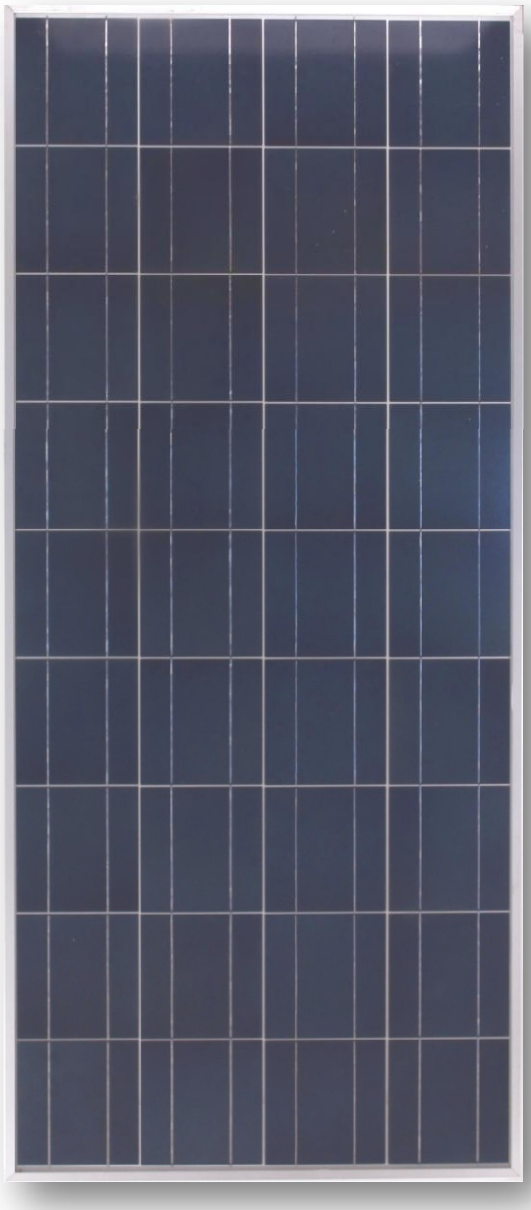
Photovoltaic Modules

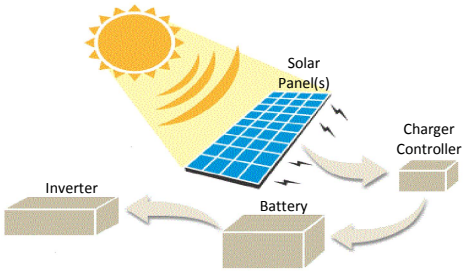
www.spotsolar.com

Specification Sheet

Models :
S-140-36-3
S-145-36-3



Modules Rating : 140, 145 Watts
Anodized Aluminum Frame
Weather Resistant Junction Box
High Efficiency Crystalline Sillicon Solar Cell
Built-in Bypass Diodes in Junction Box
Standard IEC 61215, IEC 61730, TIS 1843-2553
ISO 9001 : 2008
25 Years Limited Warranty



Spot solar modules are made with high efficiency solar cell and is electrically matched to minimize losses, for making modules suitable for commercial as well as domestic application.

Spot solar modules have been tested for grid connected as well as stand - alone systems offering high performance and relibility.

The solar photovoltaic module is manufactured with crystalline solar cell conforming to the strict requirements to international quality standards.

The strings laminated between sheets of ethyl vinyl acetate (EVA) and backsheet.

For moisture free protection, UV stability and electrical isolation material are used. Low iron and high transitivity glass is used for strength and high power output.

A high quality backsheet (TPT) Provides mechanical protection and electrical insulation up to 1,000 Volt.

Each raw material such as EVA, glass and backsheet is procured from the most reliable and proven sources.

The laminate are framed with a strong, robust and corrosion resistant aluminum frame with multiple mounting holes for ease of installation as customer's requirement.

