

Polycrystalline Silicon Photovoltaic Module

The PowerGlaz[®] SMT 6 (54)P photovoltaic module series has 54 enhanced-efficiency Polycrystalline silicon cells in series. With up to 200 watts of nominal maximum power, it is well-suited to utility grid-supplemental systems and traditional applications of photovoltaics such as telecommunications, remote villages and clinics, water pumping, and land-based aids to navigation.

Materials

Romag has used its extensive glass processing experience to produce the high quality PowerGlaz[®] SMT 6 (54)P photovoltaic modules using the latest materials. Textured low iron glass is used as the outer component of the laminate to maximize the light transmission to the cells. 54 Polycrystalline cells are connected in series and encapsulated in EVA bonded to the glass sheet. A final layer of Tedlar is laminated to the rear of the module to complete the weather protection. Lead free materials and components are used throughout the manufacture.

Quality

- ◆ TUV approval to IEC 61215 ed 2 / IEC 61730 pending
- ◆ Certified as Class II equipment for use in systems up to 1000 VDC
- ◆ Our factory is subject to periodic inspection by TUV.
- ◆ These products are manufactured in our ISO 9000-certified factory to demanding specifications
- ◆ 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)

Advantages

- ◆ High power module manufactured using Polycrystalline cells
- ◆ Textured low iron glass to maximize light transmission to the cells
- ◆ Bypass diodes to counteract shading effects
- ◆ Junction box and connectors to enable quick and easy site connection
- ◆ Sturdy Aluminium frame
- ◆ 54 high performance Polycrystalline cells in series

Limited Warranties

- ◆ 80 % Power output for 25 years
- ◆ Freedom from defects in materials and workmanship for 2 years.

Mechanical Characteristics

Weight:	19 Kg
Dimensions:	1482 x 994 x 46mm
Overall tolerances	±3mm

SMT 6 (54)P

PowerGlaz® SMT 6 (54)P Electrical Characteristics

SMT 6 (54)P Module Grade	654220	660215	660210	660205	660200	660195
Maximum power (P_{max}) ₂	200W	195W	190W	185W	180W	175W
Voltage at Pmax (V_{mp})	26.73V	26.24V	25.68V	25.17V	24.59V	24.00V
Current at Pmax (I_{mp})	7.48A	7.43A	7.40A	7.35A	7.32A	7.29A
Short-circuit current (I_{sc})	8.00A	7.95A	7.90A	7.85A	7.80A	7.75A
Open-circuit voltage (V_{oc})	33.16V	32.83V	32.62V	32.50V	32.44V	32.35V

Module Temperature Coefficients

Isc 2.3mA/K

Voc -114mV/K

Power - 0.43%/K

Notes

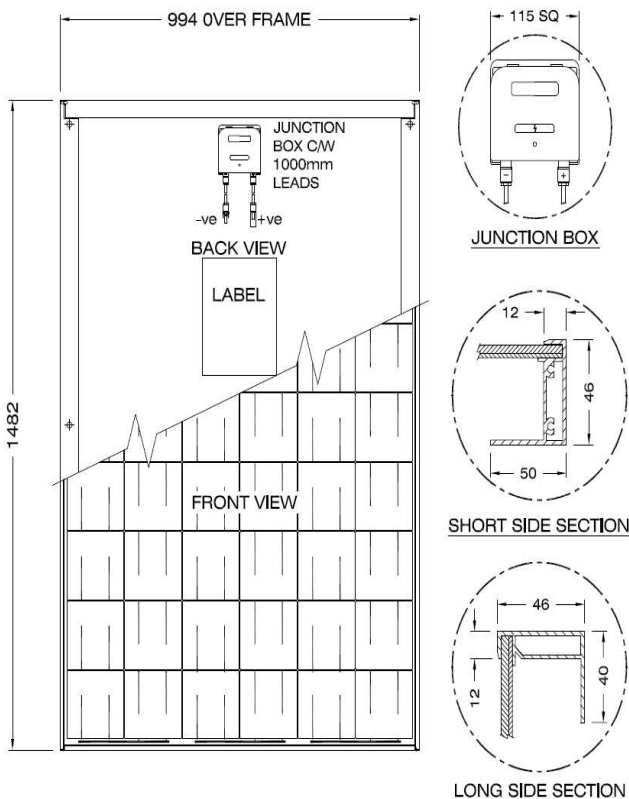
1. This data represents the performance of typical PowerGlaz®SMT 6 (54)P modules and laminates as measured at their output connectors. The data are based on measurements made in accordance with ASTM E1036 corrected to SRC (Standard Reporting Conditions, also known as STC or Standard Test Conditions), which are:

- illumination of 1 kW/m², (1 sun) at spectral distribution of AM1.5 (ASTM E892 global spectral irradiance);
- cell temperature of 25°C.

The power of solar cells varies in the normal course of production; specifications of these products reflect that variation.

2. During the stabilization process which occurs during the first few months of deployment, module power may decrease approximately 3% from typical Pmax.

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 1m/s.



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This publication summarizes product warranty and specifications, which are subject to change without notice and should not be used as the definitive