%	21.48%	21.68%	
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W	
Maximum System Voltage	VDC 1500V					
Maximum Series Fuse	25A					
Increased Snowload Acc.to lec 6121	5 5400Pa					
Operating Temperature	-40~+85℃					
Number Of Bypass Diodes	3					
Norminal Operating Cell Temperature	e(Noct) 45°C±2°C					
Temperature Coefficient Of Pmax		-0.35%℃				
Temperature Coefficient Of Voc		-0.27%℃				
Temperature Coefficient Of Isc		0.05%℃				

STC: 1000W/m2 irradiance, 25°C cell temperature, AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C , wind speed 1m/s .



