

80 Watt Photovoltaic Module

BP 380

4017E-4 06/07

The BP 380 is an advanced 80W photovoltaic module that uses cells with antireflective SiN coating. This solar module is as equally suited to grid connect applications, such as residential systems or installations on commercial roofs and traditional photovoltaic applications such as telecommunications and rural electrification. The BP 380 offers a superior price-performance relationship due to its reliability, white polyester back sheet and 36 advanced polycrystalline cells connected in series.

Performance

Rated power	80W
Tolerance	+/-5%
Module efficiency	12.6%
Nominal voltage	12V
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 380J	Clear Universal frame and J-type junction box.
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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 load test (eg: wind)	2400Pa
Front load test (eg: snow and wind)	5400Pa
Hailstone impact test	25mm hail at 23m/s from 1m distance

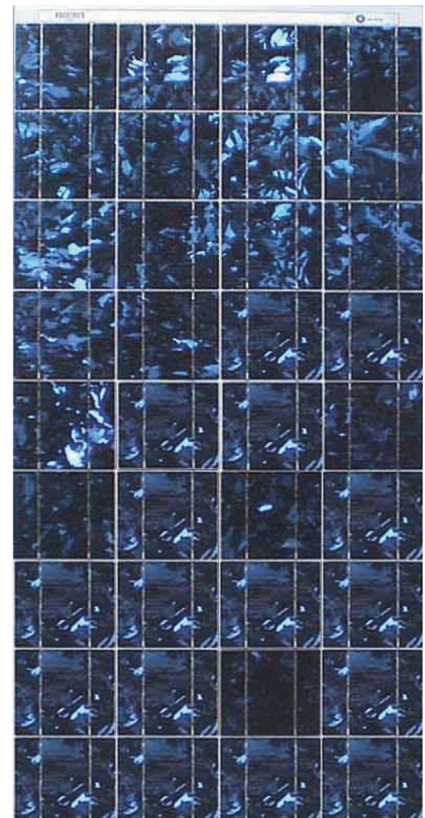
Quality and Safety

- Manufactured in ISO 9001 and ISO 14001 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 the World Radiometric Reference from ESTI (European Solar Test Installation) at Ispra, Italy.

Modules of type 380J are certified by TÜV Rheinland as Safety Class II (IEC 60364) equipment for use in systems up to 1000V.

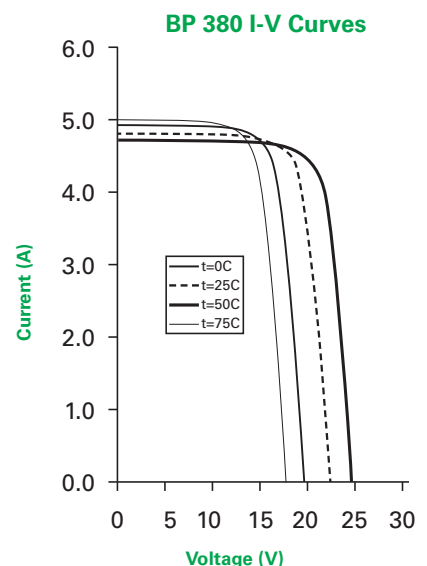
Modules of type 380J are listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating).



BP 380J scale 1:14

Efficiency (%)

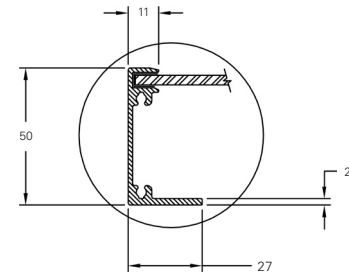
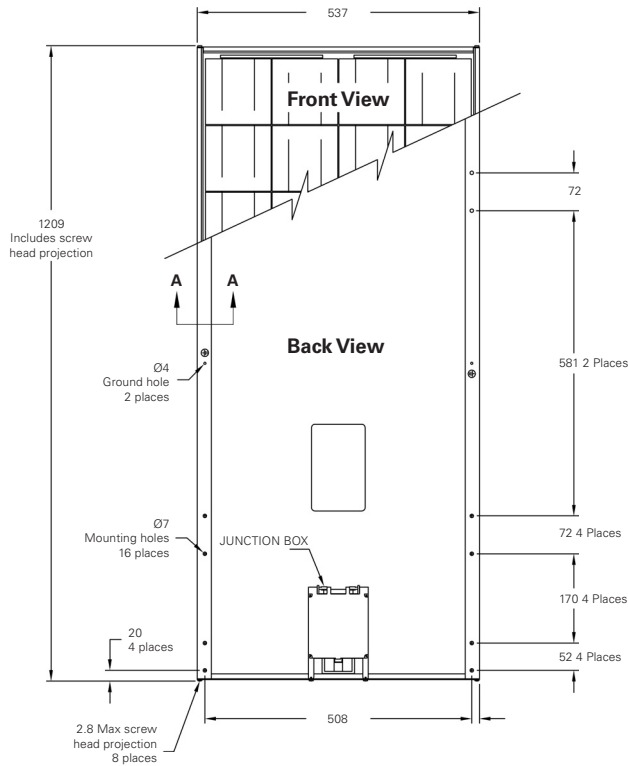
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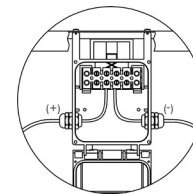
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Module Diagram



SECTION A-A



JUNCTION BOX

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

All dimensions in mm with a tolerance of ± 3 mm.

Typical Electrical Characteristics

BP 380

Nominal power (P_{nom})	80W
Voltage at MPP (V_{mpp})	17.6V
Current at MPP (I_{mpp})	4.6A
Short circuit current (I_{sc})	4.8A
Open circuit voltage (V_{oc})	22.1V
Temperature coefficient of I_{sc}	$(0.065 \pm 0.015) \% / K$
Temperature coefficient of V_{oc}	$-(80 \pm 10) mV / K$
Temperature coefficient of P	$-(0.5 \pm 0.05) \% / K$
NOCT (Air 20°C; Sun 800W/m ² ; wind speed 1m/s)	47 \pm 2°C
Maximum series fuse rating	15A
Maximum system voltage (380J)	600V

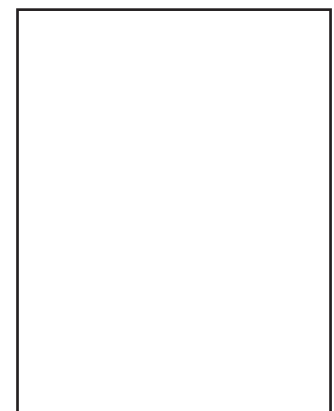
Standard test conditions - irradiance of 1000W/m² at an AM1.5G solar spectrum and a temperature of 25°C.

Mechanical Characteristics

BP 380J

Dimensions (mm) (Overall tolerances ± 3 mm)	1209 x 537 x 50
Weight (kg)	7.7
Frame	Clear anodised aluminium alloy type 6063T6. Silver Universal frame.
Solar cells	36 cells (125mm x 125mm) configured geometrically for a 4 x 9 matrix connected in series.
Junction box (BP 380J)	IP 65 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 wire.
Diodes	IntegraBus™ technology includes for every 18 cells one Schottky bypass diode integrated into the printed circuit board bus.
Construction	Front: High transmission 3.2mm tempered glass. Rear: White polyester; encapsulant: EVA.

Your BP Solar Distributor:



www.bpsolar.com