



GPNE-S144/M6H 166 Half Cell Series

435-460W

144-CELL HALF CUT MONOCRYSTALLINE SOLAR MODULE

Product Advantages



High Power Output
Compared to 158.75mm module, the power output can increase 25W-30W



High Reliability
Passed 3*IEC standard test



Low Hot-spot Risk
1/2 current, reducing the hot spot temperature



Excellent loading capability
2400Pa wind loads, 5400Pa snow loads, 8000Pa extra support



Low NMOT
As low as 43°C, improving the power generation efficiency



Half Cell, MBB Technology
Series-then-parallel cell connection design, more reliable soldering technology

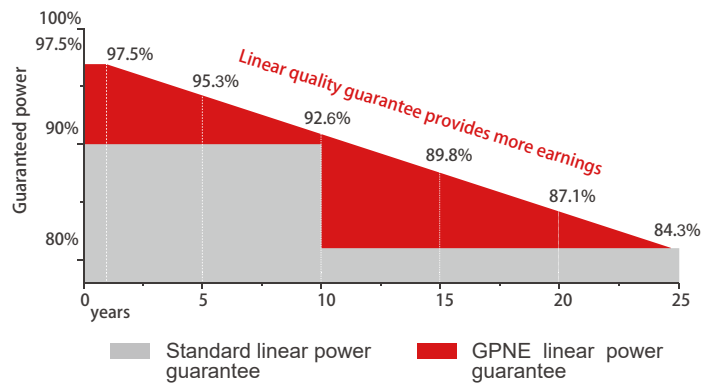
20.8%

Module efficiency

460W

Highest power output

Product Guarantee



-2.50%

First year power degradation

-0.55%

Annual degradation

12
Years

Materials and workmanship warranty

25
Years

Linear power warranty

Product Certification



GPNE-S144/M6H

Electrical Characteristics

STC	460	455	450	445	440	435
Maximum Power at STC (Pmax)	460W	455W	450W	445W	440W	435W
Optimum Operating Voltage (Vmp)	41.8V	41.6V	41.4V	41.2V	41.0V	40.8V
Optimum Operating Current (Imp)	11.01A	10.94A	10.87A	10.81A	10.74A	10.67A
Open Circuit Voltage (Voc)	49.6V	49.4V	49.2V	49.0V	48.8V	48.6V
Short Circuit Current (Isc)	11.25A	11.68A	11.61A	11.54A	11.47A	11.40A
Module Efficiency	20.8%	20.6%	20.4%	20.1%	19.9%	19.7%
Operating Module Temperature	-40 °C to +85 °C					
Maximum System Voltage	1500 V DC (IEC)					
Maximum Series Fuse Rating	20 A					
Power Tolerance	0/+5W					

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5; Tolerances of Pmax, Voc and Isc are all within +/- 5%.

NMOT	460	455	450	445	440	435
Maximum Power at NMOT (Pmax)	356.80W	352.24W	348.10W	335W	331.2W	327.5W
Optimum Operating Voltage (Vmp)	39.6V	39.4V	39.2V	38.5V	38.3V	38.1V
Optimum Operating Current (Imp)	9.01A	8.94A	8.88A	8.70A	8.65A	8.59A
Open Circuit Voltage (Voc)	47.8V	47.6V	47.4V	46.8V	46.6V	46.4V
Short Circuit Current (Isc)	8.96A	9.42A	9.36A	9.19A	9.14A	9.08A

