AKT-100-M  
100 Watt MONOCRYSTALLINE SOLAR PANEL

Features

- High performance, high efficiency monocrystalline silicon cells
- 3.2mm tempered glass and rigid anodised aluminium alloy frame gives exceptional strength
- Grounding holes for easy installation
- Voltage optimised for use in 12V systems
- Guaranteed 25 year power-output  
  (90% of power after 10 years of use, 80% of power after 25 years of use)
- 100W ±5% power output
- CE certification
- Waterproof for permanent outdoor use

Example Applications

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

Specific Attributes

- Low-iron tempered anti-reflecting glass, 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 prevent damage due to frost, snow, hail and high winds.
- Thermal isolation between laminate and waterproof junction box minimises electrical power losses.
Electrical Output under Different Light Intensity and Temperature

Current-Voltage Relationship, variable light intensity

Power-Voltage Relationship, variable light intensity

Current-Voltage Relationship, variable temperature

Power-Voltage Relationship, variable temperature

Electrical Characteristics under STC¹

Open-circuit voltage (Voc)  Av 21.0V, sd 0.3
Voltage at maximum power (Vmp)  Av 17.5V, sd 0.2
Short-circuit current (Isc)  Av 6.20A, sd 0.2
Current at maximum power (Imp)  Av 5.70A, sd 0.1
Maximum power at STC (Wp)  100W ±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 Isc, Voc and Wp

Nominal operating cell temperature (NOCT)  47°C ±2°C
Temperature coefficient of Wp  -0.5±0.05%/°C
Temperature coefficient of Voc  -0.155±0.01%/°C
Temperature coefficient of Isc  0.06±0.01%/°C

Mechanical Characteristics and Dimensions

Solar cells  Monocrystalline 125x125mm
No. of cells  72 (12x3+12x3)
Dimensions  940x808x35mm
Weight  10.5kg
Front glass  3.2mm tempered glass
Frame  Anodised aluminium alloy

Specifications for future models may be subject to change
Copyright © AKT Solar, 2009-2012