

Mars Series

395W/400W/405W/410W/415W

SUN 72MD-HFS






HALF-CELL BIFACIAL MBB MONO PERC DOUBLE GLASS 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;

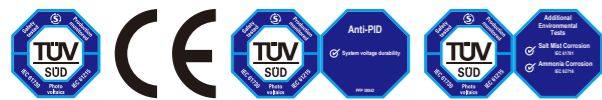
KEY SALIENT FEATURES

-  **High output power**
-  **Better power generation under shadows**
-  **Strong anti-hot spot ability**
-  **Enhanced safety**
-  **Easy to install**
-  **High tolerance for harsh environment and extreme weather conditions**

SUNERGY USA WORKS LLC

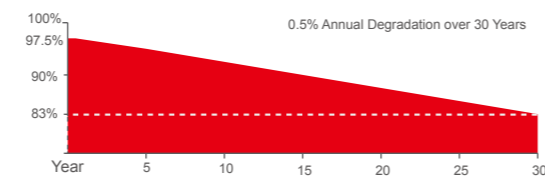
Founded in 2008, Sunergy is a manufacturer of high-performance photovoltaic products. With 12 manufacturing bases and more than 20 branches around the world, the company's business covers modules, photovoltaic power stations and EPC. Sunergy products are available in over 120 countries and regions and 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 92% Power Output
- 30 Years 83% Power Output

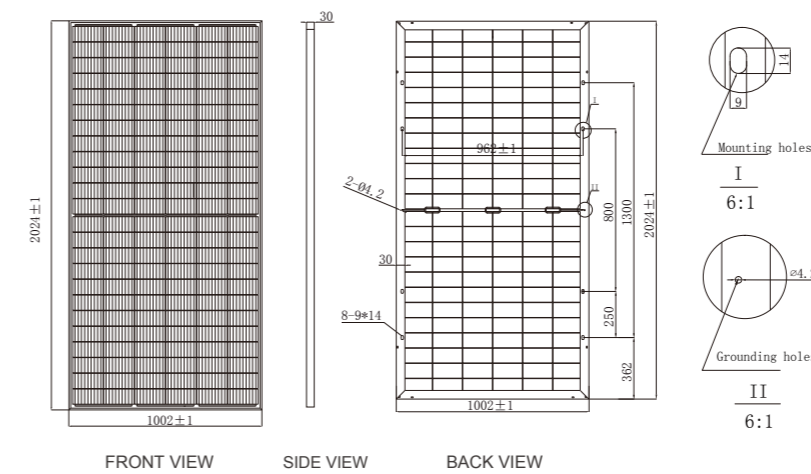


SUNERGY USA WORKS LLC
www.sunergyworks.com



Mars Series SUN 72MD-HFS

MECHANICAL DRAWINGS



MECHANICAL SPECIFICATION

Cell Type	Mono Crystalline 158.75x79.375mm
Number Of Cells	144 (6x24)
Dimensions(AxBxC)	2024x1002x30mm
Weights	26.5kg
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	4.0mm ² ,+300mm,-300mm Customized Length

ELECTRICAL CHARACTERISTICS

Module Type	395W		400W		405W		410W		415W	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power At STC(Pmax)	395W	296.9W	400W	300.7W	405W	304.4W	410W	308.2W	415W	311.9W
Short Circuit Current(Isc)	10.24A	8.29A	10.31A	8.35A	10.40A	8.42A	10.47A	8.48A	10.56A	8.55A
Open Circuit Voltage(Voc)	49.4V	46.1V	49.7V	46.3V	49.9V	46.5V	50.2V	46.8V	50.4V	47.0V
Maximum Power Current(Impp)	9.78A	7.86A	9.85A	7.91A	9.93A	7.98A	10.00A	8.03A	10.07A	8.10A
Maximum Power Voltage(Vmpp)	40.4V	37.8V	40.6V	38.0V	40.8V	38.1V	41.0V	38.4V	41.2V	38.5V
Module Efficiency	19.48%		19.72%		19.97%		20.22%		20.46%	
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 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									

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE POWER GAIN

(Reference to 405W Front)

Backside Power Gain	5%	10%	15%	20%	25%
Maximum Power At STC(Pmax)	425	446	466	486	506
Short Circuit Current(Isc)	10.90	11.43	11.95	12.40	12.91
Open Circuit Voltage(Voc)	49.9	49.9	49.9	50.0	50.0
Maximum Power Current(Impp)	10.42	10.93	11.42	11.85	12.34
Maximum Power Voltage(Vmpp)	40.8	40.8	40.8	41.0	41.0

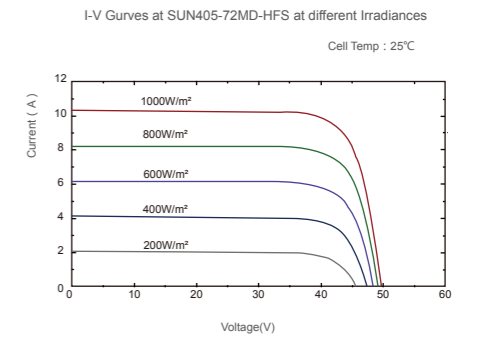
STC: 1000W/m² irradiance, 25°C cell temperature, AM1.5. NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, wind speed 1m/s.



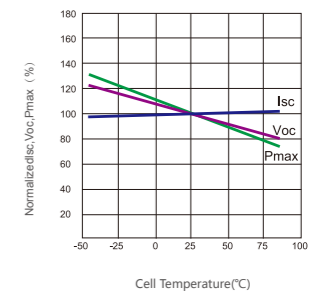
SUNERGY USA WORKS LLC
www.sunergyworks.com



I-V CURVES



Power voltage current curve at different temperature



PACKING CONFIGURATION

Container	40' HQ
Pieces Per Pallet	35
Pallets Per Container	22
Pieces Per Container	770