

BP Solar's SX series provides cost-effective photovoltaic power for general use, operating DC loads directly or, in an inverter-equipped system, AC loads. The SX 150 is one of the largest products in this series, providing 150 watts of nominal maximum power. With 72 cells in series, it charges 24V batteries (or multiples of 24V) efficiently in virtually any climate. It is used primarily in utility grid-supplemental systems, telecommunications, remote villages and clinics, pumping, and land-based aids to navigation. Electrical output is via cables terminated with installation-speeding polarized connectors.

This product is available as the SX 150S module, with a clear anodized frame; and as a frameless laminate, the SX 150L.

Proven Materials and Construction

BP Solar's quarter-century of field experience shows in every aspect of SX 150 construction and materials:

- 72 multicrystalline silicon solar cells in series;
- Polarized weatherproof DC-rated plug-and-socket connectors provide reliable low-resistance connections, eliminate wiring errors, and speed installation;
- SX 150S frame strength exceeds requirements of certifying agencies;
- Cells are laminated between sheets of ethylene vinyl acetate (EVA) and high-transmissivity low-iron 3mm tempered glass.



DC Connectors

Limited Warranties

- Power output for 20 years;
- Freedom from defects in materials and workmanship for 2 years.

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



Clear-Anodized Universal Frame

Quality and Safety

- Manufactured in ISO 9001-certified factories;
- SX 150S is listed by Underwriter's Laboratories for electrical and fire safety (Class C fire rating);
- SX 150S is certified by TÜV Rheinland as Class II equipment and for use in systems with voltage up to 1000 VDC;
- SX 150S complies with the requirements of IEC 61215, including:
 - repetitive cycling between -40°C and 85°C at 85% relative humidity;
 - simulated impact of 25mm (one-inch) hail at terminal velocity;
 - 2200 VDC frame/cell string isolation test;
 - static loading, front and back, of 2400 pascals (50 psf); front loading (e.g. snow) of 5400 pascals (113 psf).



BP SX 150S



Mechanical Characteristics

Weight

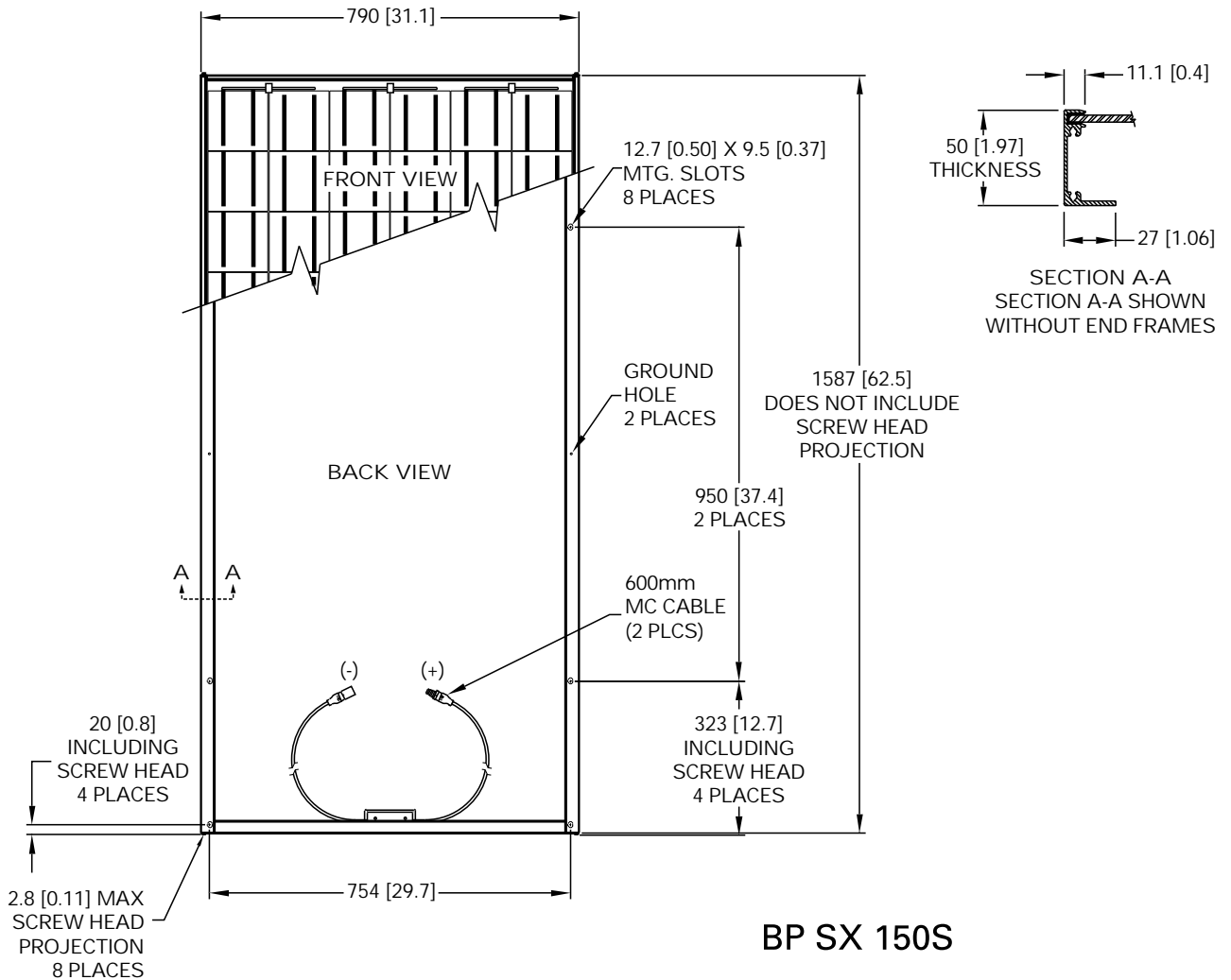
SX 150S 15.0 kg (33.1 pounds)
 SX 150L 12.4 kg (27.3 pounds)

