Solent Energy

Solar Module ST70F

A Quality, accredited PV Module

70 Watt Mono-Crystalline Flexible PV Module

Product Description:

The Solent ST70F flexible PV module is a high quality mono-crystalline silicon cell module with the versatility of being both lightweight and semi-flexible. The modules are particularly suitable for caravans, mobile homes and boats as they can be mounted on slightly curved surfaces, are extremely robust and are practically theft proof.

Quality and Safety:

TUV Approved to IEC 61215 Ed 2 & IEC61730

ISO 9000 Certified Factory

Limited Warranties:

Freedom from defects in materials and workmanship for 5 years.
Minimum 80% output in 20 years.

Weight:

3.0 KG

Cell Specification:

36 series connected, half-156mm monocrystalline, silicon pseudo square cells

Overall Mechanical Data:
Length: 700 mm
Width: 800 mm
Depth: 14 mm
Cable: MC cable 500 mm
Front glass: Low iron (optiwhite) glass 4 mm thick.
Cells: 36 series connected,half -156mm monocrystalline silicon pseudo square cells
Encapsulation:EVA (Ethylene Vinyl Acetate)
Backing: Tri-Wall Tedlar foil

Allowable operating conditions
Maximum temperature range: -40oC to +85oC
Hail: up to 28mm diameter and 86 km/h impact speed
Surface maximum load capacity: evenly up to 240 kg/m2.

Panel Limitations:
The panel is semi - flexible so can be installed on gentle curves but it is not suitable for repeated bending or installation such that it will be able to vibrate.
Repeated flexing of the panel will result in its failure.
No blocking diode is included with the module as this wastes power so a charge controller must be used to prevent current leakage from the batteries at night.

Fitting:
The Panel can be mounted onto slight curves of no more than a 4 cm gain in height over a 1 metre length.
Screws, adhesive or both can be used to attach the panel. Up to 5mm fasteners can be used via the holes pre-drilled in to the module.
We recommend using Sikaflex 291 for the bonding of the panel or a similar marine grade adhesive.

Typical Electrical Characteristics at STC (1000W/M², 25ºC & AM 1.5):

Maximum Power (P_{max}) – Nominal	70 W
Voltage at Pmax (V_{mp})	18.4 V
Current at Pmax (I_{mp})	3.75 A
Short circuit current (I_{sc})	4.1 A
Open-circuit voltage (V_{oc})	22.0 V

Production Tolerance For Above Values + or - 5%

Reduction of efficiency from 1000w/m2 to 200w/m2:	93.6% of STC Values
Maximum System Voltage:	600V
Temperature Coefficient of Power:	-0.43 %/K
Temperature Coefficient of Voltage:	- 2.12 mV/K
Temperature Coefficient of Current:	+ 2.20 mA/K

Panel Features:

- Lightweight- Approximately 50% that of conventional modules.
- Flexible- Follows gentle curve in roof.
- Powerful- Built using latest technology mono-crystalline cells.
- Robust- Glass free and very strong terminal box.
- Low Profile - Just 14mm at highest point.
- High security- Difficult to see and even harder to remove.

Products are under continuous development and may be subject to change

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