

160 Watt Photovoltaic Module

BP 3160

The BP 3160 is an advanced 160W module utilising polycrystalline cells with anti-reflective SiN coating. The BP 3160 has been especially designed for grid connect applications such as large commercial roofs, residential systems, photovoltaic power plants along with remote off-grid applications such as telecommunications, water pumping and home systems. This 72 cell module offers a superior price – performance relationship with a blue tedlar back sheet and innovative, high-efficiency cells.

Performance	BP 3160	BP 3150
Rated power	160W	150W
Module efficiency	12.7%	11.9%
Nominal voltage	24V	24V
Warranty	90% of minimum warranted power output over 12 years 80% of minimum warranted power output over 25 years Free from defects in materials and workmanship for 5 years	

Configuration

BP 3160S	Universal frame, a sealed junction box with output cables and polarized Multicontact (MC) connectors
BP 3160U	Universal frame with an accessible junction box for cable connection

Qualification Test Parameters

Temperature cycling range	-40°C to +85°C for 200 cycles
Damp heat test	85°C and 85% relative humidity for 1000h
Front & rear static load test (eg: wind)	2400 Pa
Front load test (eg: snow)	5400 Pa
Hailstone impact test	25mm hail at 23m/s from 1m

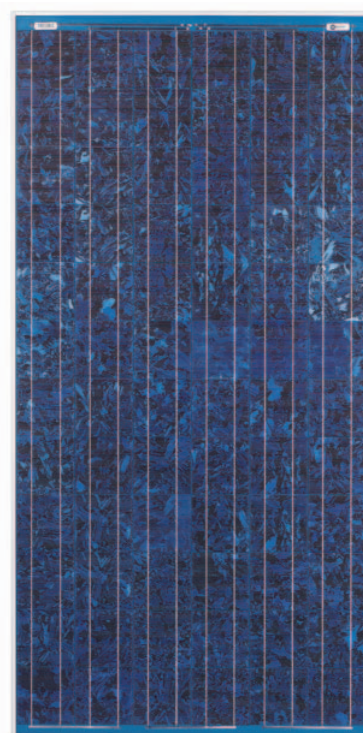
Quality and Safety

- Manufactured in ISO 9001 and ISO 14003 certified factories
- Conforms to European Community Directive 89/33/EEC, 73/23/EEC, 93/68/EEC
- Certified to IEC 61215

Module power measurements calibrated to World Radiometric Reference through ESTI (European Solar Test Installation at Ispra, Italy)

Framed modules certified by TÜV Rheinland as Safety Class II (IEC 60364) equipment for use in systems up to 1000 VDC

Framed modules listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

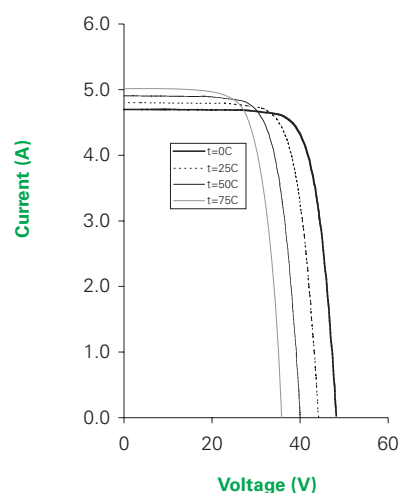


BP 3160

Efficiency (%)

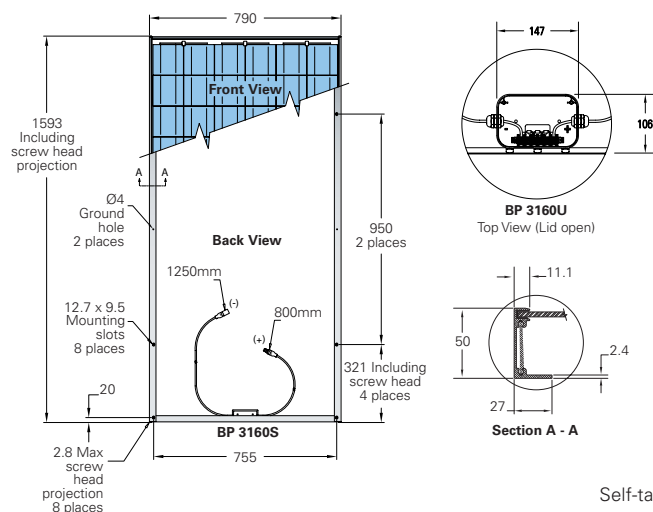
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BP 3160 I-V Curves



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Module Diagram



Self-tapping grounding screw, instruction sheet and warranty document included with each module.

Typical Electrical Characteristics

	BP 3160	BP 3150 ³
Rated Power (P_{max}) ¹	160W	150W
Warranted minimum power	152W	143W
Voltage at P_{max} (V_{mp})	35.1V	34.5V
Current at P_{max} (I_{mp})	4.55A	4.35A
Short circuit current (I_{sc})	4.8A	4.75A
Open circuit voltage (V_{oc})	44.2V	43.5V
Temperature coefficient of I_{sc}	(0.065±0.015)%/°C	
Temperature coefficient of V_{oc}	-(160±20)mV/°C	
Temperature coefficient of P_{max}	-(0.5±0.05)%/°C	
NOCT ²	47±2°C	
Maximum series fuse rating	15A (BP 3160S) / 20A (BP 3160U)	
Maximum system voltage	600V (IEC 61215 rating) 1000V (TÜV Rheinland rating)	

Mechanical Characteristics

	BP 3160S / BP 3160U ⁴
Dimensions (mm) (Overall tolerances +/-3mm)	1593 x 790 x 50
Weight (kg)	15.0
Frame	Clear anodised aluminium alloy type 6063T6. Colour: silver.
Solar cells	72 cells (125mm x 125mm) configured geometrically for a 12 x 6 matrix connected in series.
Output cables (BP 3160S)	RHW AWG# 12 (4mm ²) cable with polarized weatherproof DC rated Multicontact (MC) connectors; asymmetrical lengths 1250 (-) and 800mm (+).
Junction box (BP 3160U)	IP54 junction box with 6 terminal screw connection block, accepts PG 13.5, M20, 13mm conduit, or cable fittings accepting 6 – 12mm diameter cable. Terminals accept 2.5 – 10mm ² (8 to 14 AWG) wire.
Diodes	Three 9A, 45V Schottky by-pass diodes included.
Construction	Front: High transmission 3mm tempered glass Rear: Blue tedlar; Encapsulant: EVA.

1. Standard test conditions (STC), irradiance of 1000W/m² at an AM1.5G solar spectrum and a cell temperature of 25°C.

2. Normal Operating Cell Temperature (NOCT), air temperature of 20°C; irradiance 800W/m²; wind speed 1m/s.

3. Power of solar cells varies in the normal course of production; the BP 3150 is assembled using cells of slightly lower power than the BP 3160.

4. The mechanical characteristics of the BP 3150 and BP 3160 are identical.

Your BP Solar Distributor:

