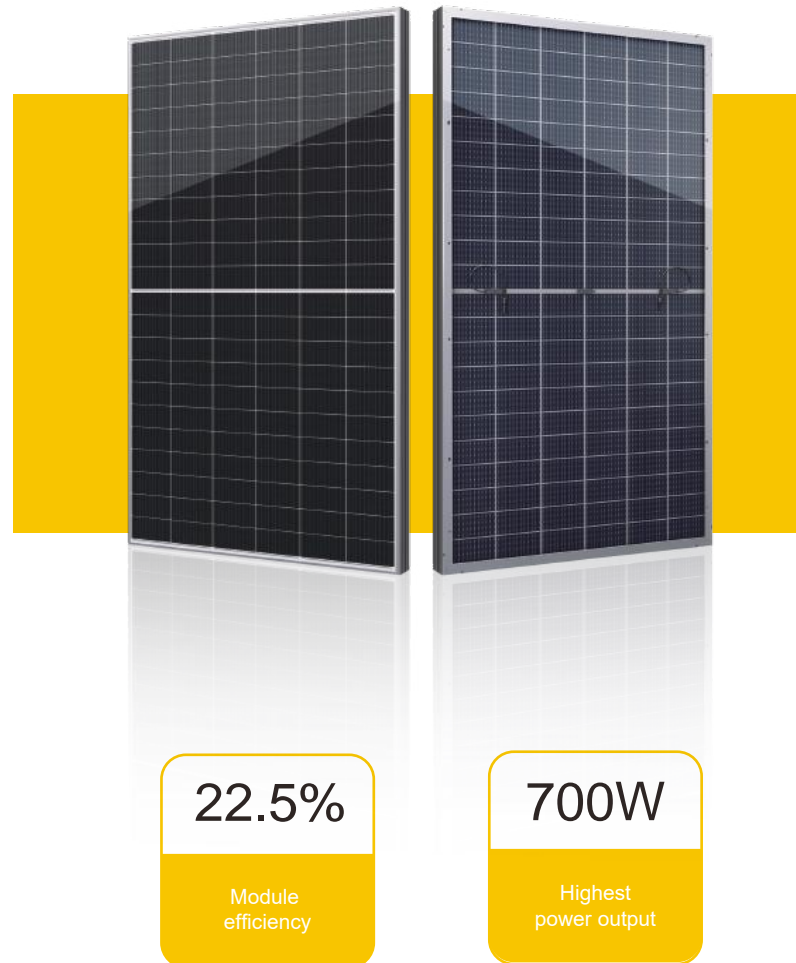


MSMDxxxG12N-132BG

680-700W

132-Cell Half Cut Bifacial Dual Glass Module



Product Advantages



High module conversion efficiency

Module efficiency up to 22.5% achieved through advanced cell technology and manufacturing process



Lower operating temperature

Lower operating temperature and temperature coefficient increase the power output



Excellent weak light performance

More power output in weak light condition, such as cloudy, morning and sunset



Extended wind and snow load tests

Module certified to withstand extreme wind(2400 Pascal) and snow loads(5400 Pascal)

