

Excellent Manufacturing, Ultimate Pinergy.

9BB

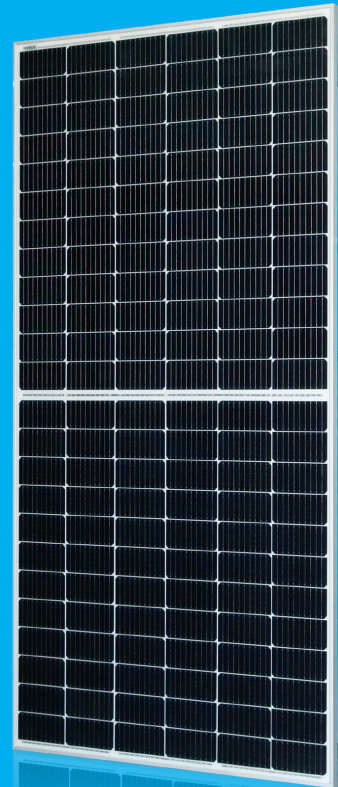
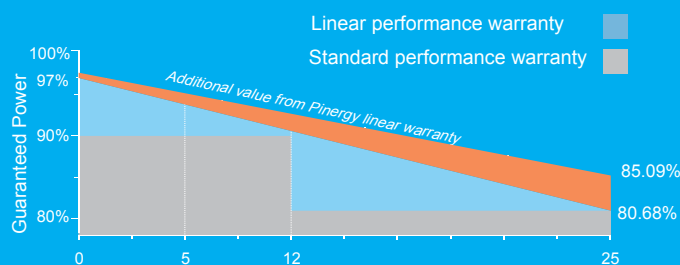
Half-Cell MBB MONO MODULE

MOREL-144M

430-460 Watt

Linear Performance Warranty

12 Years Product Warranty · 25 Years Linear Power Warranty



KEY FEATURES



Multi Busbar Solar Cell

Stronger current collection ability, Special circuit design with much lower hot spot temperature;



Module efficiency up to 20.37%

Half cell structure brings low resistance characteristic, higher lifetime generating capacity, simultaneously lower annual power attenuation;



PID Resistant

Excellent PID resistance at 96 hours (85°C/85%) test, and also can be improved to meet higher standards for the particularly harsh environment;



Low-Light Performance

Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;



Anti-Crack

Excellent anti-microcracking performance with more balanced interior stress;



Strength and Durability

Certified for 5400Pa snow and 2400Pa loads test;

ELECTRICAL SPECIFICATIONS

Module Type	Morel 144M-435		Morel 144M-440		Morel 144M-445		Morel 144M-450		Morel 144M-460	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Rated output (Pmp/Wp)	435	322	440	325	445	329	450	333	460	337
Rated voltage (Vmp/V)	40.3	36.9	40.5	37.1	40.8	37.3	41.0	37.5	44.89	37.8
Rated current (Imp/A)	10.80	8.73	10.86	8.77	10.92	8.82	10.98	8.87	10.25	8.92
Open circuit voltage (Voc/V)	48.7	45.4	49.0	45.6	49.2	45.8	49.5	45.9	53.25	46.1
Short circuit current (Isc/A)	10.24	9.08	10.30	9.13	10.36	9.18	10.42	9.23	10.70	9.28
Module efficiency(%)	19.69%		19.92%		20.14%		20.37%		20.90%	
Power Tolerance (W)	0~+5		0~+5		0~+5		0~+5		0~+5	

Standard Test Condition (STC) : Irradiance 1000W/m², Cell Temperature 25 °C, AM1.5

Nominal Module Operating Temperature (NMOT): Irradiance 800W/m², Ambient Temperature 20 °C, AM1.5, Wind Speed 1m/s

TEMPERATURE CHARACTERISTICS

NOCT Temperature	44 °C ±2 °C
Temperature Coefficient (Pmax)	-0.38%/ °C
Temperature Coefficient (Voc)	-0.30%/ °C
Temperature Coefficient (Isc)	0.06%/ °C

MECHANICAL SPECIFICATIONS

Cell Type	9BB MONO 166×83mm
No. of Cells	144 (6×24)
Dimension	2108×1048×35mm
Weight	25.5kg
Glass	3.2mm, Low Iron Tempered Glass
Frame	Anodized Aluminium Alloy (silver or black)
Junction Box	IP67/IP68, 3 diodes
Output Cables	4mm ² , Length 300mm
Connector type	MC4 compatible

PACKING CONFIGURATIONS

Per Pallet	30 Pcs
Pallet/Container	22
Per 40' HQ Container	660 Pcs

MAXIMUM RATINGS

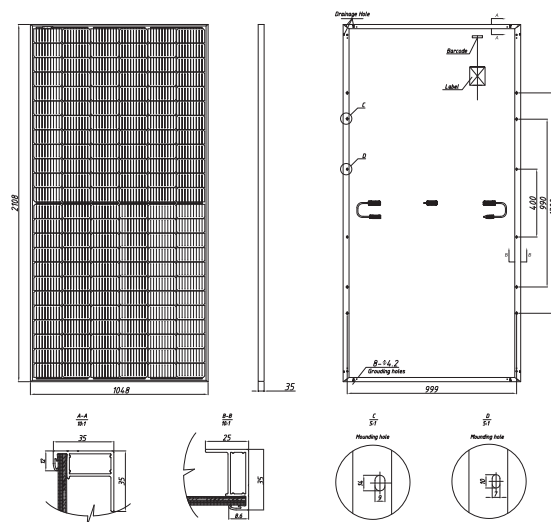
Maximum system voltage (IEC)	1500V DC
Wind/Snow	5400Pa/2400Pa
Operating Temperature	-40 °C ~ +85 °C
Maximum series fuse rating	20A

Product And Quality Certifications

ISO 9001:2008 ISO 14001:2004 OHSAS 18001:2007



ENGINEERING DRAWINGS



CURVE & TEMPERATURE DEPENDENCE