Dimensions

SX 150S: See drawing
 SX 150L: 1580(62.2) x 783(30.8) x 19(0.75)
 Dimensions in brackets are in inches.
 Unbracketed dimensions are in millimeters
 Overall tolerances $\pm 3\text{mm}$ (1/8")

Output

600mm long RHW, AWG #12 (4mm²) 2-conductor
 cable with weatherproof polarized connectors



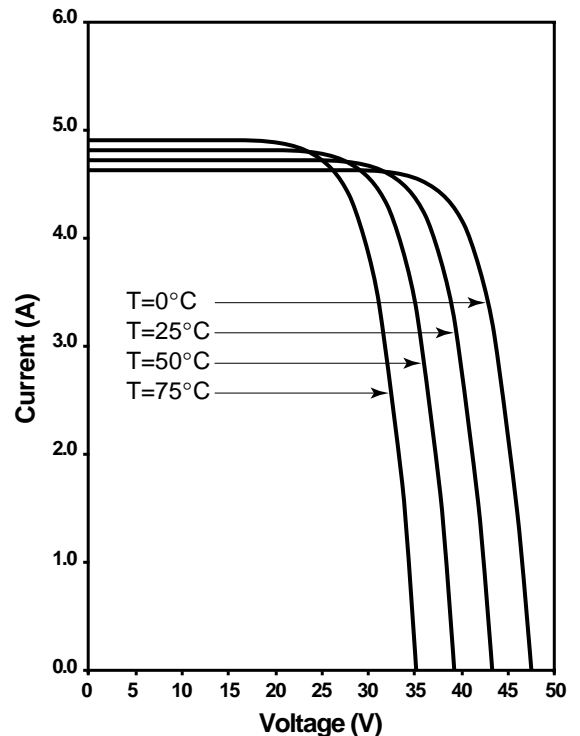
Electrical Characteristics¹

	SX 150	SX 140 ²
Maximum power (P_{\max}) ³	150W	140W
Voltage at P_{\max} (V_{mp})	34.5V	34.0V
Current at P_{\max} (I_{mp})	4.35A	4.11A
Warranted minimum P_{\max}	140W	130W
Short-circuit current (I_{SC})	4.75A	4.5A
Open-circuit voltage (V_{OC})	43.5V	42.8V
Maximum system voltage ⁴	600V	
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 ⁵	47±2°C	

Notes

1. These data represent the performance of typical SX 150 and SX 140 modules and laminates as measured at their output connectors. The data are based on measurements made in accordance with ASTM E1036 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 global spectral irradiance);
 - cell temperature of 25°C.
2. The power of solar cells varies in the normal course of production; the SX 140 is assembled using cells of slightly lower power than the SX 150.
3. During the stabilization process which occurs during the first few months of deployment, module power may decrease approximately 3% from typical P_{\max} .
4. U.S. NEC rating.
5. 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 1m/s.

BP SX 150 I-V Curves





bp solar

This publication summarizes product warranty and specifications, which are subject to change without notice and should not be used as the definitive source of information for final system design. Additional warranty and technical information may be found on our website www.bpsolar.com or may be obtained from your local representative.



Printed on recycled paper with vegetable based inks.