la TS Series 05W/410W/415W/420W/425W

MBB HALF-CELL MONO PV MODULE



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



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 powe



IP68 junction box

IP68 junction box offer perfect waterproof performance

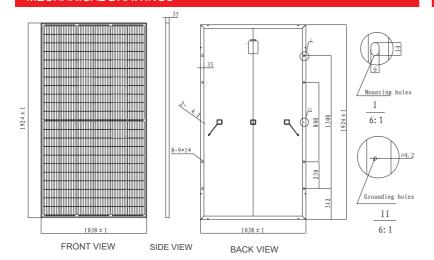
LINEAR PERFORMANCE WARRANTY

- 12 Years Manufacturing Warranty
- 12 Years 90% Power Output
- 25 Years 80% Power Output





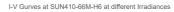
MECHANICAL DRAWINGS

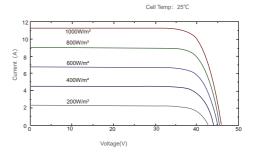


MECHANICAL SPECIFICATION

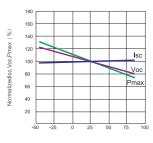
Cell Type	Mono Crystalline 166x83mm
Number Of Cells	132 (6x22)
Dimensions(AxBxC)	1924x1038x35mm
Weights	22.5kg
Glass	3.2mm Tempered Low Iron Glass
Aluminium Frame	Anodised Aluminium
Junction Box	Split Junction Box (IP68 ,three diode)
Connector	Mc4 Compatible
Output Cables	4.0mm²,+300mm,-300mm Customized 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	24
Pieces Per Container	768

ELECTRICAL CHARACTERISTICS

Module Type	405W	410W	415W	420W	425W		
	STC NOCT	STC NOCT	STC NOCT	STC NOCT	STC NOCT		
Maximum Power At STC(Pmax)	405W 304.4W	410W 308.2W	415W 311.9W	420W 315.7W	425W 319.7W		
Short Circuit Current(Isc)	11.25A 9.09A	11.34A 9.16A	11.41A 9.22A	11.49A 9.28A	11.49A 9.28A		
Open Circuit Voltage(Voc)	45.6V 42.5V	45.9V 42.8V	46.2V 43.1V	46.5V 43.4V	46.5V 43.4V		
Maximum Power Current(Impp)	10.77A 8.62A	10.85A 8.69A	10.92A 8.74A	10.99A 8.80A	11.07A 8.86A		
Maximum Power Voltage(Vmpp)	37.6V 35.3V	37.8V 35.5V	38.0V 35.7V	38.2V 35.9V	38.4V 36.1V		
Module Efficiency	20.28%	20.53%	20.78%	21.03%	21.27%		
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W		
Maximum System Voltage	VDC 1500V						
Maximum Series Fuse		20A					
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	-0.36%℃						
Temperature Coefficient Of Voc		-0.29%℃					
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.



