# ar S Series

MBB HALF-CELL MONO PV MODUL **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















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

systems;

ISO 14001: 2015 Environmental management systems;

OHSAS 18001: 2007 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

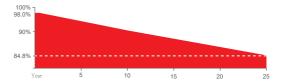


# IP68 junction box

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

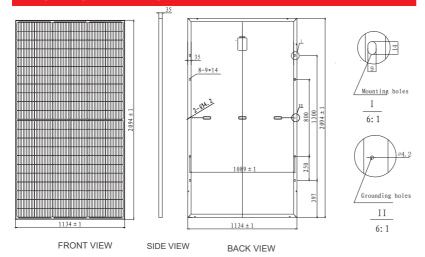








# MECHANICAL DRAWINGS

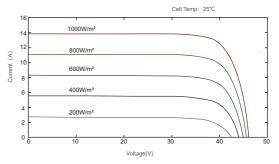


# MECHANICAL SPECIFICATION

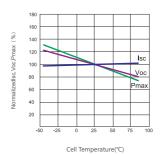
Cell Type	Mono Crystalline 182x91mm		
Number Of Cells	132 (6x32)		
Dimensions(AxBxC)	2094x1134x35mm		
Weights	26.0kg		
Glass	3.2mm Tempered Low Iron Glass		
Aluminium Frame	Anodised Aluminium		
Junction Box	Split Junction Box (IP68 ,three diode)		
Connector	Mc4 Compatible		
Output Cables	4.0mm²,+300mm,-300mm Customized Length		

# I-V CURVES





Power voltage current curve at different temperature



# **PACKING CONFIGURATION**

Container	40' HQ
Pieces Per Pallet	31
Pallets Per Container	22
Pieces Per Container	682

# **ELECTRICAL CHARACTERISTICS**

Module Type	500W	505W	510W
	STC NOCT	STC NOCT	STC NOCT
Maximum Power At STC(Pmax)	500W 376.7W	505W 380.4W	510W 384.2W
Short Circuit Current(Isc)	13.76A 11.12A	13.82A 11.17A	13.89A 11.22A
Open Circuit Voltage(Voc)	45.9V 42.9V	46.1V 43.1V	46.4V 43.4V
Maximum Power Current(Impp)	12.92A 10.54A	12.98A 10.58A	13.05A 10.64A
Maximum Power Voltage(Vmpp)	38.7V 35.7V	38.9V 35.9V	39.1V 36.1V
Module Efficiency	21.06%	21.27%	21.48%
Power Tolerance	0~+5W	0~+5W	0~+5W
Maximum System Voltage		VDC 1500V	
Maximum Series Fuse		25A	
Increased Snowload Acc.to lec 61215		5400Pa	
Operating Temperature	-40~+85°C		
Number Of Bypass Diodes	3		
Norminal Operating Cell Temperature(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.



