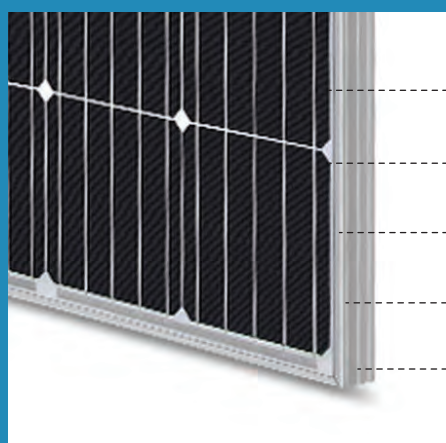


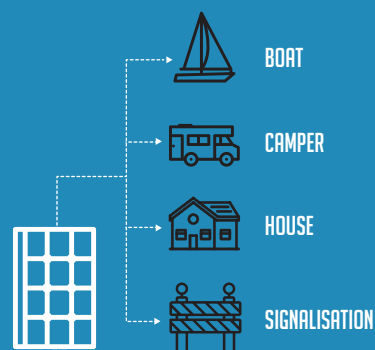
# SOLAR PANEL

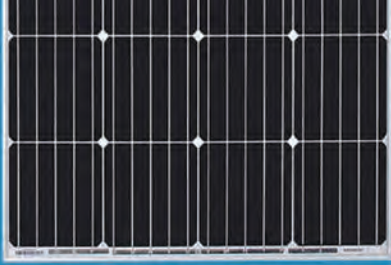
## 12V MONOCRYSTALLIN

- 12V MONOCRYSTALLIN SOLAR PANEL WITH HIGHLY EFFICIENT CELLS
- THEIR MULTI-LAYER STRUCTURE ENSURES EXCEPTIONAL OUTPUT, EVEN UNDER WEAK LIGHT OR EXTREME HEAT.
- THE ANTI-HOT SPOT SYSTEM PROTECTS THE PANEL AGAINST OVERVOLTAGE CELLS THAT CAN FUNCTION EVEN WHEN THE CELLS ARE COVERED (SHADOWS)
- THEIR HIGHLY TRANSMISSIBLE TEMPERED GLASS AND THE ANODIZED ALUMINIUM FRAME PRESERVE THEM FROM EXTERNAL DAMAGE (IMPACTS, OXIDATION, CORROSION).



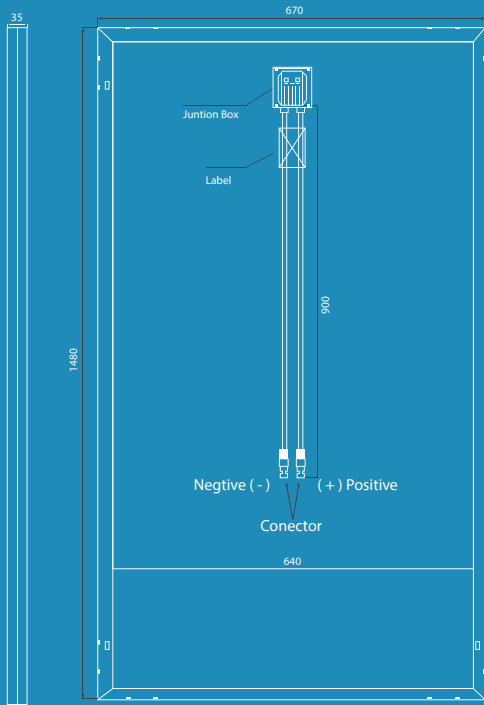
- TEMPERED GLASS, HIGH TRANSMISSIBILITY
- EVA RESIN 0,45MM
- FRAME (ANODISED ALUMINIUM)
- 5BB (5 BUSBARS)
- ULTRA RAPID CONNECTORS MC4





# PRODUCT SPECIFICATION

## DIMENSIONS AND STRUCTURE



## ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC:AM=1.5, 1000W/M2, CELLS TEMPERATURE 25°C )

Typical type	180W	170W	160W	150W
Max power (Pmax)	180	170	160	150
Max power voltage (Vmp)	19.87	19.48	18.81	18.25
Max power current (Imp)	9.06	8.73	8.51	8.22
Open circuit voltage (Voc)	23.96	23.44	22.56	21.87
Short circuit current (Isc)	9.61	9.27	9.02	8.72
Cell efficiency (%)	21.34	19.61	18.45	17.30
Module Efficiency (%)	18.15	17.14	16.14	15.12
Max system voltage	DC 1000(TUV)			
Maximum Series Fuse Rating	15A			

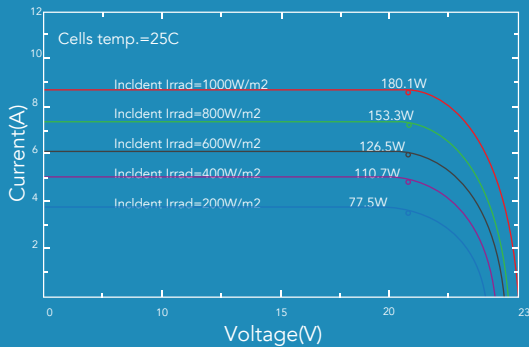
## MECHANICAL DATA

Dimensions	1480*670*35 mm
Weight	12kgs
Front glass	3.2 mm tempered glass
Output cables	4 mm <sup>2</sup> length 900 mm
Connectors	MC4 comoatible ≥IP67
Cell type	Mono Cell 156.75*156.75 mm
Number of cells	36 cells in series

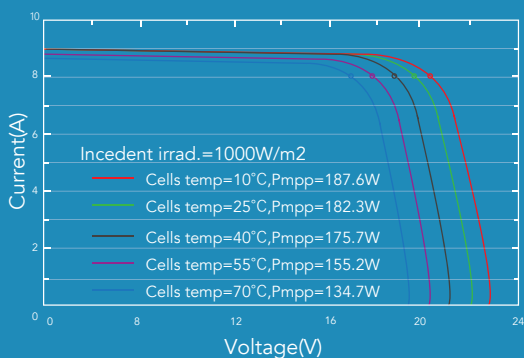
## TEMPERATURE CHARACTERISTICS

Temp.Coeff.of Isc(TK Isc)	0.05% / °C
Temp.Coeff.of Voc(TK Voc) °C Temp.Coeff.of	(-0.32%) / °C
Pmax(TK Pmax)	(-0.41%) / °C
Operating temperature	(-40~+85%) °C
Normal operating cell temperature	45±2°C

## I-V CURVES AT DIFFERENT IRRADIANCE



## I-V CURVES AT DIFFERENT TEMPERATURE



## PACKING CONFIGURATION

	20 GP	40 GP	40 HQ
Container	20 GP	40 GP	40 HQ
Pieces per pallet	40	40	42
Pallets per container	12	28	28
Pieces per container	480	1120	1232

## TESTS, CERTIFICATIONS

Standard tests	IEC 61215, IEC 61730
System certs	ISO 9001, ISO14001
Certifications	CQC, TUV, CE, MCS, CEC, CHUBB
Withstand extreme wind	Withstand extreme wind (1800 Pascal)
Snow loads testing	Snow loads (3600 Pascal)
Positive tolerance	0~+5W
Junction box	≥IP67

