

## Certified Systems

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## Important Note:

The Certified Systems listed on this page are complete PV system packages submitted for review by the listed company.

Assembly of similar components, without approved documentation, does not constitute an approved system.

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<b>FSEC Certification Number</b>	<b>System Designation</b>	<b>Modules</b>	<b>Inverter</b>	<b>Battery</b>	<b>Array DC Rating at STC</b>
SO-09-0101A	Sol-Gen UT5900BS	BP Solar 175B	SMA SunnyBoy 6000US	N/A	7000 W
<b>SO-09-0102A</b>	<b>UT2950BF</b>	<b>BP Solar BP175B</b>	<b>Fronius IG Plus 3.8-1 uni</b>	N/A	<b>3500 W</b>
SO-09-0102B	UT3250BF	BP Solar BP175B	Fronius IG Plus 3.8-1 uni	N/A	3850 W
SO-09-0102C	UT3550BF	BP Solar BP175B	Fronius IG Plus 3.8-1 uni	N/A	4200 W
SO-09-0103A	UT6700AF	Evergreen Solar ES-A-205-fa2	Fronius IG Plus 7.5-1 uni	N/A	7790 W
SO-09-0103B	UT7100AF	Evergreen Solar ES-A-205-fa2	Fronius IG Plus 7.5-1 uni	N/A	8200 W

High-efficiency photovoltaic module using silicon nitride multicrystalline silicon cells.

### Performance

Rated power ( $P_{max}$ )	175W
Power tolerance	± 5%
Nominal voltage	24V
Limited Warranty <sup>1</sup>	25 years

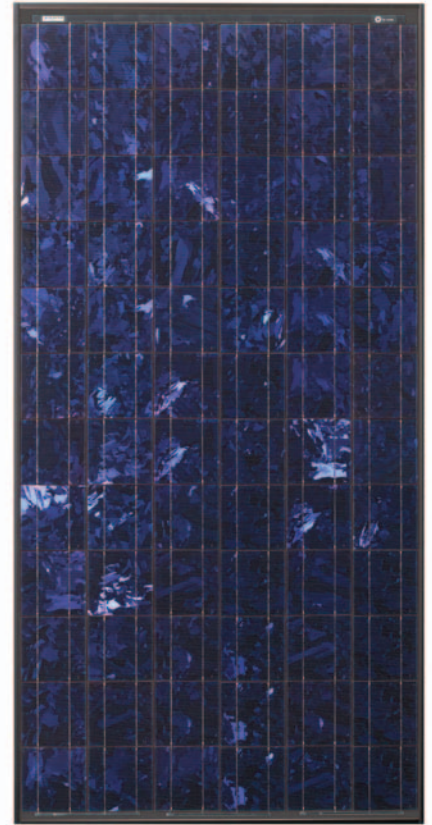
### Configuration

BP 175B	Bronze frame with output cables and polarized Multicontact (MC) connectors
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### Electrical Characteristics<sup>2</sup>

#### BP175B

Maximum power ( $P_{max}$ ) <sup>3</sup>	175W
Voltage at Pmax ( $V_{mp}$ )	35.8V
Current at Pmax ( $I_{mp}$ )	4.9A
Warranted minimum $P_{max}$	166.3W
Short-circuit current ( $I_{sc}$ )	5.4A
Open-circuit voltage ( $V_{oc}$ )	44.2V
Temperature coefficient of $I_{sc}$	(0.065±0.015)%/ °C
Temperature coefficient of $V_{oc}$	-(160±20)mV/°C
Temperature coefficient of power	-(0.5±0.05)%/ °C
NOCT (Air 20°C; Sun 0.8kW/m <sup>2</sup> ; wind 1m/s)	47±2°C
Maximum series fuse rating	15A
Maximum system voltage	600V (U.S. NEC & IEC 61215 rating)



### Mechanical Characteristics

Dimensions      **Length:** 1593mm (62.8")    **Width:** 790mm (31.1")    Depth: 50mm (1.97")

**Weight**                      15.0 kg (33.1 pounds)

Solar Cells                      72 cells (125mm x 125mm) in a 6x12 matrix connected in series

Output Cables                      RHW AWG# 12 (4mm<sup>2</sup>) cable with polarized weatherproof DC rated Multicontact connectors; asymmetrical lengths - 1250mm (-) and 800mm (+)

Diodes                              **IntegraBus™** technology includes Schottky by-pass diodes integrated into the printed circuit board bus

Construction                      Front: High-transmission anti-reflective 3mm (1/8th inch) tempered glass; Back: Gray Charcoal Tedlar; Encapsulant: EVA

Frame                                Anodized aluminum alloy type 6063T6 Universal frame; Color: Bronze

1. Warranty: Power output for 25 years. Freedom from defects in materials and workmanship for 5 years. See our website or your local representative for full terms of these warranties.
2. These data represent the performance of typical BP 175B products, and are based on measurements made in accordance with ASTM E1036 corrected to SRC (STC.)
3. During the stabilization process that occurs during the first few months of deployment, module power may decrease by up to 1% from typical  $P_{max}$ .

## Quality and Safety

**ESTI**

Module power measurements calibrated to World Radiometric Reference through ESTI (European Solar Test Installation at Ispra, Italy); Certified to IEC 61215



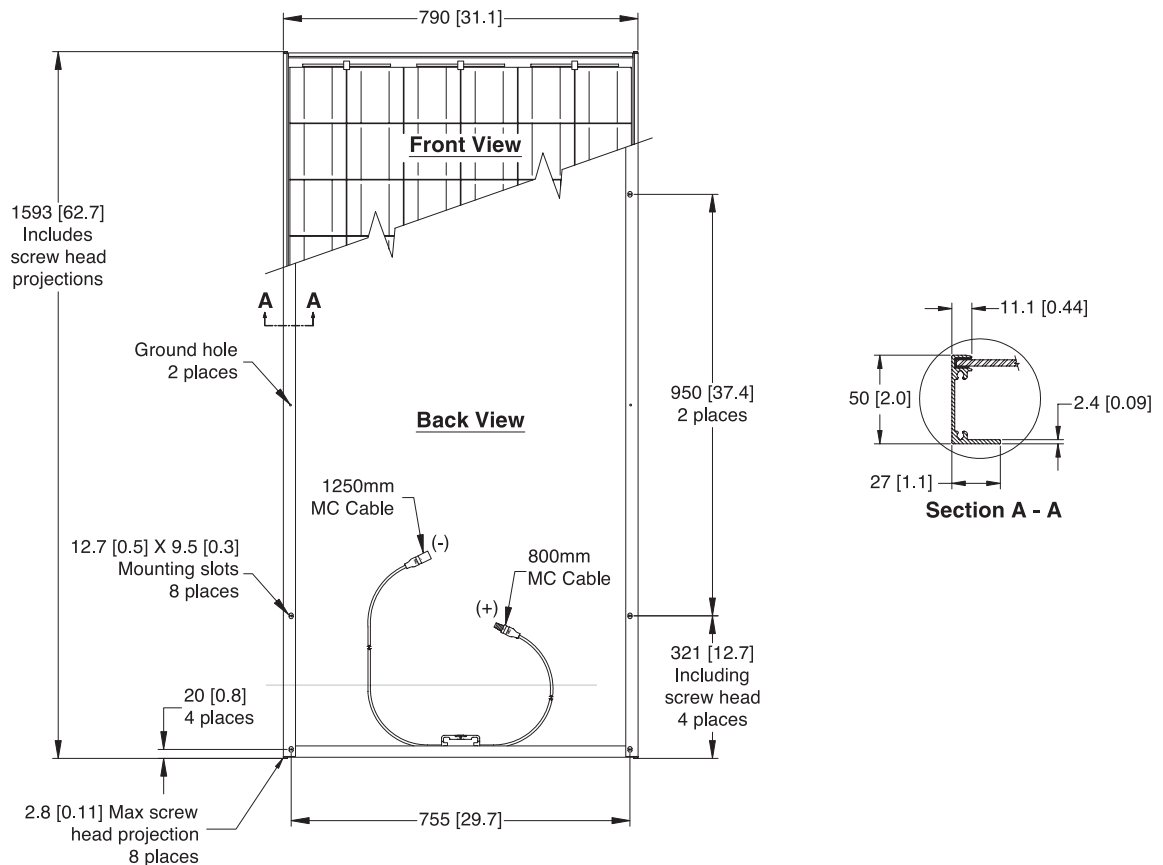
Listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating)

