



BP SOLAR

SOLAR MODULES

BP280F & BP275F

SOLAR MODULES

PRODUCT FEATURES

- High efficiency monocrystalline silicon cells.
- Designed for maximum reliability and minimum maintenance.
- Produced using in-house technology in cell manufacturing and encapsulation.
- Highly resistant to water, abrasion, hail impact and other environmental factors.
- Lightweight anodised aluminium frame or laminate version only.
- All proven products. Only materials with extensive field experience used.
- Designed and manufactured to comply with European and International standards. European specification ESTI503.
- 20 year product warranty



CELL SPECIFICATIONS

36 series connected, 125 mm monocrystalline silicon pseudo square cells.



TECHNICAL SPECIFICATIONS

Module Catalogue Number	BP280	BP275
Nominal Peak Power (Pmax)	80.00W	75.00W
Voltage @ maximum power (V mp)	17.00V	17.00V
Current @ maximum power (I mp)	4.70A	4.45A
Short-circuit current (I sc)	5.0A	4.75A
Open-circuit Voltage (V oc)	21.8V	21.40V

Dimensions

BP275/280F	Length 1188 mm Depth 43.5 mm
BP275/280L	Length 1183 mm Depth 4 mm (±1 mm)

F=Framed L=Laminate

Width 530 mm
Weight 7.5 kg
Width 525 mm
Weight 5.5 kg

APPLICATIONS

GRID-CONNECT

- Rain-screen Façades
- Sun-shade & Balcony Products
- Roofing Products
- Domestic/Residential Roof Products
- Multi-Kilowatt and Megawatt Power Stations
- Generator-type Power for centralised locations.

TELECOMS

- Microwave Repeaters and Terminals.
- VHF/UHF Radio Systems and Repeaters.
- Mobile Radio Systems.
- HF/SSB Radio Transceivers
- TV Translators
- Radio Telephones & Telemetry.
- Radio Navigational Aids
- Fibre Optic Repeaters
- Miscellaneous Packages DC Loads

RURAL INFRASTRUCTURE

- Community/Village Water Pumping
- Community/Village Water Purification
- Community/Village Refrigeration, Medical and Domestic
- Community/Village Lighting
- Community/Village Television & Video
- Individual House Power
- Community/Village Power

SPECIALIST

- Cathodic Protection
- Aircraft Obstruction Lighting
- Lighthouse Lighting Systems
- Racon Systems
- Beacon Buoy Lighting Systems
- Fog Warning Systems



HIGH EFFICIENCY BP280F/BP275F MODULES

POWER SPECIFICATIONS

All performance specifications given are as measured at the standard test conditions.

Standard Test Conditions

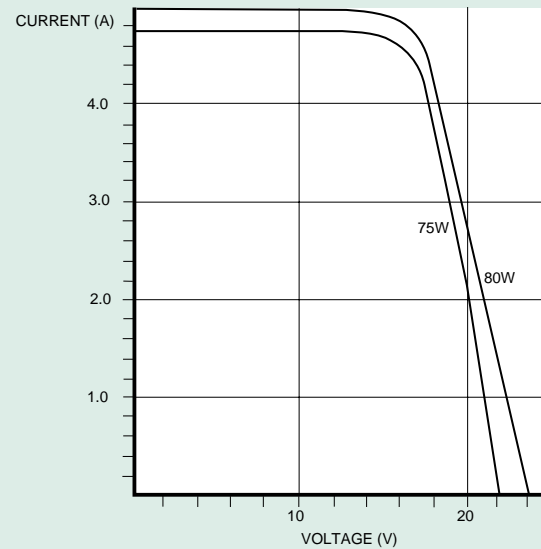
Description	Parameter	Value
Intensity of illumination	Insolation (W/m ²)	1000
Special Density	Air Mass (AM)	1.5
Operating Temperature	Cell Temperature (°C)	25

Description of performance parameters

P _{max}	Maximum power of a module. The point on the curve where the IV is at a maximum
V _{mp}	Voltage at the maximum power point
I _{mp}	Current at the maximum power point
I _{sc}	The short circuit current of a PV module
V _{oc}	The open circuit voltage of a PV module
P _{min}	Minimum guaranteed power of a module

VOLTAGE/CURRENT CURVE (Nominal)

The graph below details module performance at an insolation of 1000 W/m², air mass 1.5 D



Tolerance – Minimum power, the peak power of all high power modules is normally supplied within minus 5watts actual of the nominal value, for further details contact BP Solar.

Coefficient of Voltage -0.0022 V/cell/°C

Coefficient of Current 8.9 mA/cm²/°C

CEC APPROVAL SPECIFICATION NO.503

BP Solar modules have been tested and qualified to the Commission of European Communities specification number 503 at the CEC Joint Research Centre in Ispra, Italy. The qualification tests are designed to demonstrate the module's suitability for use in field conditions.

- 200 thermal cycles from -40°C to 85°C.
- 10 humidity/freeze cycles from 85°C at 85% relative humidity to -40°C.
- Ice ball impact test.
- Ultra violet exposure.
- Outdoor exposure.
- Damp heat.
- Hot spot endurance (to simulate partial shading).
- Mechanical endurance, to simulate wind loads of up to 225 km/h.

Power specifications are measured at Standard BP Solar Test Conditions. For further information on module performance contact BP Solar.

Approved by TÜV Rheinland Group for use as Class II equipment, Schutzklasse II.

CONSTRUCTION

BP280 & BP275 modules are manufactured using industry-standard materials and lamination techniques. Stainless steel fasteners are used throughout. The junction box is bonded directly to the laminate to facilitate both framed and laminate only module products.

Materials are as follows:

- Front Cover: Toughened glass, 3mm, high light transmission (c 92%)
- Encapsulant: Ethylene-vinyl-acetate (EVA)
- Rear Cover: Tri-laminate of PVF/Polyester/PVF
- Frame: Extruded Aluminium, Anodised
- Frame Sealant: High strength bonding tape
- Junction Box: Glass filled polycarbonate

Electrical connections to the module are made via screw terminals within the junction box. One cable gland is fitted and 3 further knockouts (suitable for glands or conduit) are provided to facilitate series and/or parallel connection.

Rear Module Label

WARNING
ELECTRICAL HAZARD
THIS UNIT PRODUCES ELECTRICITY WHEN EXPOSED TO LIGHT. COVER GLASS BEFORE REMOVING TERMINAL BOX LID.
MAXIMUM SYSTEM OPERATING VOLTAGE - REFER TO INSTRUCTION LEAFLET

BP SOLAR

MODULE TYPE: BP275F

NOMINAL PEAK POWER (P _{max})	: 75.00
PEAK POWER VOLTAGE (V _{mp})	: 17.00
PEAK POWER CURRENT (I _{mp})	: 4.45
SHORT CIRCUIT CURRENT (I _{sc})	: 4.75
OPEN CIRCUIT VOLTAGE (V _{oc})	: 21.40
MINIMUM POWER (P _{min})	: 70.00

Volts

Power specifications measured at Standard Test Conditions. Insolation of 1000W/m², AM 1.5, 25°C cell temperature. Module Certified to CEC Specification 503 by JRC ISPRRA. 10 Year Limited Output Guarantee.

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Catalogue

