It Pays To Be Flexible
Building on 25 years of solar experience, the new, enhanced version of our proven PVL delivers greater efficiency, packing density and ease of installation, resulting in a lower cost of electricity than ever before.

Key Attributes
- Lightweight and flexible
- Roof-friendly solution requiring no penetrations
- BIPV & BAPV
- Superior performance at high temperatures
- Excellent performance even when partially shaded
- Built-in strain relief reduces installation labor and improves reliability
- Polarized, latching connectors
- Lead-free RoHS compliant design

Performance Characteristics
Rated Power (Pmax): 144, 136 or 68 Wp
Tolerance of Pmax: ±5%

Mechanical Characteristics
Junction Box: IP66 terminal housing with integrated strain relief
Connectors: Polarized, weatherproof latching connectors with 4 mm² (12 AWG) halogen-free cables
Bypass Diodes: Connected across every solar cell
Front Surface: Durable ETFE high light-transmissive polymer
Adhesive: Peel and stick pressure sensitive adhesive (PSA)
Cell Type: Multi-junction amorphous silicon solar cells 356 mm x 239 mm (14" x 9.4")

Certifications and Warranty
- UL 1703 Listed by Underwriters Laboratories® for electrical and fire safety (Class A Max. Slope 2/12, Class B Max. Slope 3/12, Class C Unlimited Slope fire ratings) for use in systems up to 600 VDC
- IEC 61646 and IEC 61730 certified by TÜV Rheinland for use in Class A PV systems up to 1000 VDC
- MCS Certified
- CEC Listed

5-Year Limited Product Warranty
Limited Power Output Warranty: 92% at 10 years, 84% at 20 years, 80% at 25 years (of minimum power)

Application Criteria*
Suitable for installation on clean, dry approved substrates (refer to uni-solar.com for full details) at ambient temperatures above 10°C

Roof Requirements
Maximum slope of 60°
Install in areas free of water pooling

*Refer to United Solar’s installation manuals for further application criteria

Global Contact Information

Global Headquarters
Auburn Hills, MI USA
info@uni-solar.com
1.248.293.0440

European Headquarters
Paris, France
franceinfo@uni-solar.com
+33.1.74.70.46.24

German Sales Office
Mainz
europeinfo@uni-solar.com
+49.6131.240.40.400

Italian Sales Office
Verona
italyinfo@uni-solar.com
+39.045.8600982
Electrical Performance at Standard Test Conditions (STC) (1000 W/m², AM 1.5, 25°C Cell Temperature)

<table>
<thead>
<tr>
<th></th>
<th>ePVL-144</th>
<th>ePVL-136</th>
<th>ePVL-68</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power (P_{max})</td>
<td>144 W</td>
<td>136 W</td>
<td>68 W</td>
</tr>
<tr>
<td>Voltage at Pmax (V_{mp})</td>
<td>33.0 V</td>
<td>33.0 V</td>
<td>16.5 V</td>
</tr>
<tr>
<td>Current at Pmax (I_{mp})</td>
<td>4.4 A</td>
<td>4.1 A</td>
<td>4.1 A</td>
</tr>
<tr>
<td>Short-circuit Current (I_{sc})</td>
<td>5.3 A</td>
<td>5.1 A</td>
<td>5.1 A</td>
</tr>
<tr>
<td>Open-circuit Voltage (V_{oc})</td>
<td>46.2 V</td>
<td>46.2 V</td>
<td>23.1 V</td>
</tr>
<tr>
<td>Maximum Series Fuse Rating</td>
<td>10 A</td>
<td>10 A</td>
<td>10 A</td>
</tr>
<tr>
<td>Limiting Reverse Current</td>
<td>10 A</td>
<td>10 A</td>
<td>10 A</td>
</tr>
</tbody>
</table>

Temperature Coefficients (TC)* (at AM 1.5, 1000 W/m² irradiance)

| TC of I_{sc}   | 0.0010/K (-0.10%/°C) |
| TC of V_{oc}   | -0.0038/K (-0.38%/°C) |
| TC of P_{max}  | -0.0021/K (-0.21%/°C) |
| TC of I_{mp}   | 0.0010/K (0.10%/°C)   |
| TC of V_{mp}   | -0.0031/K (-0.31%/°C) |

Physical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>ePVL-136</th>
<th>ePVL-144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length:</td>
<td>5412 mm (213.1&quot;)</td>
<td>2771 mm (109.1&quot;)</td>
</tr>
<tr>
<td>Width:</td>
<td>373 mm (14.69&quot;)</td>
<td>373 mm (14.69&quot;)</td>
</tr>
<tr>
<td>Laminate Thickness:</td>
<td>3 mm (.12&quot;)</td>
<td>3 mm (.12&quot;)</td>
</tr>
<tr>
<td>Overall Thickness: (including adhesive and terminal housing)</td>
<td>21 mm (.83&quot;)</td>
<td>21 mm (.83&quot;)</td>
</tr>
<tr>
<td>Weight:</td>
<td>7.4 kg (16.2 lbs)</td>
<td>3.9 kg (8.5 lbs)</td>
</tr>
<tr>
<td>Number of Cells:</td>
<td>22 (n)</td>
<td>11 (n)</td>
</tr>
</tbody>
</table>

Tolerances: Length: ± 5 mm (¼"), Width: ± 5 mm (¼")

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

To learn more about PowerBond and other UNI-SOLAR products, please call 1.800.528.0617 or visit uni-solar.com.

United Solar is a proud member of PV Cycle, an association that promotes the environmentally responsible collection and recycling of PV laminates and the protection of our climate and the environment by encouraging increased use and sustainability of PV technology. To learn more, please visit pvcycle.org.

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