



# Full Black Series GPNE-S72/FNHB

# 405-385w

144-CELL HALF CUT MONOCRYSTALLINE SOLAR MOUDLE



## Product Advantages



**High Efficiency**  
Module efficiency leading in industry, up to 20.4%



**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

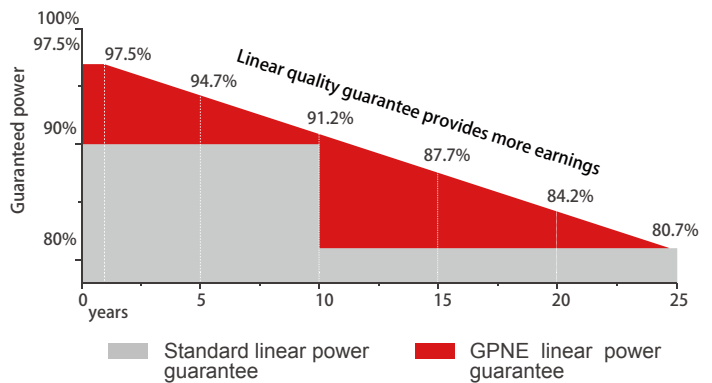


**Half Cell, MBB Technology**  
Series-then-parallel cell connection design, more reliable soldering technology

**20.1%**  
Module efficiency

**405W**  
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-S72/FNHB

## Electrical Characteristics

STC	405	400	395	390	385
Maximum Power at STC (Pmax)	405 W	400 W	395 W	390 W	385 W
Optimum Operating Voltage (Vmp)	42.0 V	41.8 V	41.6 V	41.4 V	41.2 V
Optimum Operating Current (Imp)	9.65 A	9.57 A	9.50 A	9.43 A	9.35 A
Open Circuit Voltage (Voc)	49.2 V	49.0 V	48.8 V	48.6 V	48.4 V
Short Circuit Current (Isc)	10.24 A	10.17 A	10.10 A	10.03 A	9.96 A
Module Efficiency	20.1%	19.9%	19.6%	19.4%	19.1%
Operating Module Temperature	-40 °C to +85 °C				
Maximum System Voltage	1000V 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	405	400	395	390	385
Maximum Power at NMOT (Pmax)	304.6 W	300.8 W	297.3 W	293.8 W	290.1 W
Optimum Operating Voltage (Vmp)	38.7 V	38.5 V	38.3 V	38.1 V	37.9 V
Optimum Operating Current (Imp)	7.88 A	7.82 A	7.76 A	7.71 A	7.66 A
Open Circuit Voltage (Voc)	46.1 V	45.9 V	45.7 V	45.5 V	45.3 V
Short Circuit Current (Isc)	8.27 A	8.21 A	8.16 A	8.10 A	8.05 A

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

## Temperature Characteristics

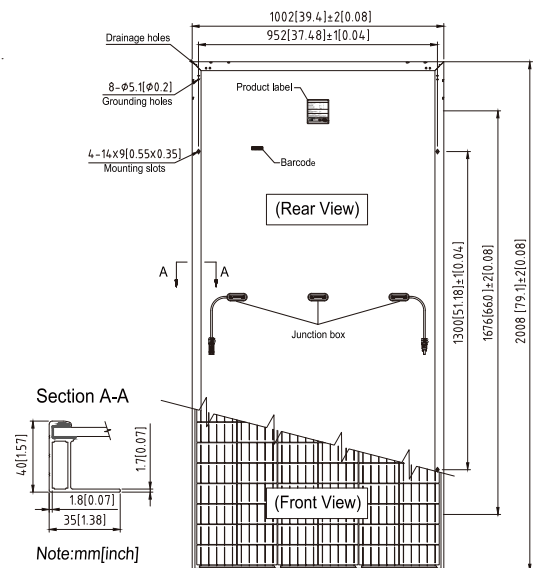
Nominal Module Operating Temperature(NMOT)	42±2°C
Temperature Coefficient of Pmax	-0.37 %/°C
Temperature Coefficient of Voc	-0.304%/°C
Temperature Coefficient of Isc	0.050 %/°C

## Mechanical Characteristics

Solar Cell	Monocrystalline 158.75mm
No. of Cells	144 (6 × 24)
Dimensions	2008 × 1002 × 40mm
Weight	23kgs
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
Connectors	MC4 compatible

## Packing Configuration

Container	20' GP	40' HC
Pieces per pallet	26	28
Pallets per container	10	22
Pieces per container	260	616



Current-Voltage & Power-Voltage Curve (405S)

