

## 150 Watt Photovoltaic Module

# BP 3150

4031E-1 02/04

The BP 3150 is an advanced 150W module that uses cells with anti-reflective SiN coating. The BP 3150 has a new tighter power tolerance of 3% so a higher average power output is guaranteed. There are various versions of this module available which make it ideally suited to grid connect applications such as large commercial roofs, residential systems and photovoltaic power plants, as well as traditional off grid installations. This module offers a superior price - performance relationship due to its 72 advanced polycrystalline cells connected in series.

### Performance

Rated power	150W
Module efficiency	12%
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 3150S	Clear Universal frame with output cables and polarized Multicontact (MC) connectors
BP 3150U	Clear Universal frame and robust junction box

### 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

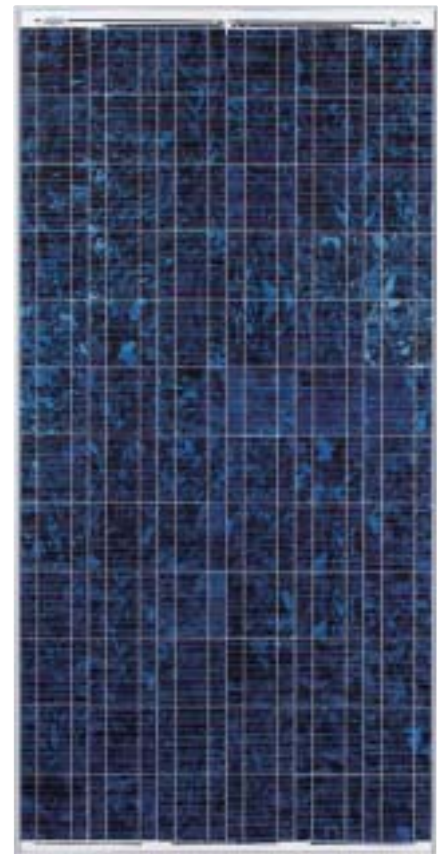
- Manufactured in ISO 9001 and ISO 14003 certified factories.
- Conforms to European Community Directive 89/33/EEC, 73/23/EEC, 93/68/EEC
- Certified to IEC 61215

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)

Approved by Factory Mutual Research in NEC Class 1, Division 2, Groups C & D hazardous locations (BP 3150U)

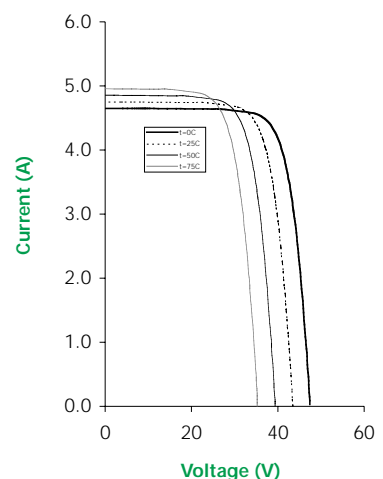


BP 3150S scale 1:14

### Efficiency (%)

9-11	11-12	12-13	13-14	14-15
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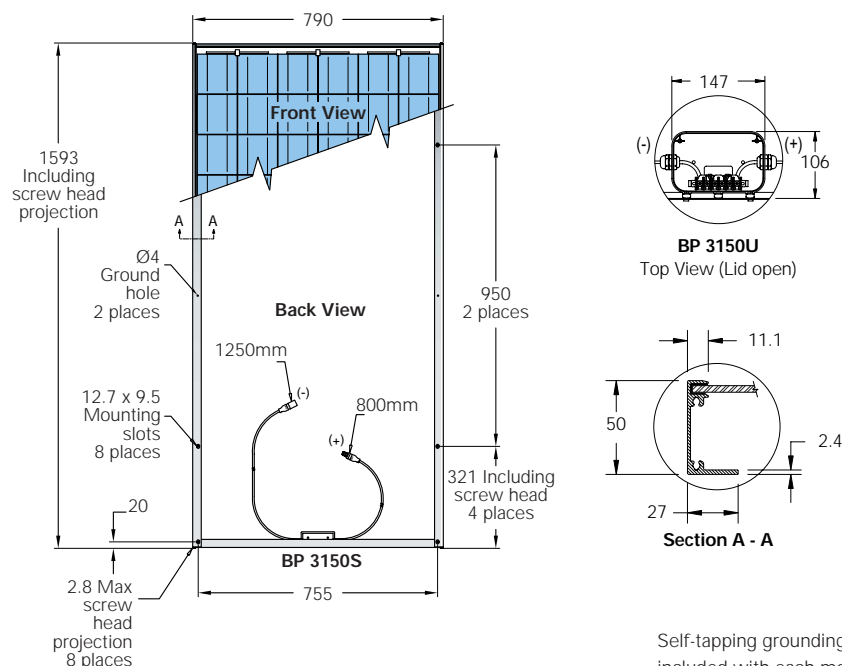
### BP 3150 I-V Curves



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### Module Diagram



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

### Typical Electrical Characteristics

### BP 3150

Maximum power ( $P_{max}$ )	150W
Warranted minimum power	146W (BP 3150S); 143W (BP 3150U)
Voltage at $P_{max}$ ( $V_{mp}$ )	34.5V
Current at $P_{max}$ ( $I_{mp}$ )	4.35A
Short circuit current ( $I_{sc}$ )	4.75A
Open circuit voltage ( $V_{oc}$ )	43.5V
Temperature coefficient of $I_{sc}$	$(0.065 \pm 0.015)\%/K$
Temperature coefficient of $V_{oc}$	$-(160 \pm 10)mV/K$
Temperature coefficient of $P_{max}$	$-(0.5 \pm 0.05)\%/K$
NOCT (Air 20°C; Sun 0.8kW/m <sup>2</sup> ; wind speed 1m/s)	47±2°C
Maximum series fuse rating	15A (BP 3150S); 20A (BP 3150U)
Maximum system voltage	600V (IEC 61215 rating) 1000V (TÜV Rheinland rating)

Standard test conditions - irradiance of 1000W/m<sup>2</sup> at an AM1.5G solar spectrum and a temperature of 25°C.

### Mechanical Characteristics

### BP 3150S / BP 3150U

Dimensions (mm) (Overall tolerances +/-3mm)	1593 x 790 x 50
Weight (kg)	15.0
Frame	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.
Junction box (BP 3150U)	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 <sup>2</sup> (8 to 14 AWG wire).
Output cables (BP 3150S)	RHW AWG# 12 (4mm <sup>2</sup> ) 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 (BP 3150S), Blue tedlar (BP 3150U); Encapsulant: EVA

Your BP Solar Distributor:

