



BP SOLAR

# SOLAR MODULES

## BP250/1, BP250/2

### 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.
- All proven products. Only materials with extensive field experience used.
- Tested and qualified to meet the requirements of European specification CEC503.
- BP250/1 uses 72 125mm x 42.7mm monocrystalline solar cells.
- BP250/2 uses 36 125mm x 82.3mm monocrystalline solar cells.
- 20 year product warranty.

### DIMENSIONS

Length 825 mm Width 530 mm  
Depth 43.5 mm Weight 5.6 kg

BP250/1 ▶



BP250/2 ▼



### APPLICATIONS

#### GRID-CONNECT

- Rain-screen Facades
- Sun-shade & Balcony Products
- Roof and Atria 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

### TECHNICAL SPECIFICATIONS

#### Module Catalogue Number

- Typical Peak Power (Pmax)
- Voltage @ maximum power (V mp)
- Current @ maximum power (I mp)
- Short-circuit current (I sc)
- Open-circuit Voltage (V oc)

BP250/1  
BP250/2

50.00W  
17.00V  
2.94A  
3.22A  
21.20V



# BP250/1, BP250/2 SOLAR MODULES

## POWER SPECIFICATIONS

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

## VOLTAGE/CURRENT CURVE (Typical)

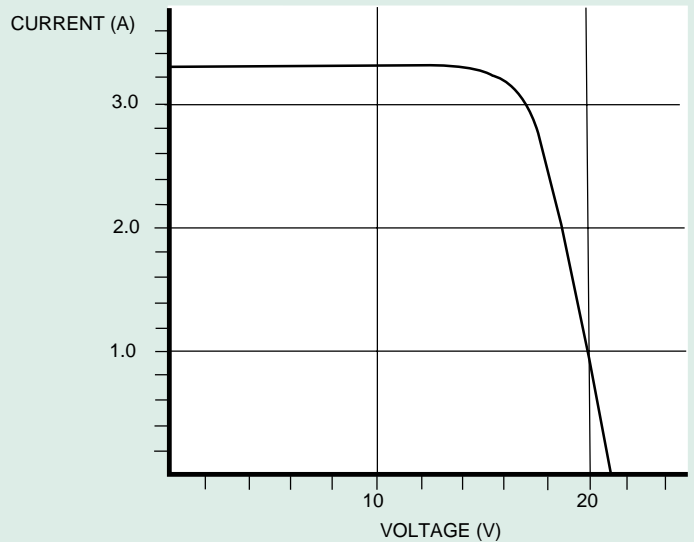
The graph below details module performance at an insolation of 100 mW/cm<sup>2</sup>, air mass 1.5 D for typical BP250/1 & BP250/2 modules.

### Standard Test Conditions

Description	Parameter	Value
Intensity of illumination	Insolation (mW/cm <sup>2</sup> )	100
Spectral 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's curve where the IV product is 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



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.

Temperature coefficient of Voc : -0.078V/module/°C  
 Temperature coefficient of Pmax : -0.45%/module/°C

Temperature coefficient of Isc : 0.68mA/module/°C  
 Temperature coefficient of Pmax : -0.23W/module/°C

## CEC APPROVAL SPECIFICATION NO.503

BP Solar modules have been tested and qualified to the requirements of 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.

Designed to meet TÜV Rheinland Group for use as Class II equipment, Schutzklasse II.


## CONSTRUCTION

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 thick, 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.



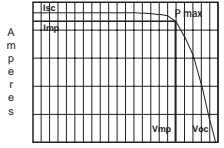
**WARNING**  
**ELECTRICAL HAZARD**  
THIS UNIT PRODUCES ELECTRICITY WHEN EXPOSED TO LIGHT. COVER GLASS BEFORE REMOVING TERMINAL BOX LID.  
 MAXIMUM SYSTEM OPERATING VOLTAGE - REFER TO INSTRUCTION LEAFLET




**BP SOLAR**

**MODULE TYPE: BP 250/1**

NOMINAL PEAK POWER (P max) : **5.00**  
 PEAK POWER VOLTAGE (Vmp) : **17.00**  
 PEAK POWER CURRENT (Imp) : **2.94**  
 SHORT CIRCUIT CURRENT (Isc) : **3.22**  
 OPEN CIRCUIT VOLTAGE (Voc) : **21.20**  
 MINIMUM POWER (P min) : **45.00**



Volts

Power specifications measured at Standard Test Conditions, Insolation of 100mW/cm<sup>2</sup>, 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