Village Power
Electric Fence Charging
Telecommunications
Solar Home System

Recreational
Telemetry
Traffic Control Signals
Water Pumping

Security Lighting
Battery Maintenance
Outdoor Lighting
Solar Grid System

SOLAR POWER TECHNOLOGY CO., LTD.
711 M. 2 Bang Pa-In Industrial Estate, Khlongjik,
Bang Pa-In, Ayutthaya 13160
Tel. +66-35221691-2 Fax. +6635221690

TIS 1843-2553 ISO 9001 SGS UKAS MANAGEMENT SYSTEMS 005 THAILAND QMS 001

Electrical Properties at Standard Test Condition (STC)

PV Module Model	S-145-36-3	S-140-36-3
Rated Maximum Power (Pmax)	145 W	140 W
Tollerance of Maximum Power	± 5%	± 5%
Open Circuit Voltage (Voc)	22.40 V	22.30 V
Short Circuit Current (Isc)	8.55	8.46 A
Voltage at Pmax (Vmp)	18.2 V	17.80 V
Current at Pmax (Imp)	7.97 A	7.87
Efficiency of Module	14.66%	14.16%

Temperature Properties

Voltage Temperature Coefficient	-0.32%/°C
Current Temperature Coefficient	0.05%/°C
Power Temperature Coefficient	-0.39%/°C

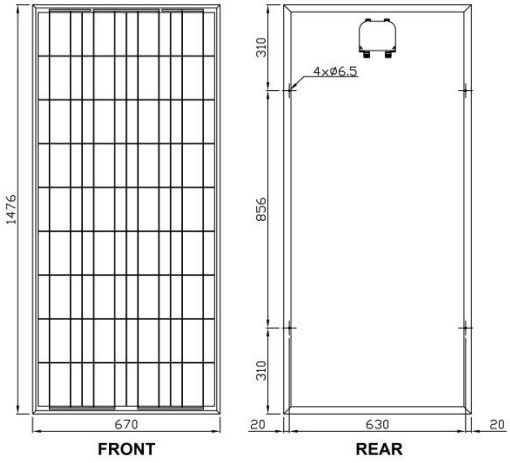
Maximum Use Rate

Maximum System Voltage	1000 V
Maximum Series Fuse	20 A

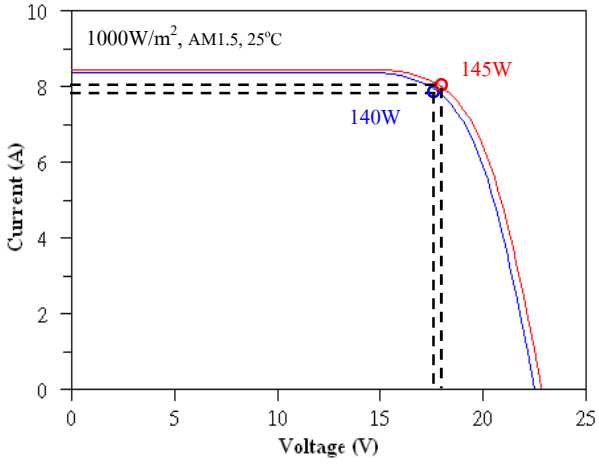
Mechanical Properties

Dimension	1476 x 670 x 33 mm.
Weight	12.4 Kg.
Frame	Anodized Aluminum Profiles
Glass	Tempered Glass
Encapsulated Materials	Ethylene Vinyl Acetate (EVA)
Backsheet Materials	Composite Films
Solar Cell	Multicrystalline Silicon
Junction Box	2 Bypass Diodes
PV Cable	1x4 mm^2 Length 750 mm.

Dimension



I-V Characteristic Curves



Electrical specification are based on measurements performed at standard test conditions (STC) of 1000 W/m^2 irradiance, air mass 1.5 and cell temperature of 25°C after long-term stabilization. Performance may vary up to 10% from rated power due to temperature operation, spectrum and related effects.

Note: Dimension and electrical specification of the solar modules may change without notice according to the type or size of cells in each lot to used in manufacturing lines.

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