

## Model: PVL-144

- High Temperature and Low Light Performance
- 5-Year Limited Product Warranty
- Limited Power Output Warranty
- 92% at 10 years, 84% at 20 years, 80% at 25 years (of minimum power)
- Quick -Connect Terminals and Adhesive Backing
- Bypass Diodes for Shadow Tolerance



### Performance Characteristics

Rated Power(Pmax): 144Wp  
 Production Pmax Tolerance:  $\pm 10\%$   
 Maximum Power Voltage(V): 35.2V  
 Maximum Power Current(A): 4.09A  
 Open Circuit Voltage(V): 48.4V  
 Short Circuit Current(A): 5.1A  
 Maximum System Voltage IEC/UL(V): 1000/600

### Construction Characteristics

Dimension: Length 5392mm, Width: 378mm, Depth: 2.5mm  
 Weight(without adhesive): 4.80KG  
 Weight(with adhesive): 5.7KG  
 Cables: AmphenolH4/ TYCO / MC4 Compatible  
 Bypass Diodes: Connected across every solar cell  
 Encapsulation: Durable ETFE high light-transmissive polymer  
 Adhesive: Ethylene propylene copolymer adhesive sealant with microbial inhibitor  
 Cell Type: 22 Triple junction amorphous silicon solar cells connected in series

### Certificate: CE

### Laminate Standard Configuration

Photovoltaic laminate with potted terminal housing assembly with output cables and quick-connect terminals on top.

### Application Criteria

- Installation temperature between 10°C - 40°C
- Maximum roof temperature 85°C
- Minimum slope: 3°
- Maximum slope 60°
- Approved substrates include certain membrane and metal roofing products:
  - TPO membranes
  - Modified Bitumen
  - Coated Steels, PVDF, SMP, Polyseter, Acrylic, Galvalume Plus, Galvaneal
  - EPDM membranes
  - Polycarbonate
  - Other Materials, including Multiple RV Backsheets, PVDF film(kynar), Tefzel, Glass, Stainless steel, Noryl, Lexan, Xyron, Fiberglass reinforced plastics, Aluminum

TECHNICAL DATA SHEET



Flexible



Lightweight



No-Glass



Durable



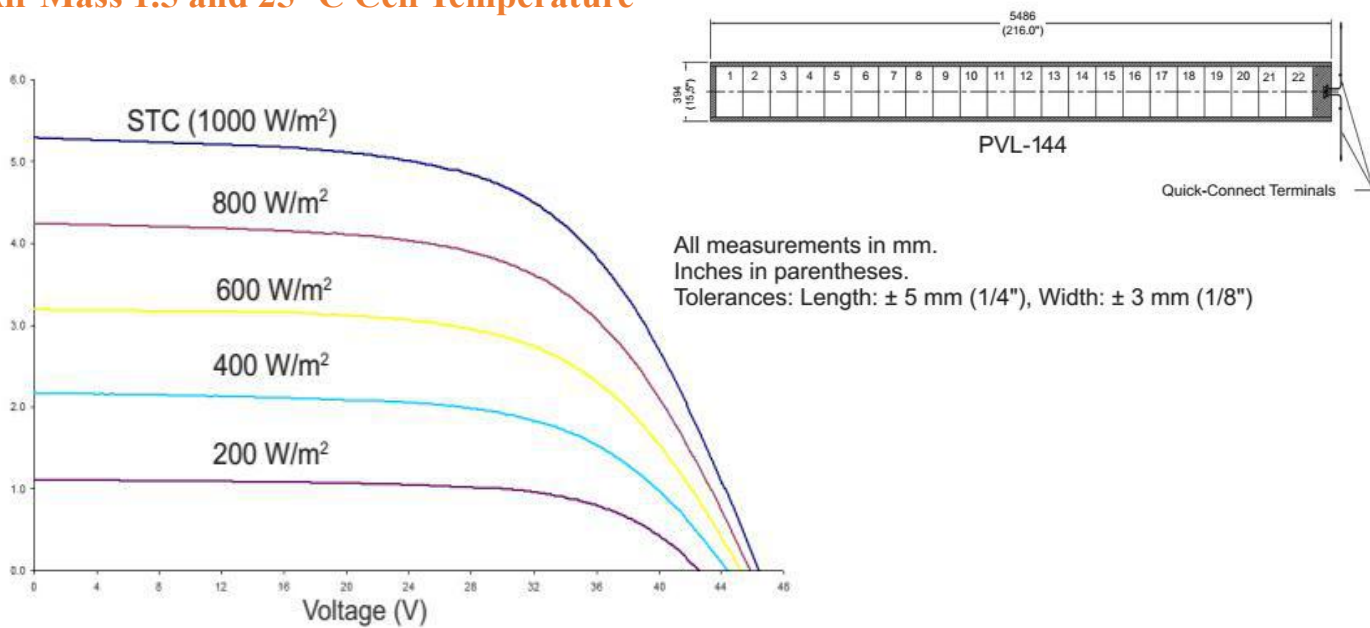
Shadow Tolerant



High Temp Performance

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### IV Curves at various Levels of Irradiance at Air Mass 1.5 and 25 °C Cell Temperature



### Temperature Coefficients

(at AM 1.5, 1000 W/m2 irradiance)

Temperature Coefficient (TC) of Isc: 0.001/° K (0.10%/° C)

Temperature Coefficient (TC) of Voc: -0.0038/° K (-0.38%/° C)

Temperature Coefficient (TC) of Pmax: 0.0021/° K (-0.21%/° C)

Temperature Coefficient (TC) of Imp: 0.001/° K (0.10%/° C)

Temperature Coefficient (TC) of Vmp: -0.0031/° K (-0.31%/° C)

$$y = y_{reference} \cdot [1 + TC \cdot (T - T_{reference})]$$

### Notes:

1. During the first 8-10 weeks of operation, electrical output exceeds specified ratings. Power output may be higher by 15 %, operating voltage may be higher by 11 % and operating current may be higher by 4 %.
2. Electrical specifications are based on measurements performed at standard test conditions of 1000 W/m2 irradiance, Air Mass 1.5, and cell temperature of 25 ° C after stabilization.
3. Actual performance may vary up to 10 % from rated power due to low temperature operation, spectral and other related effects. Maximum system open-circuit voltage not to exceed 600 VDC per UL.
4. Specifications subject to change without notice.



**SINOLTECH**

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