ar S Series

-Type TOPCon HALF-CELL MONO



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;

OHSAS 18001: 2007 Occupational health and safety management systems;

Sunergy Advantages



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

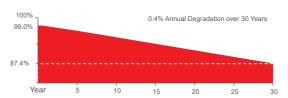


IP68 junction box

IP68 junction box offer perfect waterproof performance

LINEAR PERFORMANCE WARRANTY

- 12 Years Manufacturing Warranty
- 12 Years 94.6% Power Output
- 30 Years 87.4% Power Output

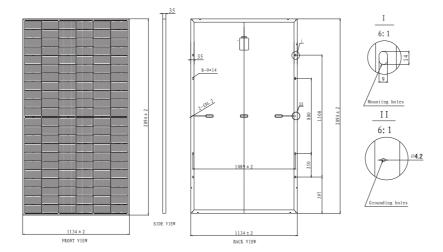








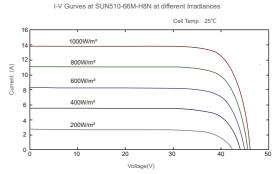
MECHANICAL DRAWINGS



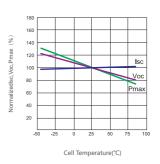
MECHANICAL SPECIFICATION

Cell Type	N-Type Mono Crystalline 182x91mm
Number Of Cells	132 (6x22)
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	510W	515W	520W	525W	530W		
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT		
Maximum Power At STC(Pmax)	510W 385.0W	515W 388.7W	520W 392.5W	525W 396.3W	530W 400.1W		
Short Circuit Current(Isc)	13.98A 11.36A	14.07A 11.43A	14.14A 11.49A	14.23A 11.56A	14.31A 11.62A		
Open Circuit Voltage(Voc)	46.38V 43.93V	46.53V 44.07V	46.68V 44.21V	46.83V 44.36V	46.98V 44.50V		
Maximum Power Current(Impp)	13.23A 10.73A	13.31A 10.80A	13.38A 10.86A	13.46A 10.92A	13.54A 10.99A		
Maximum Power Voltage(Vmpp)	38.56V 35.87V	38.71V 35.99V	38.86V 36.16V	39.01V 36.27V	39.16V 36.41V		
Module Efficiency	21.5%	21.7%	21.9%	22.1%	22.3%		
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°C						
Number Of Bypass Diodes	3						
Norminal Operating Cell Temperature	nperature(Noct) 45°C±2°C						
Temperature Coefficient Of Pmax		-0.30%℃					
Temperature Coefficient Of Voc		-0.25%℃					
Temperature Coefficient Of Isc		0.046%℃					

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



