



**GREEN ENERGY
SOLUTIONS**



GES-S144/M10H | 182mm Half Cell Series

530-550W

144-CELL HALF CUT MONOCRYSTALLINE SOLAR MODULE

Artikel-Nr.: 550-1.2023-R35-C350

21.3%

Module Efficiency

550W

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 Rs loss Ga doped wafer, attenuation<2% (1st year) / ≤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

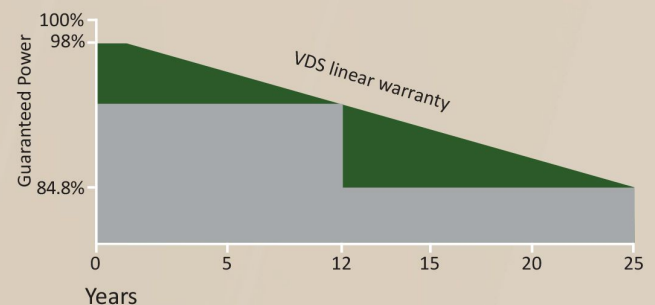
2 times of industry standard Anti-PID test by TUV SUD



IP68 junction box

High waterproof level

PERFORMANCE WARRANTY



Certifications of Product and Manufacturer



Green Energy Solutions B.V.

The Hague, The Netherlands

GES-S144/M10H

ELECTRICAL PARAMETERS

Maximum Power (Pmax/W)*	530	535	540	545	550
Operating Voltage (Vmp/V)	40.8	41.0	41.2	41.4	41.6
Operating Current (Imp/A)	13.00	13.05	13.11	13.17	13.23
Open-Circuit Voltage (Voc/V)	49.0	49.2	49.4	49.6	49.8
Short-Circuit Current (Isc/A)	13.76	13.81	13.87	13.93	13.99
Module Efficiency η_m (%)	20.5	20.7	20.9	21.1	21.3
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)	395	398	402	406	410
Operating Voltage (Vmp/V)	38.0	38.2	38.4	38.6	38.8
Operating Current (Imp/A)	10.40	10.44	10.49	10.54	10.58
Open-Circuit Voltage (Voc/V)	45.9	46.1	46.3	46.4	46.6
Short-Circuit Current (Isc/A)	11.09	11.13	11.18	11.23	11.28

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	144 (6*24)
Weight	29 kg
Module Dimensions	2279*1134*35 mm
Cable Length	Portrait 350 mm/Customized
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	31 pcs/Cartron, 620 pcs/40HQ
Frame	Anodized Aluminium Alloy
Junction Box	IP68

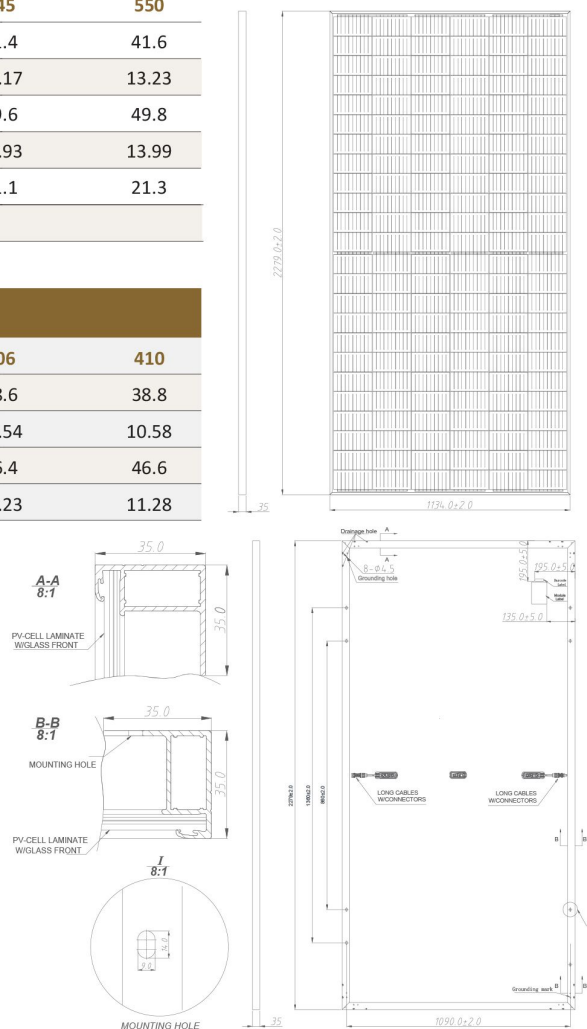
OPERATING CONDITIONS

Maximun System Voltage	1000V/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

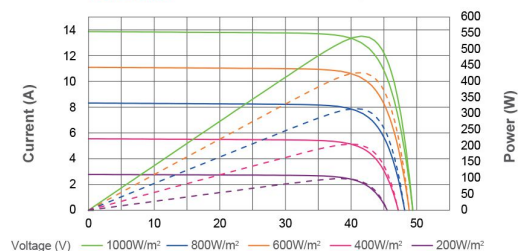
TEMPERATURE COEFFICIENT

Temperature Coefficient Pmax	-0.34%/°C
Temperature Coefficient Voc	-0.25%/°C
Temperature Coefficient Isc	+0.040%/°C
NMOT	43±2°C

TECHNICAL DRAWINGS



I-V CURVE



VDS-S144/M10H-540

