



GREEN ENERGY SOLUTIONS



GES-S144/FNH

390-410W

144-CELL HALF CUT MONOCRYSTALLINE SOLAR MOUDLE

Artikel-Nr.: 410-1.2023-C40-350

20.4%

Module Efficiency

410W

Highest Power Output

12 YEARS

Material & Workmanship Warranty




25 YEARS

Linear Power Warranty

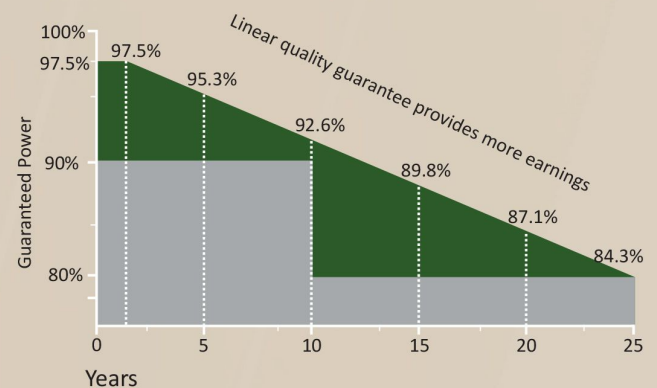
-2.5% First year power degradation



-0.55% Annual degradation

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 PERC Technology**
More reliable soldering technology, reduce possibility of hot spot

PRODUCT GUARANTEE



-  Standard linear power guarantee
-  VDS linear power guarantee

Certifications of Product and Manufacturer



Green Energy Solutions B.V.
The Hague, The Netherlands

GES-S144/FNH

ELECTRICAL CHARACTERISTICS

STC	390	395	400	405	410
Maximum Power at STC (Pmax)	390W	395W	400W	405W	410W
Optimum Operating Voltage (Vmp)	41.4V	41.6V	41.8V	42.0V	42.2V
Optimum Operating Current (Imp)	9.43A	9.50A	9.57A	9.65A	9.72A
Open Circuit Voltage (Voc)	48.6V	48.8V	49.0V	49.2V	49.4V
Short Circuit Current (Isc)	10.03A	10.10A	10.17A	10.24A	10.31A
Module Efficiency	19.4%	19.6%	19.9%	20.1%	20.4%
Operating Module Temperature	-40°C to +85°C				
Maximum System Voltage	1500V DC (IEC)				
Maximum Series Fuse rating	20A				
Power Tolerance	0~+5W				

STC: Irradiance 1000 W/m², module temperature 25°C, AM=1.5; Measuring tolerance: ± 3%.

NMOT	390	395	400	405	410
Maximum Power at NMOT (Pmax)	293.8W	297.3W	300.8W	304.6W	308.1W
Optimum Operating Voltage (Vmp)	38.1V	38.3V	38.5V	38.7V	38.8V
Optimum Operating Current (Imp)	7.71A	7.76A	7.82A	7.88A	7.93A
Open Circuit Voltage (Voc)	45.5V	45.7V	45.9V	46.1V	46.3V
Short Circuit Current (Isc)	8.10A	8.16A	8.21A	8.27A	8.33A

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	-0.34%/°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.040%/°C

MECHANICAL CHARACTERISTICS

Solar Cell	Monocrystalline 158.75 mm
No. of Cells	144 (6 × 24)
Dimensions	2008 × 1002 × 40 mm
Weight	23 kgs
Front Glass	3.2 mm tempered glass with AR coating
Frame	Anodized Aluminium Alloy
Junction Box	IP68 rated (3 bypass diodes)
Output Cables	4.0 mm ² , cable length 350 mm or customized length
Connectors	MC4 compatible

PACKING CONFIGURATION

Container	20' GP	40' HC
Pieces per pallet	26	27+27+5
Pallets per container	10	11
Pieces per container	260	649