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

Temperature Characteristics

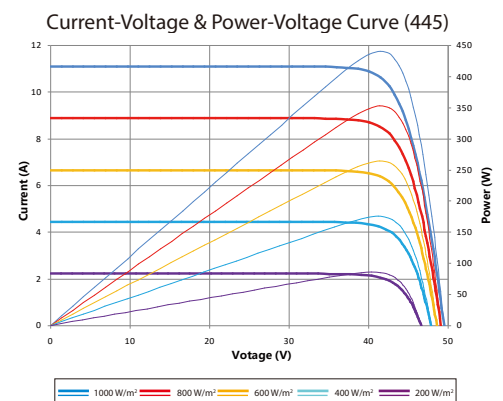
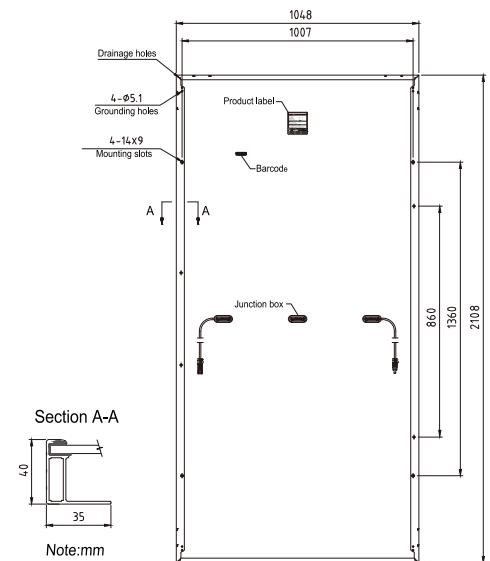
Nominal Module Operating Temperature(NMOT)	42 ± 2 °C
Temperature Coefficient of Pmax	-0.37 %/°C
Temperature Coefficient of Voc	-0.304%/°C
Temperature Coefficient of Isc	0.050 %/°C

Mechanical Characteristics

Solar Cell	Monocrystalline silicon 166 mm (9BB)
No. of Cells	144 (6 × 24)
Dimensions	2108 × 1048 × 40 mm
Weight	24 kgs
Front Glass	3.2 mm tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm ² , cable length 350mm or customized length

Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	26	26+1
Pallets per container	5	22
Pieces per container	130	594

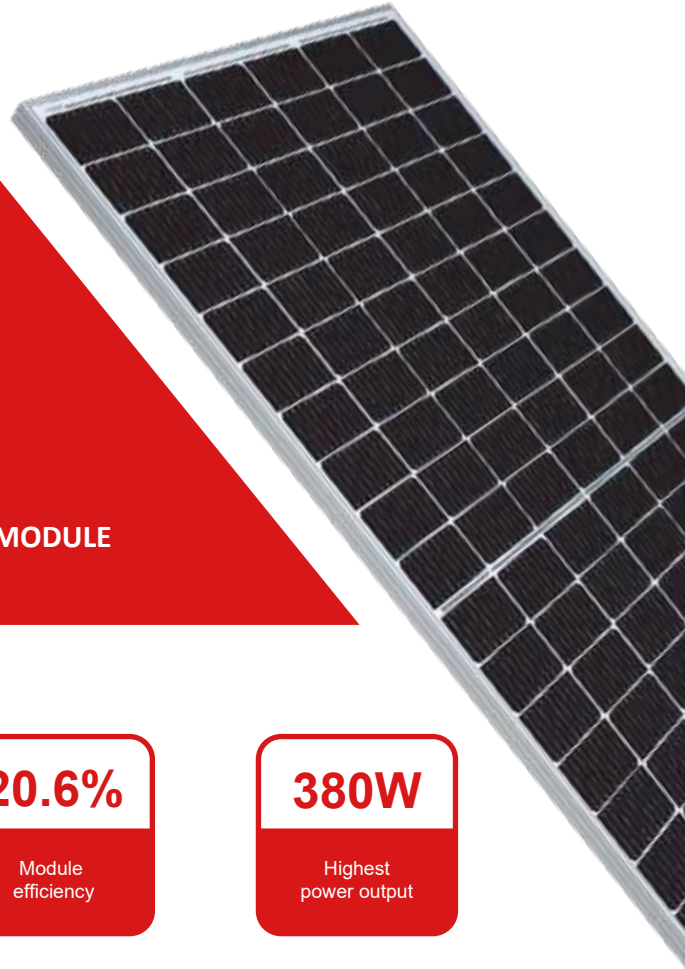




GPNE-S120/M6H 166 Half Cell Series

355-380W

120-CELL HALF CUT MONOCRYSTALLINE SOLAR MODULE



Product Advantages



High Power Output
Compared to 158.75mm module, the power output can increase 25W-30W



High Reliability
Passed 3*IEC standard test



Low Hot-spot Risk
1/2 current, reducing the hot spot temperature



Excellent loading capability
2400Pa wind loads, 5400Pa snow loads, 8000Pa extra support



Low NMOT
As low as 43°C, improving the power generation efficiency



Half Cell, MBB Technology
Series-then-parallel cell connection design, more reliable soldering technology

