

## Photovoltaic Monocrystalline SMM - 165



High efficiency monocrystalline solar panel

### Electrical Specification

Peak Power (Wp)	165
Tolerance (Power allowance range)	-0.05
Rated voltage (Voc)	35.6v
Rated current (Imp)	4.63A
Open Circuit Voltage (Voc)	44.3V
Short Circuit Current (Isc)	5.05A
Max. System voltage (v)	1000
Cell efficiency	>15%
Module efficiency	>13.5%

#### Standard test conditions

These values are effective for irradiation of 1000w/m<sup>2</sup>, AM1.5, and a cell temperature of 25°C.

### Operating Conditions

Temperature range	-40°C to 80°C
Hail	Maximum diameter of 28mm with impact speed of 86km/h

### Mechanical Data

Length mm	1580
Width mm	808
Height mm	45
Weight kg	15.5
Junction box	3 bypass diodes
Cable Solar	900mm length prefabricated with MC plug
Front glass	Low-iron high transparency temper glass 3.2mm
Cell	125 x 125mm monocrystalline silicon
Cell encapsulation	EVA (Ethylene-Vinyl-Acetate)
Back	TPT
Frame	Anodized aluminium profile

Monocrystalline Solar cells directly convert sunlight into electricity by means of the photovoltaic effect. This occurs when photons are absorbed by a solar cell which generates a voltage across its terminals.

Cells are connected in series within a solar module to provide sufficient voltage to operate a system. Modules can be connected in series and parallel to increase the system power. This solid state process provides a clean,

silent, non-polluting and reliable source of electrical energy. A Tedlar® base is used and ethylene vinyl acetate encapsulant.

High transmission tempered glass protects the cells from the front and a high strength polymer sheet at the rear. A reinforced aluminum frame completes the laminate structure which is fully sealed against moisture and protected from environmental and mechanical damage.

**NB:** Due to continuous development specifications are subject to change