

Mars Series

435W/440W/445W/450W/455W/
460W

SUN 72M-H6(BK)

MBB HALF-CELL MONO PV MODULE



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 power



IP68 junction box

IP68 junction box offer perfect waterproof performance

SUNERGY USA WORKS LLC

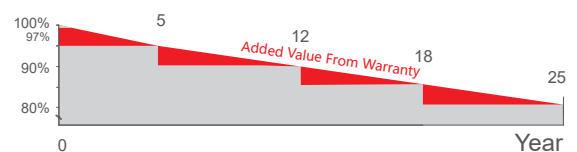
Founded in 2008, Sunergy is a manufacturer of high-performance photovoltaic products. With 12 manufacturing bases and more than 20 branches around the world, the company's business covers modules, photovoltaic power stations and EPC. Sunergy products are available in over 120 countries and regions and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

QUALIFICATIONS AND CERTIFICATES



LINEAR PERFORMANCE WARRANTY

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

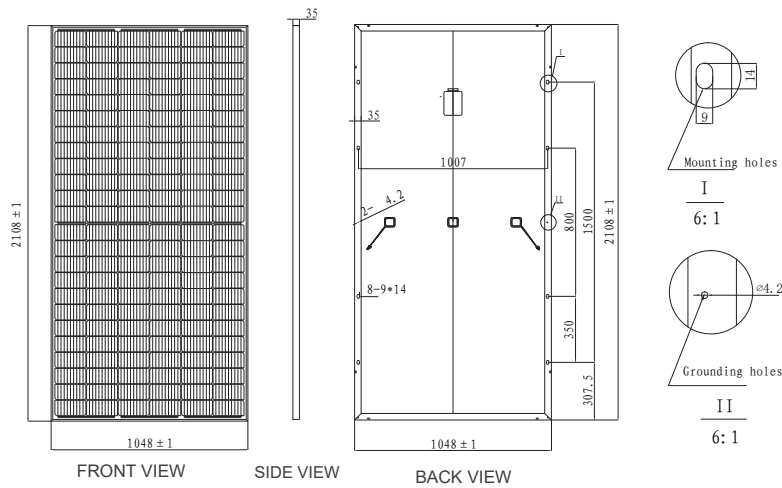


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www.sunergyworks.com



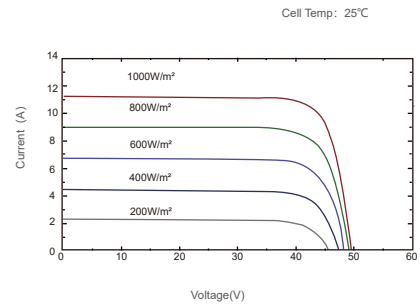
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MECHANICAL DRAWINGS

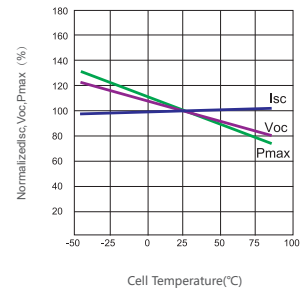


I-V CURVES

I-V Curves at SUN440-72M-H6(BK) at different Irradiances



Power voltage current curve at different temperature



MECHANICAL SPECIFICATION

Cell Type	Mono Crystalline 166x83mm
Number Of Cells	144 (6x24)
Dimensions(AxBxC)	2108x1048x35mm
Weights	24.5kg
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

PACKING CONFIGURATION

Container	40' HQ
Pieces Per Pallet	31
Pallets Per Container	22
Pieces Per Container	704

ELECTRICAL CHARACTERISTICS

Module Type	435W		440W		445W		450W		455W		460W	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power At STC(Pmax)	435W	327.0W	440W	330.7W	445W	334.5W	450W	338.3W	455W	342.0W	460W	345.8W
Short Circuit Current(Isc)	11.14A	9.00A	11.21A	9.06A	11.29A	9.12A	11.36A	9.18A	11.43A	9.24A	11.50A	9.29A
Open Circuit Voltage(Voc)	49.2V	45.9V	49.4V	46.1V	49.7V	46.3V	50.0V	46.6V	50.3V	46.9V	50.6V	47.2V
Maximum Power Current(Imp)	10.66A	8.53A	10.73A	8.59A	10.80A	8.65A	10.87A	8.70A	10.94A	8.75A	11.01A	8.71A
Maximum Power Voltage(Vmpp)	40.8V	38.3V	41.0V	38.5V	41.2V	38.7V	41.4V	38.9V	41.6V	39.1V	41.8V	39.3V
Module Efficiency	19.55%		19.78%		20.00%		20.22%		20.45%		20.82%	
Power Tolerance	0~+5W		0~+5W		0~+5W		0~+5W		0~+5W		0~+5W	
Maximum System Voltage	VDC 1500V											
Maximum Series Fuse	20A											
Increased Snowload Acc.to Iec 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%/°C											
Temperature Coefficient Of Voc	-0.29%/°C											
Temperature Coefficient Of Isc	0.05%/°C											

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

