



**GREEN ENERGY
SOLUTIONS**



GES-108/M10H | 182mm Half Cell Series

390-410W

108-CELL HALF CUT MONOCRYSTALLINE SOLAR MODULE

Artikel-Nr.: 410-08.2023-R30-C350

21.0%

Module Efficiency

410W

Highest Power Output

12 YEARS

Material & Workmanship Warranty

25 YEARS

Linear Power Warranty

-2.00% First year power degradation

-0.55% Annual degradation

PRODUCT ADVANTAGES



10BB half-cut cell technology

New circuit design, lower internal current, lower R_s loss Ga doped wafer, attenuation <2% (1st year) / $\leq 0.55\%$ (Linear)



Significantly lower the risk of hot spot

Special circuit design with much lower hot spot temperature



Lower LCOE

2% more power generation, lower LCOE



Excellent Anti-PID performance

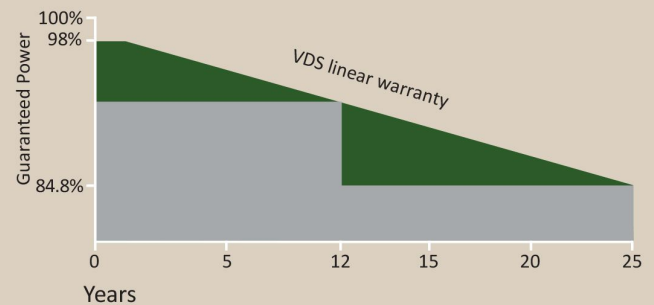
2 times of industry standard Anti-PID test by TUV SUD



IP68 junction box

High waterproof level

PERFORMANCE WARRANTY



Certifications of Product and Manufacturer



Green Energy Solutions B.V.

The Hague, The Netherlands

GES-S108/M10H

ELECTRICAL PARAMETERS

Maximum Power (Pmax/W)*	390	395	400	405	410
Operating Voltage (Vmp/V)	30.8	31.0	31.2	31.4	31.6
Operating Current (Imp/A)	12.69	12.76	12.83	12.91	12.98
Open-Circuit Voltage (Voc/V)	36.7	36.9	37.1	37.3	37.5
Short-Circuit Current (Isc/A)	13.59	13.66	13.73	13.81	13.88
Module Efficiency ηm (%)	19.9	20.2	20.5	20.7	21.0
Power Tolerance (W)	0~+5				

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

PERFORMANCE AT NMOT

Maximum Power (Pmax/W)	295	298	302	306	309
Operating Voltage (Vmp/V)	28.4	28.6	28.8	29.0	29.2
Operating Current (Imp/A)	10.38	10.44	10.50	10.56	10.62
Open-Circuit Voltage (Voc/V)	34.4	34.6	34.8	35.0	35.2
Short-Circuit Current (Isc/A)	10.93	10.98	11.04	11.10	11.16

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

MECHANICAL SPECIFICATION

Cell Type	Monocrystalline
Cell Dimensions	182*182 mm
Cell Arrangement	108 (6*18)
Weight	21 kg
Module Dimensions	1724*1134*30 mm
Cable Length	350 mm or customized length
Cable Cross Section Size	TÜV: 4 mm ²
Front Glass	3.2 mm AR Coating Tempered Glass
No. of Bypass Diodes	3/6
Packing Configuration	36 pcs/Carton, 936 pcs/40HQ
Frame	Anodized Aluminium Alloy
Junction Box	IP68

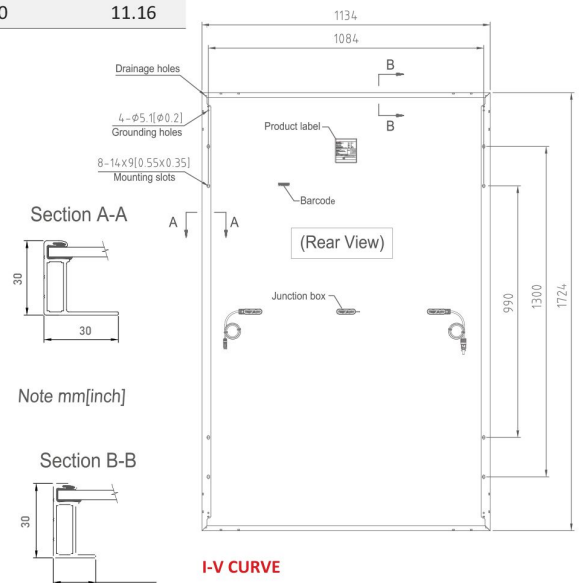
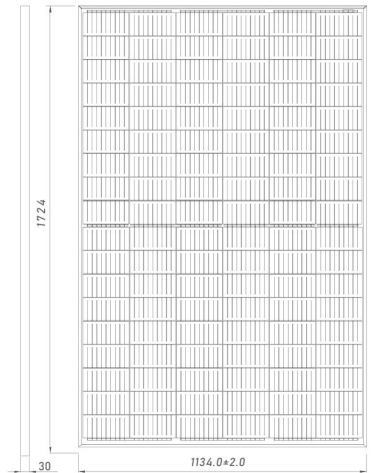
OPERATING CONDITIONS

Maximun System Voltage	1500V/DC(IEC)
Operating Temperature	-40°C to +85°C
Maximun Series Fuse	25A
Static Loading	Snow Loading: 5400Pa / Wind Loading: 2400Pa
Conductivity at Ground	≤0.1Ω
Safety Class	II
Resistance	≥100MΩ
Connector	MC4 compatible

TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.34%/°C
Temperature Coefficient Voc	-0.25%/°C
Temperature Coefficient Isc	+0.040%/°C
NMOT	42±2°C

TECHNICAL DRAWINGS



I-V CURVE

Current-Voltage & Power-Voltage Curve (410)

