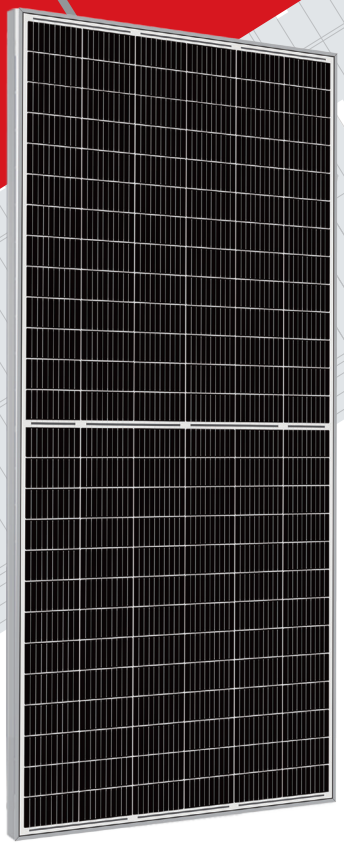
Mars Series

430W/435W/440W/445W/450W/ 455W/460W

SUN 78M-HF

9BB 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;

KEY SALIENT FEATURES

- High output power
- Better power generation under shadows
- Strong anti-hot spot ablity
- Strong mechanical load capacity
- Super strong frame
- 1500V system voltage

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.

LINEAR PERFORMANCE WARRANTY

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

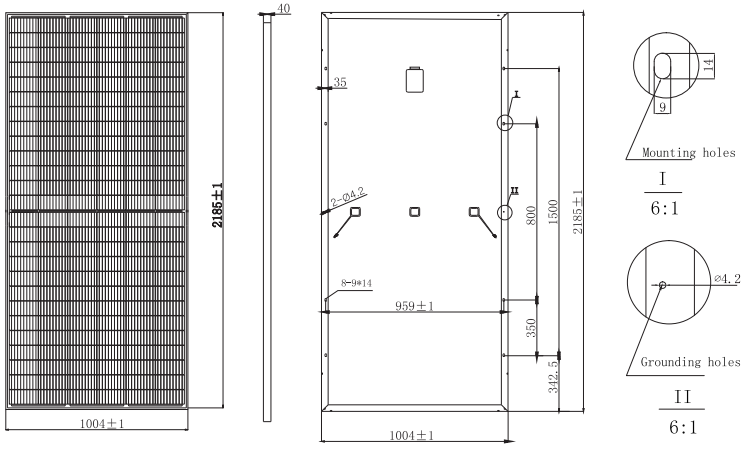
QUALIFICATIONS AND CERTIFICATES

SUNERGY

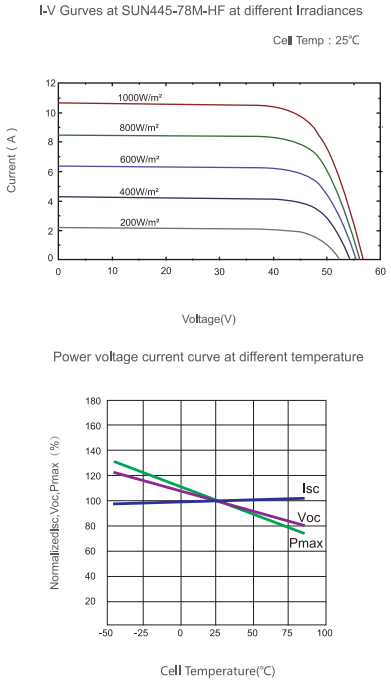
SUNERGY USA WORKS LLC
www.sunergyworks.com

Mars Series SUN 78M-HF

MECHANICAL DRAWINGS



I-V CURVES



MECHANICAL SPECIFICATION

Cell Type	Mono Crystalline 158.75x79.375mm
Number Of Cells	156（6x26）
Dimensions(AxBxC)	2185x1004x40mm
Weights	25.0kg
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

PACKING CONFIGURATION

Container	40′ HQ
Pieces Per Pallet	27
Pallets Per Container	20
Pieces Per Container	540

ELECTRICAL CHARACTERISTICS

Module Type	430W		435W		440W		445W		450W		455W		460W	
	STC	NOCT	STC	NOCT	STC	NOC	STC	NOC	STC	NOC	STC	NOC	STC	NOC
Maximum Power At STC(Pmax)	430W	323.2W	435W	327.0W	440W	330.7W	445W	334.5W	450W	338.3W	455W	342.0W	460W	319.5W
Short Circuit Current(Isc)	10.40A	8.42A	10.48A	8.48A	10.57A	8.56A	10.64A	8.61A	10.71A	8.67A	10.77A	8.72A	10.84A	8.67A
Open Circuit Voltage(Voc)	53.2V	49.6V	53.5V	49.9V	53.8V	50.2V	54.1V	50.5V	54.4V	50.7V	54.7V	51.0V	55.0V	47.6V
Maximum Power Current(Impp)	9.86A	7.98A	9.93A	8.04A	10.02A	8.11A	10.09A	8.17A	10.16A	8.22A	10.22A	8.26A	10.29A	8.22A
Maximum Power Voltage(Vmpp)	43.6V	40.5V	43.8V	40.7V	43.9V	40.8V	44.1V	41.0V	44.3V	41.2V	44.5V	41.4V	44.7V	38.9V
Module Efficiency	19.60%		19.83%		20.06%		20.28%		20.51%		20.74%		20.97%	
Power Tolerance	0~+5W		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℃
Number Of Bypass Diodes	3
Norminal Operating Cell Temperature(Noct)	45℃±2℃
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 .

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