

160 Watt Photovoltaic Module

BP 3160Q

4023E-2 05/04

The BP 3160Q is an advanced 160W module that uses cells with SiN coating. This product has been especially designed for grid connect applications such as large commercial roofs, residential systems and photovoltaic power plants. The BP 3160Q offers a higher output current and lower voltage (16V) than other products of the same size, as it is made up of fifty large area polycrystalline cells (150mm x 150mm). The module's high output current and low voltage make it ideal for use in systems with the latest grid connect inverters.

Performance

Rated power	160W
Module efficiency	12.7%
Nominal voltage	16V
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 3160QS	Clear Universal frame with output cables and polarized Multicontact (MC) connectors
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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 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 750 VDC

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

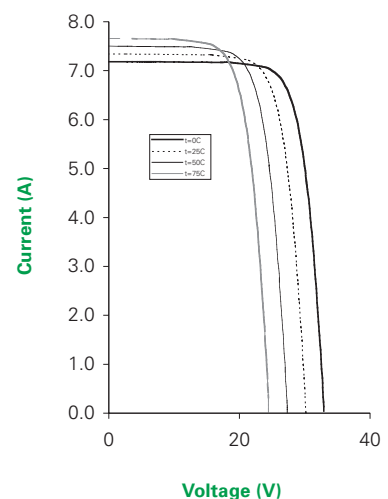


BP 3160QS scale 1:14

Efficiency (%)

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

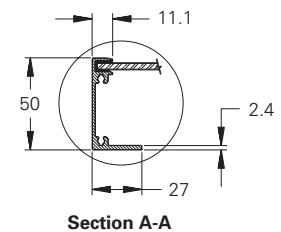
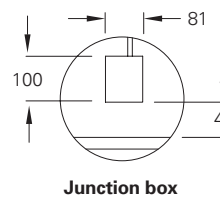
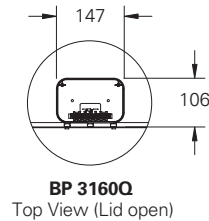
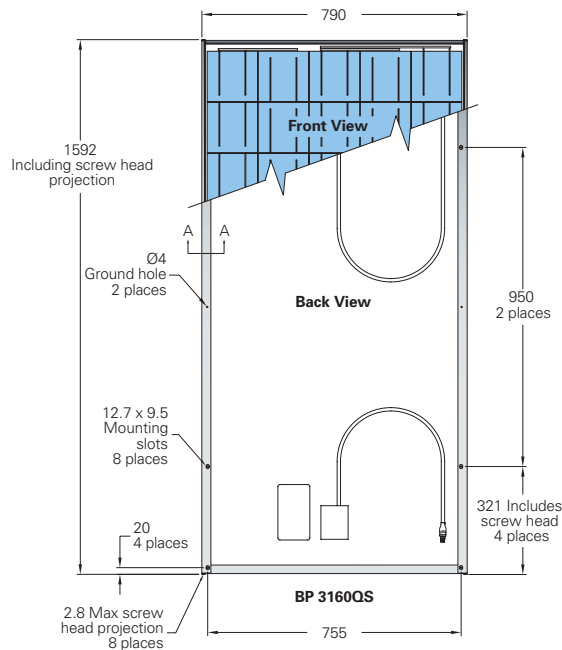
BP 3160 I-V Curves



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Module Diagram



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

Typical Electrical Characteristics

BP 3160QS

Maximum Power (P_{max})	160W
Warranted minimum power	152W
Voltage at P_{max} (V_{mp})	23.8V
Current at P_{max} (I_{mp})	6.72A
Short circuit current (I_{sc})	7.34A
Open circuit voltage (V_{oc})	30.2V
Temperature coefficient of I_{sc}	$(0.065 \pm 0.015)\%/K$
Temperature coefficient of V_{oc}	$-(110 \pm 10)mV/K$
Temperature coefficient of P_{max}	$-(0.5 \pm 0.05)\%/K$
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) 750V (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 3160QS

Dimensions (mm) (Overall tolerances +/-3mm)	1592 x 790 x 50
Weight (kg)	15.4
Frame	Clear anodised aluminium alloy type 6063T6. Silver Universal frame.
Solar cells	50 cells (150mm x 150mm) configured geometrically for a 5 x 10 matrix connected in series.
Output cables	RHW AWG# 12 (3.3 mm ²) cable with polarized weatherproof DC rated Multicontact (MC) connectors; asymmetrical lengths 1250mm (-) and 800mm (+).
Diodes	Three 12.5A by-pass diodes included.
Construction	Front: High transmission 3mm tempered glass. Rear: White front/black rear tedlar/polyester/tedlar (TPT).

Your BP Solar Distributor:

