BP 275U

75-Watt
Monocrystalline Photovoltaic Module

BP 275U PV modules provide cost-effective photovoltaic power for general use, operating DC loads directly or, in an inverter-equipped system, AC loads. Its features include the strongest frame in the industry, time-tested monocrystalline silicon solar cells, and a high-capacity multi-purpose junction box. With 75 watts of nominal maximum power, the BP 275U is well-suited to utility grid-connected building facades and roof systems, telecommunication systems, pumping and irrigation, cathodic protection, remote villages and homes, and land-based navigation aids. Its 36 series-connected cells charge 12V batteries efficiently in virtually any climate.

Proven Materials and Construction

BP Solar's quarter-century of field experience shows in every aspect of this module's construction and materials:

- Frame strength exceeds requirements of certifying agencies;
- 36 monocrystalline silicon solar cells configured as one 36-cell string (bypass diodes included);
- Cells are laminated between sheets of ethylene vinyl acetate (EVA) and high-transmissivity low-iron 3 mm tempered glass.

Clear Anodized Universal Frame

Limited Warranties

- Power output for 20 years;
- Freedom from defects in materials and workmanship for 1 year.

See our website or your local representative for full terms of these warranties.

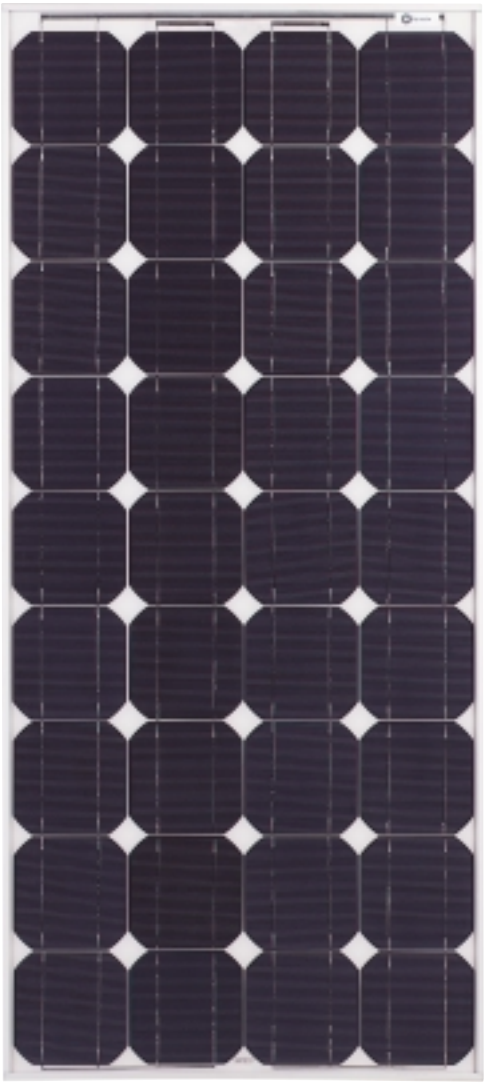
High-Capacity Versatile Junction Box

The junction box is raintight (IP54 rated) and accepts PG13.5 or 1/2" nominal conduit or cable fittings. Its volume (411cc, 25 cubic inches) and 6-terminal connection block enable most system array connections (putting modules in series or parallel) to be made right in the junction box. Options include:

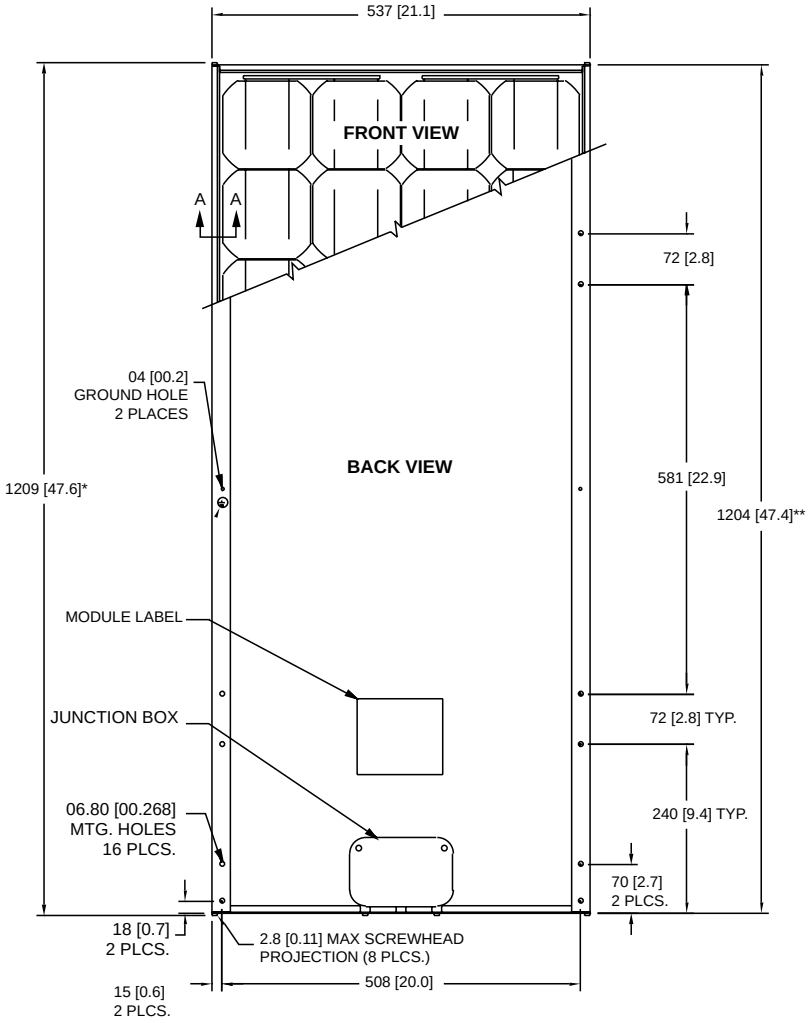
- oversize terminal block which accepts conductors up to 25mm^2 (AWG #4); standard terminals accept up to 6mm^2 (AWG #10);
- Solarstate™ charge regulator.

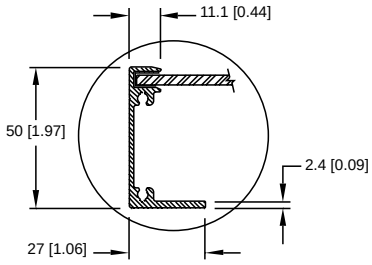
Quality and Safety

- Manufactured in ISO 9001-certified factories;
- Listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating);
- Certified by TÜV Rheinland as Class II equipment for use in systems with voltage up to 1000VDC;
- Compliant with the requirements of IEC 61215, including:
  - repetitive cycling between -40°C and 85°C at 85% relative humidity;
  - simulated impact of 25 mm (one-inch) hail at terminal velocity;
  - a "damp heat" test, consisting of 1000 hours of exposure to 85°C and 85% relative humidity;
  - a "hot-spot" test, which determines a module's ability to tolerate localized shadowing (which can cause reverse-biased operation and localized heating);
  - static loading, front and back, of 2400 pascals (50 psf); front loading (e.g. snow) of 5400 pascals (113 psf).

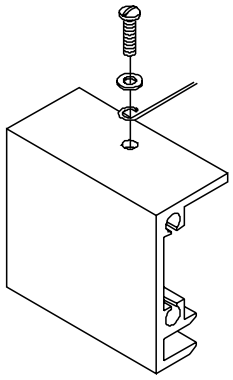


BP 275U





SECTION A-A
SECTION A-A SHOWN
WITHOUT END FRAMES



GROUNDING DETAIL

BP 270U, BP 275U

* includes screw head projection on each end.
** does not include screw head projection.

Dimensions

Unbracketed dimensions are in millimeters.Dimensions in brackets are in inches. Overall tolerances ±3mm (1/8")

Mechanical Characteristics

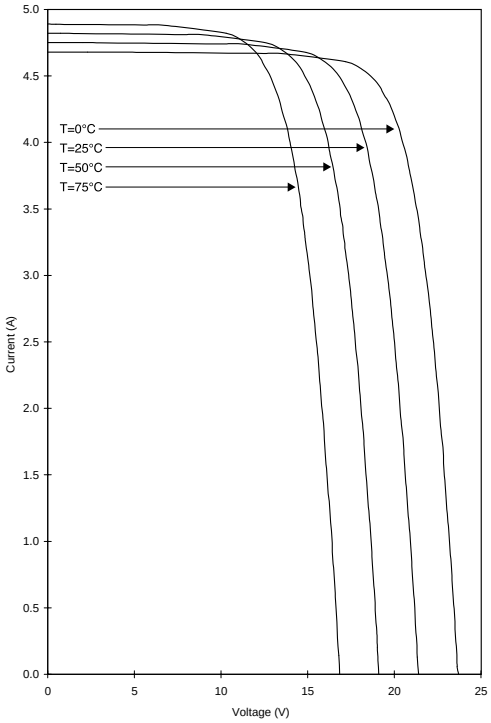
	Weight
BP 275U	7.7 kg (17 pounds)

Typical Electrical Characteristics[1]	BP 270U	BP 275U
Maximum Power (P_{max})[4]	70W	75W
Voltage at P_{max} (V_{mp})	17.0V	17.0V
Current at P_{max} (I_{mp})	4.16A	4.45A
Warranted minimum P_{max}	65W	70W
Short-circuit current (I_{sc})	4.48A	4.75A
Open-circuit voltage (V_{oc})	21.4V	21.4V
Maximum System Voltage[2]	600V	
Temperature coefficient of I_{sc}	(0.065±0.015)%/°C	
Temperature coefficient of V_{oc}	-(80±10)mV/°C	
Temperature coefficient of power	-(0.5±0.05)%/°C	
NOCT[3]	47±2°C	

Notes

1. These data represent the performance of typical BP 270U and BP 275U modules as measured at their output terminals. The data are based on measurements made in accordance with ASTM E1036-85 corrected to SRC (Standard Reporting Conditions, also known as STC or Standard Test Conditions), which are:
   - illumination of 1 kW/m² (1 sun) at spectral distribution of AM 1.5 (ASTM E892-87 global spectral irradiance);
   - cell temperature of 25°C.
2. U.S. NEC rating.
3. The cells in an illuminated module operate hotter than the ambient temperature. NOCT (Nominal Operating Cell Temperature) is an indicator of this temperature differential, and is the cell temperature under Standard Operating Conditions: ambient temperature of 20°C, solar irradiation of 0.8 kW/m², and wind speed of 1 m/s.
4. During the stabilization process which occurs during the first few months of deployment, module power may decrease approximately 3% from typical Pmax.

BP 275U I-V Curves



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This publication summarizes product specifications and warranty. For details of construction, performance, and warranty, see our website **www.bpsolar.com** or contact your local representative. Specifications subject to change without notice.

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BP Solar uses recycled and recyclable materials in its operation to the fullest extent.