



**GREEN ENERGY
SOLUTIONS**



VDS-S132/M10H
480-500W
182 mm Half Cell , 132 Cells
Monocrystalline Solar Module

21.1%

Module Efficiency

500W

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



MBB half-cut cell technology

New circuit design, lower internal current, lower Rs 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

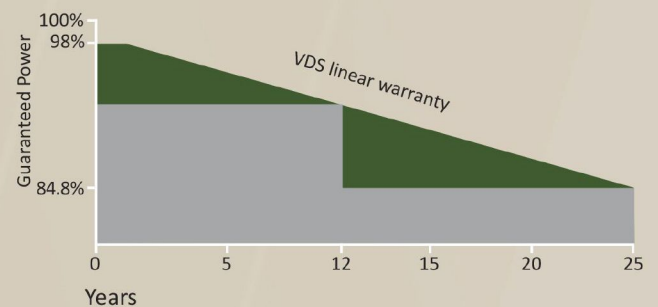
2 times of industry standard Anti-PID test by TUV SUD



IP68 junction box

High waterproof level

PERFORMANCE WARRANTY



Certifications of Product and Manufacturer



Green Energy Solutions B.V.

The Hague, The Netherlands

GES-S132/M10H

ELECTRICAL PARAMETERS

Maximum Power (Pmax/W)	480	485	490	495	500
Operating Voltage (Vmp/V)	37.1	37.3	37.5	37.7	37.9
Operating Current (Imp/A)	12.94	13.00	13.07	13.13	13.19
Open-Circuit Voltage (Voc/V)	44.9	45.1	45.3	45.5	45.7
Short-Circuit Current (Isc/A)	13.36	13.45	13.54	13.63	13.72
Module Efficiency η_m (%)	20.2	20.4	20.6	20.8	21.1
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)	357	361	365	369	373
Operating Voltage (Vmp/V)	34.6	34.8	35.0	35.2	35.4
Operating Current (Imp/A)	10.31	10.37	10.43	10.48	10.54
Open-Circuit Voltage (Voc/V)	41.7	41.9	42.1	42.3	42.5
Short-Circuit Current (Isc/A)	10.89	10.94	11.00	11.06	11.13

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	132 (6*22)
Weight	27 kg
Module Dimensions	2094*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, 682 pcs/40HQ
Frame	Anodized Aluminium Alloy
Junction Box	IP68

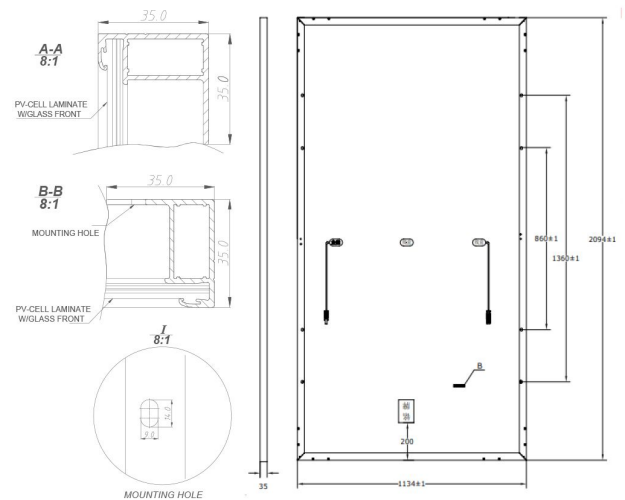
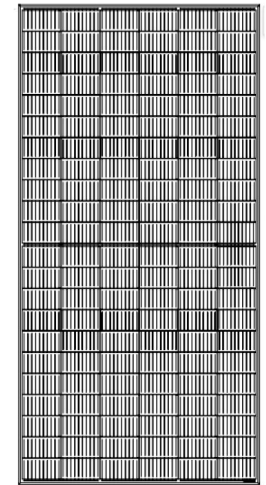
OPERATING CONDITIONS

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	-0.30%/°C
Temperature Coefficient Voc	-0.25%/°C
Temperature Coefficient Isc	+0.046%/°C
NMOT	42±2°C

TECHNICAL DRAWINGS



I-V CURVE