## Qualification Test Parameters

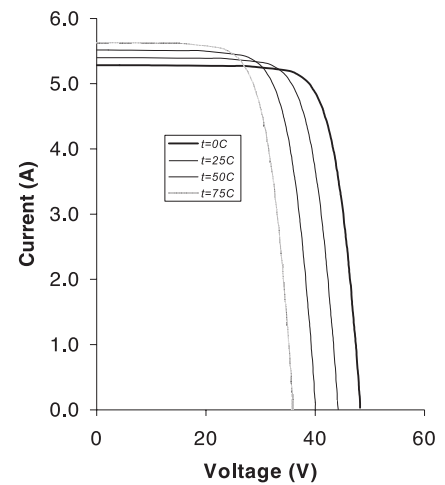
Temperature cycling range	-40°C to +85°C (-40°F to 185°F)
Humidity freeze, damp heat	85% RH
Static load front and back (e.g. wind)	50psf (2400 pascals)
Front loading (e.g. snow)	113psf (5400 pascals)
Hailstone impact	25mm (1 inch) at 23 m/s (52mph)

## Module Diagram

Dimensions in brackets are in inches. Unbracketed dimensions are in millimeters. Overall tolerances  $\pm 3\text{mm}$  (1/8")



## BP 175B I-V Curves



**Included with each module:** self-tapping grounding screws, instruction sheet, and warranty document.

**Note:** This publication summarizes product warranty and specifications, which are subject to change without notice. Additional information may be found on our web site: [www.bpsolar.us](http://www.bpsolar.us)

Contractor's Name Solar-r-Us Job Address 1234 Abc Street

Municipality Fort Lauderdale County Broward State Florida

New Roof (requires separate roof permit) Re-Roof (requires separate roof permit) Existing Roof

Roof Slope (in/ft) 3/12 Roof Mean Height (ft) 12



Roof Type Dimensional Asphalt Shingles Roof Deck 5/8" Plywood Sheathing

Structural Support Type 2" x 4" Trusses Support Spacing (ft) 24" o/c

Solar Array Photo-Voltaic Solar

Is the Solar Array to be mounted on defined, permitted roof structure? YES NO

Companies with Florida Solar Energy Center System Certifications Solar Depot, LLC.

Florida Solar Energy Center System Certification (FSEC) Number SO-09-0102A

FSEC Module BP SOLAR BP175B FSEC Inverter FRONIUS IG PLUS 3.8-1 uni

Roof Top Location of the Solar Modules

P(1) Field of Roof Solar Modules Shall Not Be Installed in the Corners P(3) of any Roof or Roof Sections P(2) Perimeter of Roof

Perimeter Width (ft) For Simple Roof Shapes 3 Use the lessor of the 2 values below or a minimum of 3' .1 x w (Width of least horizontal dimension) or .4 x h (Roof Mean Height)

Wind Exposure Category per ASCE-10 Exposure C Exposure D

Calculated Roof Uplift Pressures

Calculated P(1) pressure (psf) Calculated P(2) pressure (psf)

Prescriptive Steep Slope Roof Uplift Pressures per RAS-127 1

P (1) Exp C Mean Height <= 20' = -39.1 psf P (2) Pressures N/A

Solar Module Pressure Rating (psf) 50 psf

Pressure Ratings for the Solar Module can be found in the Manufacturer's Data Sheet.



Roof Top Solar Array Mounting Information

Is the Solar Array Installed Parallel to the Roof Surface?  Yes  No

Solar Array Mounting System Manufacturer

Support Rail Attachment to Roof

Support Mount Height

Fasteners per Mount

Roof Mount Spacing Field P (1) (in/oc)

Roof Mount Spacing Perimeter P (2) (in/oc)

\*Roof Mount Fastener Type

\* Minimum 2.5" Embedment, Pilot Hole Required

a. Solar Module Size {l x w} (in)

b. Module Area (ft<sup>2</sup>)

c. Total Installed Modules

d. Total Area of Installed Modules {b x c} (ft<sup>2</sup>)

e. Solar Module Weight (lbs)

f. Solar Module & Rack System Weight (lbs.)

g. \* Distributed Weight of the Solar Array on Roof {f ÷ d} (lbs/ft<sup>2</sup>)

\* The distributed weight of the complete solar array shall be less than 5 lb/ft<sup>2</sup>

h. Total Number of Attachment Points (Roof Mounts)

i. \* Gravity Load per Attachment Point {f ÷ h} (lbs)

\* Load per attachment point shall be less than 45 lbs

Support Rails in Field of Roof

Support Rails in Perimeter of the Roof

Solar Array Height Above Finished Roof

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