

190W Monocrystalline Photovoltaic Black Module



Quality Management System

- ✓ Raw material and module traceability
- ✓ Control of raw material
- ✓ Products manufacturing control
- ✓ Finished products inspection



- ✓ 100% finished modules flashed
- ✓ Flash report provided to customer
- ✓ 100% electroluminescence test



- ✓ 10-year material warranty
- ✓ Power output warranty:
 - 95% of the power on 5 years
 - 90% of the power on 10 years
 - 85% of the power on 18 years
 - 80% of the power on 25 years



- ✓ Error and Omission Insurance (Chubb Group): cover the economic loss sustained due to operational defects or performance failures



Factory certified

148.8W/m²



Certification:

- ✓ MCS
- ✓ IEC61215 & IEC61730

Technical

Electrical Data

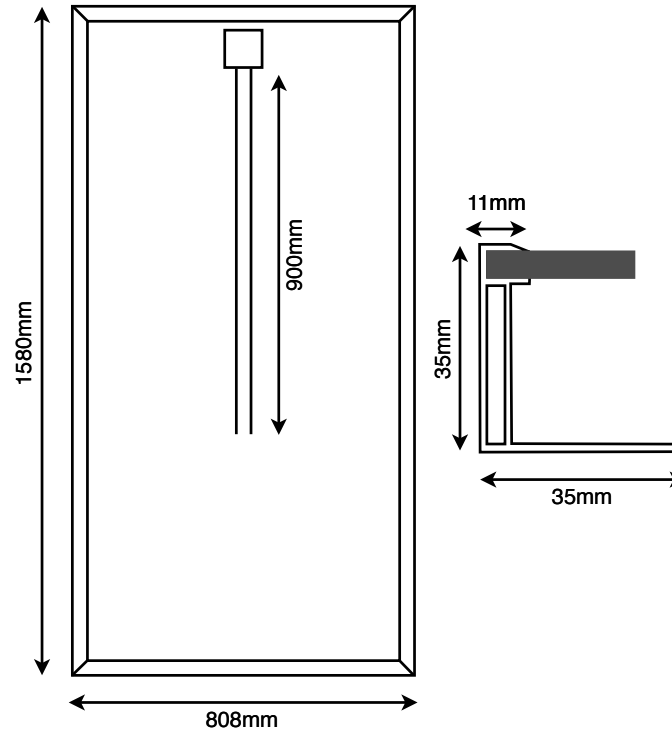
Maximum Power (Pmax)	190W
Tolerance	+/- 2%
Maximum Power Voltage (Vpm)	36.0V
Maximum Power Current (Ipm)	5.28A
Open Circuit Voltage (Voc)	44.46V
Short Circuit Current (Isc)	5.70A
Cell efficiency	17,5%
Module efficiency	14,9%
Maximum System Voltage	1000V
STC: irradiation 1000W/m2, AM 1,5 and temperature 25°C	

Performance at 800W/m2

Maximum Power Voltage (Vpm)	35.68V
Maximum Power Current (Ipm)	4.22A
NOCT, 800W/m2, AM 1,5 and 25°C	

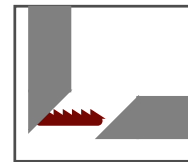
Temperature Coefficient

NOCT	45°C +/-2%
Voltage Temperature (Voc)	-0.35%/°C
Current Temperature (Isc)	+0.038 %/°C
Power Temperature (Pm)	- 0.49%/°C



Mechanical Data

Number of Cells	72 (3 x 24 series)
Cell Dimension	125*125mm, Ø 165mm
Bypass diodes	3 (12A)
Glass Thickness	3.2mm
Maximum Load	5400Pa
Weight	15.5Kg
Dimensions	1580*808*35mm
Cable length / section	900mm / 4mm ²
Connectors	MC4 compatible
Operating Temperature	-40°C to +85°C



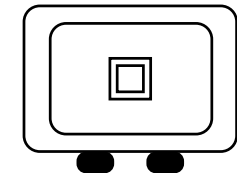
Frame

Built-in aluminium angle makes the frame stronger and reliable on long-term. Angle is set inside the frame cavity.



Back sheet

- Improved aesthetic appearance
- Anti-UV and Anti-Yellowing
- Ultimate moisture barrier
- Proven durability



Junction box

- IP65
- Fire resistance
- Excellent electrical insulation of components
- Stability and flexibility over a wide temperature range