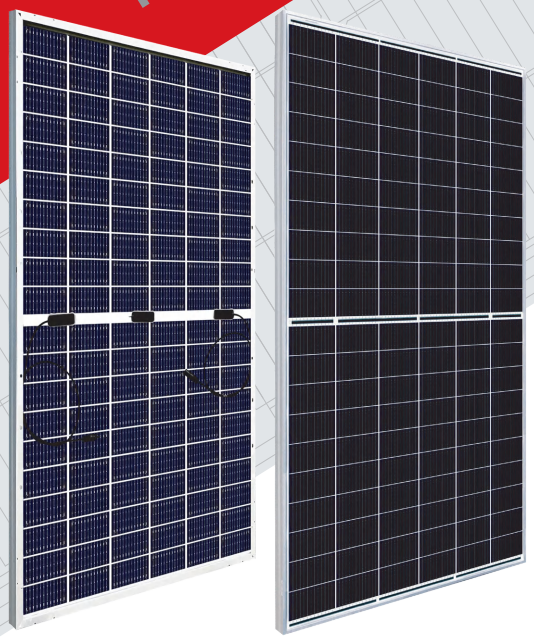
Mars Series

600W/605W/610W/615W

SUN 60MD-H12S

HALF-CELL BIFACIAL MBB MONO PERC DOUBLE GLASS MODULE 210MM CELLS



BACK VIEW FRONT VIEW

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 0.45%

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

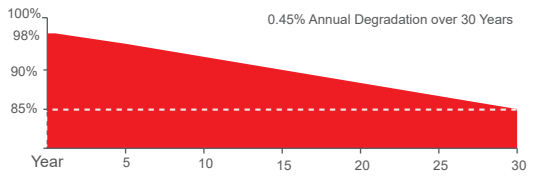
SUNERGY USA WORKS LLC

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 93% Power Output
- 30 Years 85% Power Output



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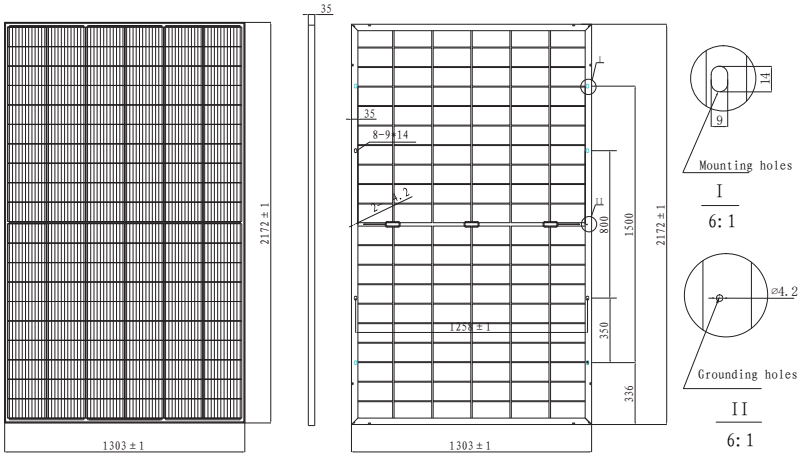
www.sunergyworks.com

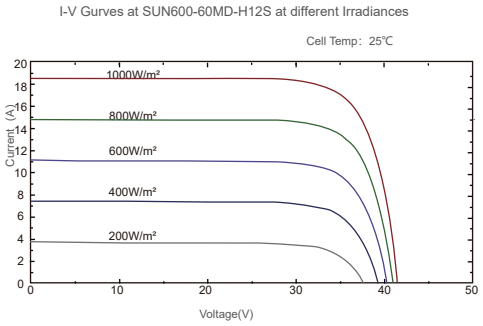
Mars Series SUN 60MD-H12S

MECHANICAL DRAWINGS

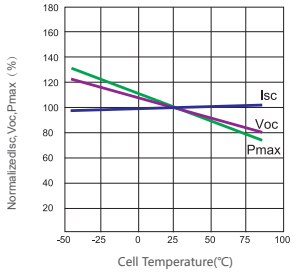


FRONT VIEW SIDE VIEW BACK VIEW

I-V CURVES



Power voltage current curve at different temperature



MECHANICAL SPECIFICATION

Cell Type	Mono Crystalline 210x105mm
Number Of Cells	120（6x20）
Dimensions(AxBxC)	2172x1303x35mm
Weights	36.0kg
Glass	2.0/2.0mm 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	18
Pieces Per Container	558

ELECTRICAL CHARACTERISTICS

Module Type	600W		605W		610W		615W	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power At STC(Pmax)	600W	454.8W	605W	458.6W	610W	462.3W	615W	466.1W
Short Circuit Current(Isc)	18.53A	14.97A	18.58A	15.01A	18.62A	15.04A	18.68A	15.09A
Open Circuit Voltage(Voc)	41.5V	38.9V	41.7V	39.1V	41.9V	39.2V	42.1V	39.4V
Maximum Power Current(Impp)	17.50A	14.19A	17.54A	14.23A	17.58A	14.26A	17.63A	14.31A
Maximum Power Voltage(Vmpp)	34.3V	32.0V	34.5V	32.2V	34.7V	32.4V	34.9V	32.6V
Module Efficiency	21.20%		21.38%		21.55%		21.73%	
Power Tolerance	0~+5W		0~+5W		0~+5W		0~+5W	

Maximum System Voltage	VDC 1500V
Maximum Series Fuse	35A
Increased Snowload Acc.to Iec 61215	5400Pa
Operating Temperature	-40~+85℃
Number Of Bypass Diodes	3
Norminal Operating Cell Temperature(Noct)	45℃±2℃
Temperature Coefficient Of Pmax	-0.34%℃
Temperature Coefficient Of Voc	-0.26%℃
Temperature Coefficient Of Isc	0.04%℃

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN

(Reference to 600W Front)

Backside Power Gain	5%	10%	15%	20%	25%
Maximum Power At STC(Pmax)	630	660	690	720	750
Short Circuit Current(Isc)	19.28	20.20	21.12	21.91	22.82
Open Circuit Voltage(Voc)	41.7	41.7	41.7	50.0	50.0
Maximum Power Current(Impp)	18.16	19.02	19.88	20.63	21.49
Maximum Power Voltage(Vmpp)	34.70	34.70	34.7	34.9	34.9

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

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