Ulica Solar is a subsidiary of Shanshan Co., Ltd (SH.600884), Top 500 Enterprise in China. Ulica designs and manufactures high-quality solar cells and panels starting from August 2005. Its product line covers both mono and poly crystalline models, suitable for full range of projects from off-grid to on-grid, from residential to commercial.

**Half-Cell Module**
Reduced resistance between cells
Less micro cracks, higher output power

**Positive power tolerance (0--+5W)**

**Outstanding mechanical load resistance**
3800 Pa wind load, 5400 Pa snow load

**High performance under low light**
Works at cloudy, rainy days

**Anti-PID (potential induced degradation)**
Passed anti-PID test under 85% damp heat, 85% relative humidity for 96 hours

**TÜV**
Passed salt mist corrosion test, ammonia corrosion test, dust & sand test, fire test, all certified by TÜV

**Double electroluminescence (EL) tests**
Carefully inspected before and after lamination to guarantee fault-free modules

**World famous insurance**
CHUBB(USA), Solar Insurance & Finance (Netherlands)

12-year product warranty
25-year linear power warranty
### ELECTRICAL PERFORMANCE

**Electrical Parameters Standard Test Conditions**

<table>
<thead>
<tr>
<th>Module Type</th>
<th>UL 340P-144</th>
<th>UL 345P-144</th>
<th>UL 350P-144</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Output $P_{max}$ W</td>
<td>340</td>
<td>345</td>
<td>350</td>
</tr>
<tr>
<td>Power Tolerance $\Delta P_{max}$ W</td>
<td>0/+5W</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Module Efficiency $n_m %$</td>
<td>17.14</td>
<td>17.39</td>
<td>17.64</td>
</tr>
<tr>
<td>Voltage at $P_{max}$ $V_m$ V</td>
<td>37.4</td>
<td>37.6</td>
<td>37.8</td>
</tr>
<tr>
<td>Current at $P_{max}$ $I_{sc}$ A</td>
<td>9.09</td>
<td>9.18</td>
<td>9.28</td>
</tr>
<tr>
<td>Open-Circuit Voltage $V_{oc}$ V</td>
<td>48.4</td>
<td>46.8</td>
<td>46.8</td>
</tr>
<tr>
<td>Short-Circuit Current $I_{sc}$ A</td>
<td>9.45</td>
<td>9.53</td>
<td>9.61</td>
</tr>
</tbody>
</table>

STC: 1000W/m² irradiance, 25°C module temperature, AM1.

### THERMAL CHARACTERISTICS

- Nominal Operating Cell Temperature (NOCT) °C: 45±2
- Temperature Coefficient of $P_{max}$ ($\gamma$) %/°C: -0.390
- Temperature Coefficient of $V_{oc}$ ($\beta_{Voc}$) %/°C: -0.230
- Temperature Coefficient of $I_{sc}$ ($\beta_{Isc}$) %/°C: -0.049

### OPERATING CONDITIONS

- Max. System Voltage: 1000V/1500V
- Max. Series Fuse Rating: 15A
- Operating Temperature Range: -40°C ~ 85°C
- Max static snow load: 5400Pa
- Max static wind load: 3800Pa
- Application Class: A

### CONSTRUCTION MATERIALS

- Front Cover (material/type/thickness): low-iron tempered glass/3.2mm
- Cell (quantity/material/type/dimension): 144 (poly-crystalline/150.7mm)
- Encapsulant (material): ethylene vinyl acetate (EVA)
- Frame (material/anodization color): anodized aluminum alloy/silver or black
- Junction Box (protection degree): IP67
- Cable (length/cross-sectional area): 400mm²/4mm²
- Plug Connector: M4 compatible

### GENERAL CHARACTERISTICS

- Dimension (L/W/H): 2000/992/40mm
- Weight: 22.5kg

### PACKING CONFIGURATION

- Pallet Size (L/W/H): 2040/1120/2460mm
- Pallet Weight: 1414kg
- Pieces per Pallet: 56pcs
- Pieces per Container: 616pcs

### INTERNATIONAL CERTIFICATES

- TÜV SÜD, TÜV NORD, UL, CE, JET, CEC
- MCS, CQC, IMERTO, NRE, KS
- ISO9001:2015
- ISO14001:2015
- BS OHSAS 18001:2007

Please read the instruction manual in this entirely before handing, installing, and operating Ulica Solar modules. Due to continuous innovation, research and improvement, the specification is subject to change without prior notice.

[Readers should be careful about the instructions provided in the document.]

Website: www.ulicasolar.com