

160 Watt Photovoltaic Module

BP 3160

4015E-1 12/03

The BP 3160 is an advanced 160W module. For better absorption it uses polycrystalline cells with anti-reflective SiN coating. With a new tighter power tolerance of 3% a higher average power output is guaranteed. The BP 3160 has been especially designed for grid connect applications such as large commercial roofs, residential systems and photovoltaic power plants. This 72 cell module offers a superior price – performance relationship due to its tighter power tolerance, white tedlar back sheet and the innovative, high-efficiency cells.

Performance

Rated power	160W
Module efficiency	12.7%
Nominal voltage	24V
Warranty	90% power output over 12 years 80% power output over 25 years Free from defects in materials and workmanship for 5 years

Configuration

BP 3160S	Clear Universal frame with output cables and polarized Multicontact (MC) connectors
BP 3160L	Unframed laminate version of BP 3160S

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 distance

Quality and Safety

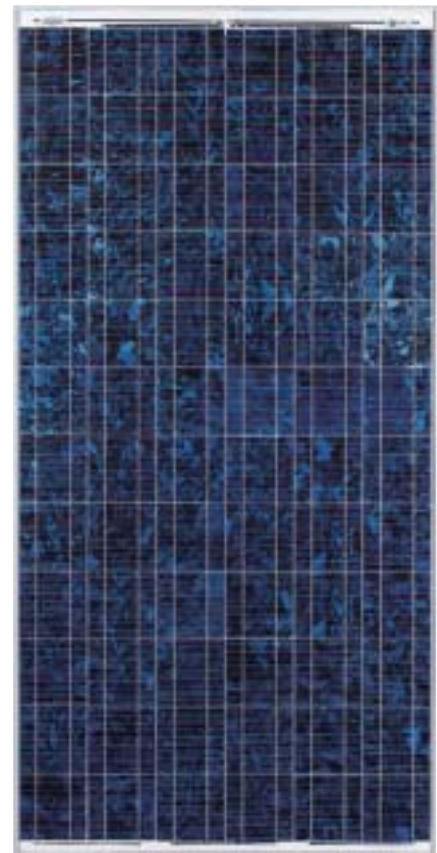
- Manufactured in ISO 9001 and ISO 14003 certified factories
- Conforms to European Community Directive 89/33/EEC, 73/23/EEC, 93/68/EEC
- Certified to IEC 61215

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)

Laminates recognised by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

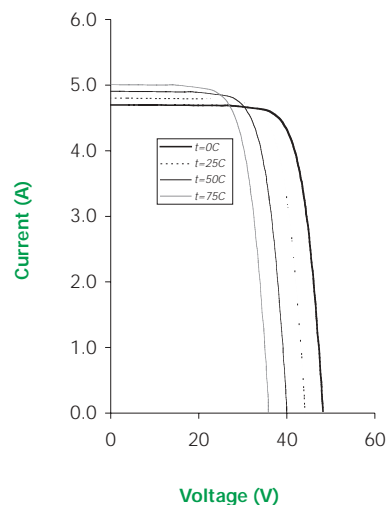


BP 3160S scale 1:14

Efficiency (%)

9-11 | 11-12 | 12-13 | 13-14 | 14-15

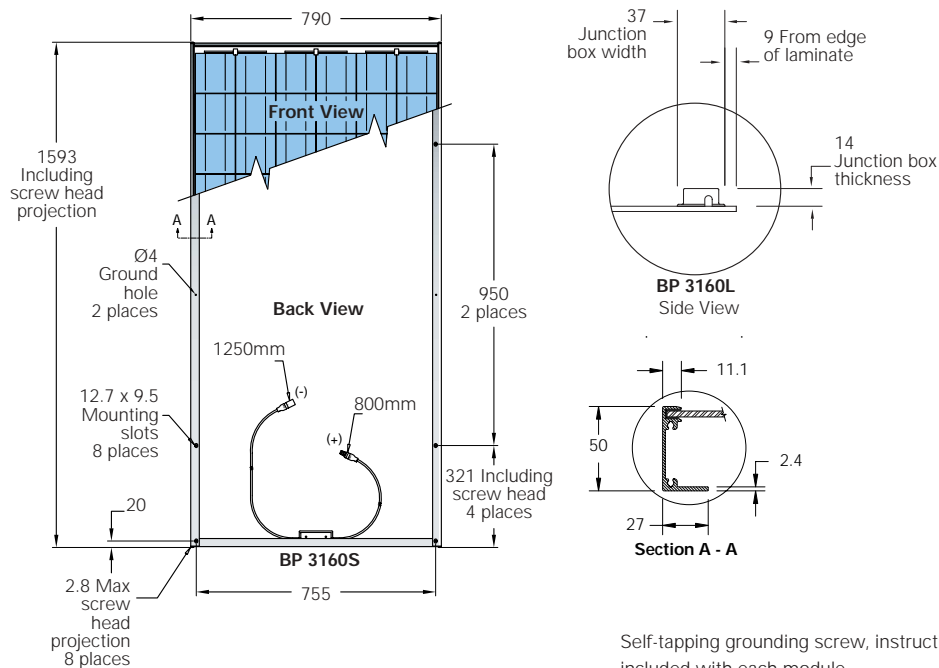
BP 3160 I-V Curves



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Module Diagram



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

Typical Electrical Characteristics

BP 3160

Maximum Power (P_{max})	160W
Warranted minimum power	155W
Voltage at P_{max} (V_{mp})	35.1V
Current at P_{max} (I_{mp})	4.55A
Short circuit current (I_{sc})	4.8A
Open circuit voltage (V_{oc})	44.2V
Temperature coefficient of I_{sc}	(0.065±0.015)%/K
Temperature coefficient of V_{oc}	-(160±20)mV/K
Temperature coefficient of P_{max}	-(0.5±0.05)%/K
NOCT (Air 20°C; Sun 0.8kW/m ² ; wind speed 1m/s)	47±2°C
Maximum series fuse rating	15A
Maximum system voltage	1000V (IEC 61215 rating) 1000V (TÜV Rheinland rating)

Standard test conditions - irradiance of 1000W/m² at an AM1.5G solar spectrum and a temperature of 25°C.

Mechanical Characteristics BP 3160S

BP 3160L

Dimensions (mm) (Overall tolerances +/-3mm)	1593 x 790 x 50	1580 x 783 x 19
Weight (kg)	15.0	12.4
Frame (BP 3160S)	Clear anodised aluminium alloy type 6063T6. Silver Universal frame.	
Solar cells	72 cells (125mm x 125mm) configured geometrically for a 6 x 12 matrix connected in series.	
Output cables	RHW AWG# 12 (4mm ²) cable with polarized weatherproof DC rated Multicontact connectors; asymmetrical lengths 1250mm (-) and 800mm (+).	
Diodes	Three 9A, 45V Schottky by-pass diodes included.	
Construction	Front: High transmission 3mm tempered glass. Rear: White tedlar; Encapsulant: EVA.	

Your BP Solar Distributor:

