Powerglaz® SMT 5(36)M

Romag Ltd

Monocrystalline Silicon Photovoltaic Modules

The PowerGlaz® SMT 5(36)M photovoltaic module series has 36 enhanced-efficiency Monocrystalline silicon cells in series. With 80 to 85 watts of nominal maximum power, it is well-suited to utility grid-supplemental systems, in roof and on roof PV systems and also grid independent systems.

Romag has used its extensive glass processing experience to produce the high quality PowerGlaz® SMT 5(36)M 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. 36 Monocrystalline cells are connected in series and encapsulated in EVA bonded to the glass sheet. A final backing layer is laminated to the rear of the module to complete the weather protection. Lead free materials and components are used throughout the manufacture.

Mechanical Characteristics

Weight:	9 Kg
Dimensions:	1197 x 530 x 4mm
Overall tolerances	±3mm

Warranty

- 80 % Power output for 25 years
- Freedom from defects in materials and workmanship for 5 years.

Quality

- Manufactured to the requirements of IEC 61215 ed 2 / Class II
- Suitable use in systems up to 1000 VDC
- Static loading, front and back, of 2400 pascals.
- These products are manufactured in our ISO 9000-certified factory to demanding specifications.
- Factory is subject to periodic inspection by TUV.
- 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;

Advantages

- High power module manufactured using Monocrystalline cells and black Tedlar. (Available with white Tedlar as option)
- Tyco Junction box and connectors to enable quick and easy site connection (Available with MC as option)
- Frameless Module (Available as a framed module if required)
- Lead Free materials used throughout.
- Textured low iron glass to maximize light transmission to the cells
- Bypass diodes to counteract shading effects

Electrical Characteristics

SMT 5 (36)M Module Grade		53680
Maximum power (Pmax)2		83Wp
Voltage at Pmax (V_{mp})		18.1V
Current at Pmax (Imp)		4.6A
Short-circuit current (I_{sc})		5.0A
Open-circuit voltage (Voc)		22.5V

Rated power may vary by +/-3% from the above

Temperature Coefficients

Isc 3.5mA/K Voc -70mV/K
Power - 0.41%/K

1. This data represents the performance of typical PowerGlaz® SMT 5(36)M 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/m^{2}2, (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/m^{2}2, and wind speed of 1m/s.

August 2008

Romag
GLASS SPECIALIST

Leadgate Industrial Estate
Leadgate
Consett
Co. Durham
DH8 7RS
UK

Phone: +44 (0) 1207 5000000
Fax: +44(0) 1207 591979
E-mail: info@romag.co.uk
www.powerglaz.co.uk