

# GPNE-S144/FNH 166 Half Cell Series

# 425-445w

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

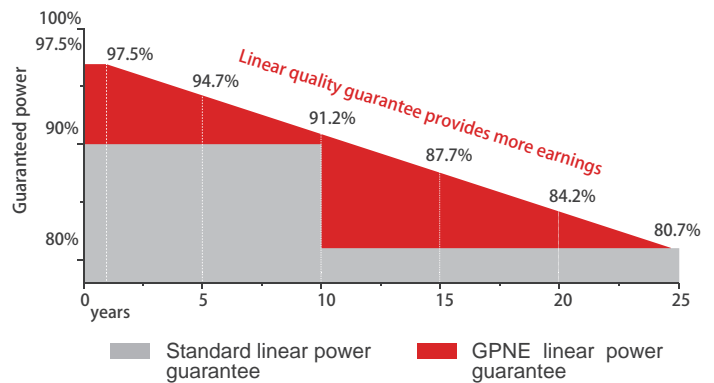
**20.0%**

Module efficiency

**445W**

Highest power output

## Product Guarantee



**-2.50%**

First year power degradation

**-0.50%**

Annual degradation

**12**  
Years

Materials and workmanship warranty

**25**  
Years

Linear power warranty

## Product Certification



# GPNE-S144/FNH

## Electrical Characteristics

STC	445	440	435	430	425
Maximum Power at STC (Pmax)	445W	440W	435W	430W	425W
Optimum Operating Voltage (Vmp)	41.2V	41.V	40.8V	40.6V	40.4V
Optimum Operating Current (Imp)	10.81A	10.74A	10.67A	10.6A	10.52A
Open Circuit Voltage (Voc)	49.V	48.8V	48.6V	48.4V	48.2V
Short Circuit Current (Isc)	11.54A	11.47A	11.4A	11.32A	11.25A
Module Efficiency	20.0%	19.8%	19.6%	19.3%	19.1%
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/m<sup>2</sup>, module temperature 25 °C, AM=1.5; Tolerances of Pmax, Voc and Isc are all within +/- 5%.

NMOT	445	440	435	430	425
Maximum Power at NMOT (Pmax)	335W	331.2W	327.5W	323.8W	319.7W
Optimum Operating Voltage (Vmp)	38.5V	38.3V	38.1V	37.9V	37.8V
Optimum Operating Current (Imp)	8.7A	8.65A	8.59A	8.53A	8.47A
Open Circuit Voltage (Voc)	46.8V	46.6V	46.4V	46.2V	46.0V
Short Circuit Current (Isc)	9.19A	9.14A	9.08A	9.03A	8.96A

NMOT: Irradiance 800 W/m<sup>2</sup>, ambient temperature 20 °C, AM=1.5, wind speed 1 m/s;

## Temperature Characteristics

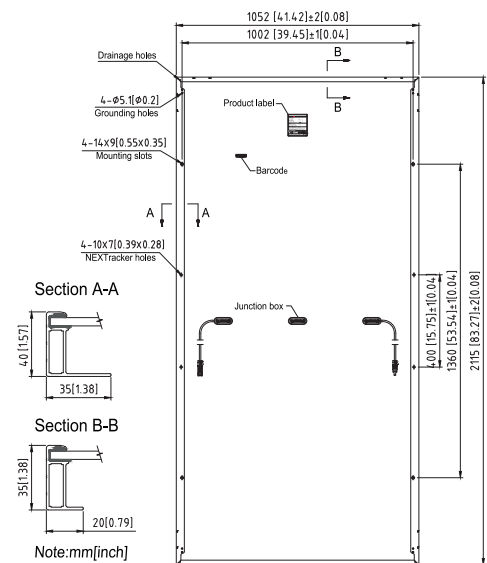
Nominal Module Operating Temperature(NMOT)	42 ± 2 °C
Temperature Coefficient of Pmax	-0.37 %/°C
Temperature Coefficient of Voc	-0.304%/°C
Temperature Coefficient of Isc	0.050 %/°C

## Mechanical Characteristics

Solar Cell	Monocrystalline silicon 166 mm (9BB)
No. of Cells	144 (6 × 24)
Dimensions	2115 × 1052 × 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 <sup>2</sup> , symmetrical lengths (-) 1400mm and (+) 1400 mm

## Packing Configuration

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



Current-Voltage & Power-Voltage Curve (445S)