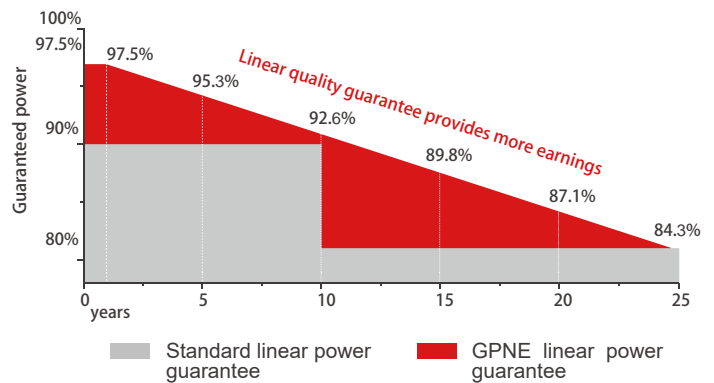
20.6%

Module efficiency

380W

Highest power output

Product Guarantee



-2.50%

First year power degradation

-0.55%

Annual degradation

12
Years

Materials and workmanship warranty

25
Years

Linear power warranty

Product Certification



GPNE-S120/M6H

Electrical Characteristics

STC	380	375	370	365	360	355
Maximum Power at STC (Pmax)	380W	375W	370W	365W	360W	355W
Optimum Operating Voltage (Vmp)	34.7V	34.5V	34.3V	34.1V	33.9V	33.7V
Optimum Operating Current (Imp)	10.96A	10.87A	10.79A	10.71A	10.62A	10.54A
Open Circuit Voltage (Voc)	41.3V	41.1V	40.9V	40.7V	40.5V	40.3V
Short Circuit Current (Isc)	11.63A	11.56A	11.49A	11.42A	11.35A	11.28A
Module Efficiency	20.6%	20.3%	20.0%	19.7%	19.4%	19.2%
Operating Module Temperature	-40 °C to +85 °C					
Maximum System Voltage	1500 V DC (IEC)					
Maximum Series Fuse Rating	20 A					
Power Tolerance	0/+5W					

STC: Irradiance 1000 W/m², module temperature 25 °C, AM=1.5; Tolerances of Pmax, Voc and Isc are all within +/- 5%.

NMOT	380	375	370	365	360	355
Maximum Power at NMOT (Pmax)	285.44W	281.75W	278.2W	274.3W	270.7W	266.8W
Optimum Operating Voltage (Vmp)	32.4V	32.2V	32.0V	31.8V	31.6V	31.5V
Optimum Operating Current (Imp)	8.81A	8.75A	8.69A	8.62A	8.56A	8.48A
Open Circuit Voltage (Voc)	39.1V	38.9V	38.7V	38.5V	38.4V	38.2V
Short Circuit Current (Isc)	9.29A	9.23A	9.17A	9.1A	9.04A	8.96A

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

Temperature Characteristics

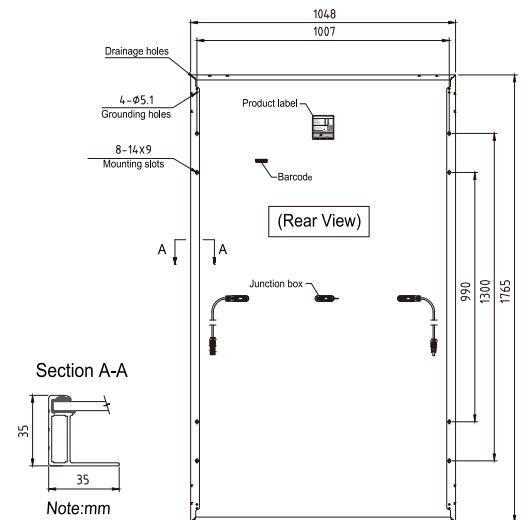
Nominal Module Operating Temperature(NMOT)	42±2°C
Temperature Coefficient of Pmax	-0.37 %/°C
Temperature Coefficient of Voc	-0.304 %/°C
Temperature Coefficient of Isc	0.050 %/°C

Mechanical Characteristics

Solar Cell	Monocrystalline silicon 166 mm (9BB)
No. of Cells	120 (6 × 20)
Dimensions	1765 × 1048 × 35mm
Weight	20.0 kgs
Front Glass	3.2 mm
Frame	Anodized aluminium alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm ² , cable length 350mm or customized length

Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	30	30+1
Pallets per container	6	26
Pieces per container	180	806



Current-Voltage & Power-Voltage Curve (370)