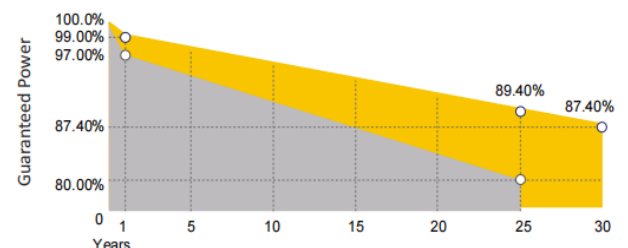


IP68 junction box

High waterproof & dustproof level

Performance Warranty

● Standard Module ● MSMD TOPCon Module



-1.00%
First year power degradation

-0.40%
Annual degradation

12
Years

Materials and workmanship warranty

30
Years

Linear power warranty

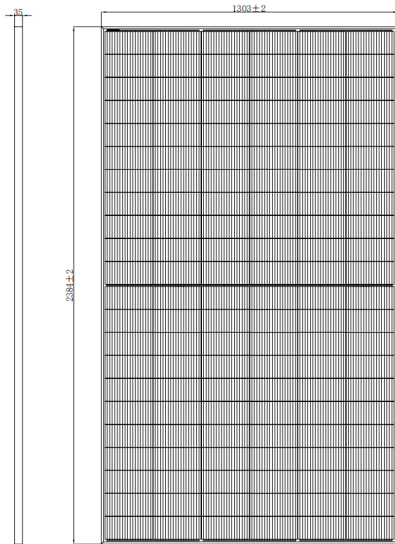
Product Certification



MSMDxxxG12N-132BG

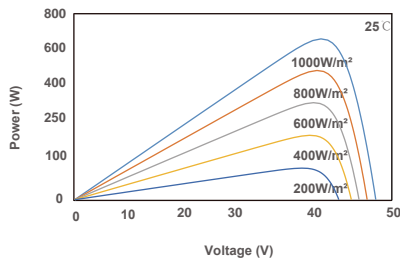
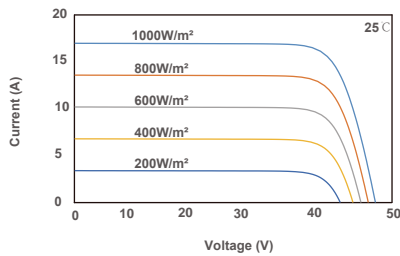
Engineering Drawings

Unit: mm



I-V CURVE

Current-Voltage & Power-Voltage Curve (700)



Temperature Characteristics

Nominal Operating Cell Temp. (NOCT)	44 °C ± 2 °C
Temperature Coefficient of Pmax	-0.35 % / °C
Temperature Coefficient of Voc	-0.28 % / °C
Temperature Coefficient of Isc	0.045 % / °C

Safety & Warranty

Safety Class	Class II
Product Warranty	12 yrs Workmanship
Performance Warranty	30 yrs Linear Warranty*

*1st year 99%, after 2nd year 0.40% annual degradation to year 30.

Electrical Characteristics (STC*)

MSMDxxxG12N-132BG	680	685	690	695	700
Maximum Power (Pmax)	680W	685W	690W	695W	700W
Module Efficiency (%)	21.7%	21.9%	22.1%	22.3%	22.5%
Optimum Operating Voltage (Vmp)	39.97V	40.13V	40.29V	40.45V	40.61V
Optimum Operating Current (Imp)	17.01A	17.07A	17.13A	17.18A	17.24A
Open Circuit Voltage (Voc)	47.88V	48.04V	48.20V	48.37V	48.53V
Short Circuit Current (Isc)	17.94A	17.98A	18.02A	18.05A	18.09A
Operating Module Temperature	-40 to +85 °C				
Maximum System Voltage	DC1500V (IEC)				
Maximum Series Fuse	35A				
Power Tolerance	0~+5W				

*STC: Irradiance 1000 W/m², cell temperature 25 °C, AM=1.5, Tolerance of Pmax is within +/- 3%.

NMOT**

Maximum Power (Pmax)	509W	512W	516W	520W	524W
Optimum Operating Voltage (Vmp)	36.50V	36.65V	36.80V	36.94V	37.09V
Optimum Operating Current (Imp)	13.93A	13.98A	14.03A	14.07A	14.12A
Open Circuit Voltage (Voc)	43.73V	43.88V	44.03V	44.17V	44.32V
Short Circuit Current (Isc)	14.69A	14.73A	14.76A	14.78A	14.81A

**NMOT: Irradiance 800W/m², ambient temperature 20 °C, AM=1.5, wind speed 1m/s

Mechanical Characteristics

Cell Type	N-Type TOPCon Monocrystalline 210*105mm
Cell Connection	132 (6×22)
Module Dimension	2384×1303×35 mm
Weight	38.6 kg
Junction Box	IP68
Output Cable	350 mm or customized length
Connectors Type	MC4 compatible
Frame	Anodised aluminum alloy
Front Load	5400 Pa
Rear Load	2400 Pa
Glass Thickness	2.0 mm

Shipping Configurations

	HC
Container Length	40'
Pallets Per Container	18
Modules Per Pallet (pcs)	31
Modules Per Container (pcs)	558