

Features

- High performance, high efficiency monocrystalline silicon cells
- 3.2mm tempered glass and rigid anodised aluminium alloy frame give exceptional strength
- Grounding holes for easy installation
- Voltage optimised for use in 12V systems
- Cells guaranteed 25 year power-output (90% of power after 10 years of use, 80% of power after 25 years of use)
- 180W \pm 5% power output
- CE certification
- Waterproof for permanent outdoor use

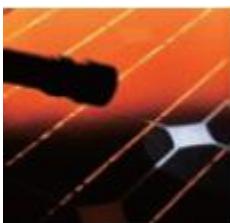


Example Applications

- Powering a 12V system
- Powering a fridge, television, laptop and lighting
- Perfect for caravans, boats and off-grid houses

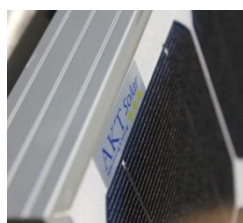


Specific Attributes



Low-iron tempered anti-reflecting glass and Back Surface Field (BSF) silicon nitride anti-reflective cell coating increase conversion efficiency.

AKT Solar logo assures of quality.

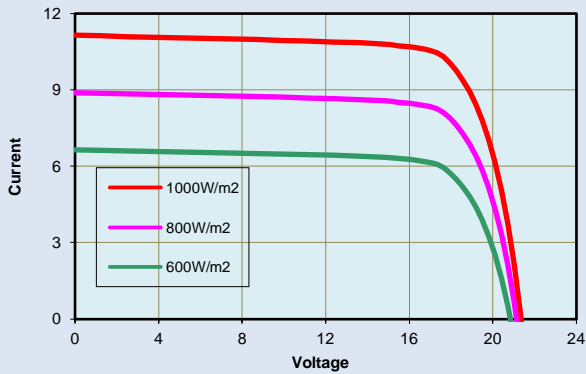


Rigid anodised aluminium frame and toughened glass ensure protection against frost, snow, hail and high winds.

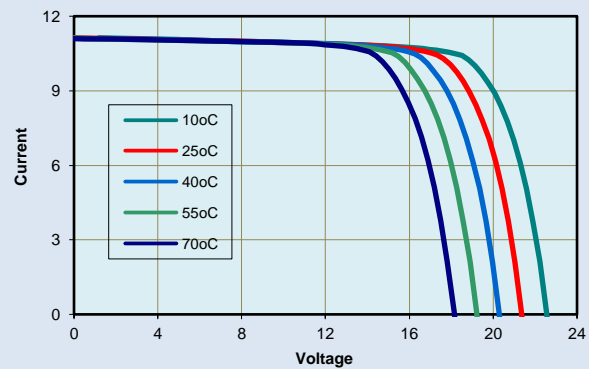
Waterproof junction box and solar cable minimise electrical power losses.

Electrical Output under Different Light Intensity and Temperature

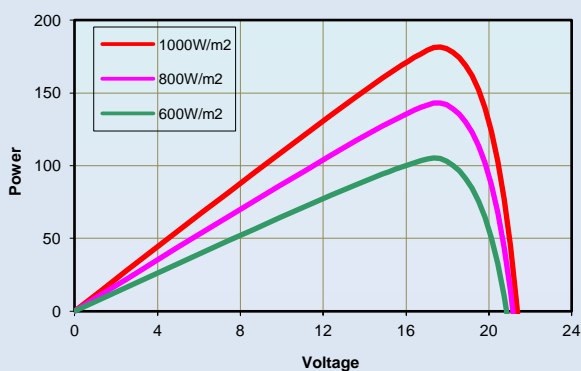
Current-Voltage Relationship, variable light intensity



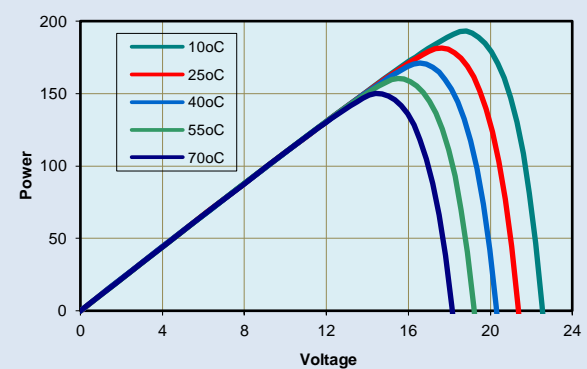
Current-Voltage Relationship, variable temperature



Power-Voltage Relationship, variable light intensity



Power-Voltage Relationship, variable temperature



Electrical Characteristics under STC¹

Open-circuit voltage (V _{oc})	Av 21.6V, sd 0.3
Voltage at maximum power (V _{mp})	Av 17.5V, sd 0.2
Short-circuit current (I _{sc})	Av 11.31A, sd 0.3
Current at maximum power (I _{mp})	Av 10.29A, sd 0.2
Maximum power at STC (W _p)	180W ±5%
Operating temperature	-40°C to +85°C
Maximum system voltage	1000V dc
Power tolerance	±5%

¹ Standard Temperature and Conditions: 25°C, AM 1.5, 1000W/m²

Temperature Dependence of I_{sc}, V_{oc} and W_p

Nominal operating cell temperature (NOCT)	47°C ±2°C
Temperature coefficient of W _p	-0.8±0.05%/°C
Temperature coefficient of V _{oc}	-0.06±0.002%/°C
Temperature coefficient of I _{sc}	0.034±0.005%/°C

Mechanical Characteristics and Dimensions

Solar cells	Monocrystalline 125x125mm
No. of cells	72 (12x3+12x3)
Dimensions	1580x808x35mm
Weight	15kg
Glazing	3.2mm textured, tempered, low-iron
Frame	Anodised aluminium alloy

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