Flexible PV Module

- **Light, Thin Design**
  1.4mm thickness, 4kg weight, leading level in PV industry

- **BIPV Application**
  Further integrate with buildings in terms of shape and installation for BIPV application

- **High Reliability**
  Conductive back sheet 2D encapsulation without soldering, resulted lower degradation under multiple extreme testing condition

- **Ultra Flexible**
  Ultra-thin silicon wafers with advanced organic polymer encapsulation materials, minimum bending radius reach 0.25m

- **High Efficiency**
  MWT back contact cell and modules with busbar-free design and higher efficiency

- **Lead Free**
  Eco-friendly PV design achieves Lead-free MWT module without soldering materials

MWT Back Contact Solar Cell

- New cell structure and different manufacturing process.
- No busbar on the front 3% less shadow and better use of sunlight.
- Effectively avoid the micro crack caused by the pressure between cell edge and ribbon.
- Compatible with other cell types including TOPCON, PERC, HIT, etc.

Comprehensive Qualifications & Certifications

- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupation Health Safety Management System
### Electrical Characteristics at Standard Test Conditions (STC)

<table>
<thead>
<tr>
<th>Spec/Model</th>
<th>Unit</th>
<th>SPP305M60S</th>
<th>SPP310M60S</th>
<th>SPP315M60S</th>
<th>SPP320M60S</th>
<th>SPP325M60S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max-Power (Pm)</td>
<td>W</td>
<td>305</td>
<td>310</td>
<td>315</td>
<td>320</td>
<td>325</td>
</tr>
<tr>
<td>Power Tolerance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0~±5</td>
<td></td>
</tr>
<tr>
<td>Max-Power Voltage (Vm)</td>
<td>V</td>
<td>32.6</td>
<td>32.8</td>
<td>33.0</td>
<td>33.2</td>
<td>33.4</td>
</tr>
<tr>
<td>Max-Power Current (Im)</td>
<td>A</td>
<td>9.36</td>
<td>9.45</td>
<td>9.55</td>
<td>9.64</td>
<td>9.73</td>
</tr>
<tr>
<td>Open-Circuit Voltage (Voc)</td>
<td>V</td>
<td>39.7</td>
<td>39.9</td>
<td>40.1</td>
<td>40.3</td>
<td>40.5</td>
</tr>
<tr>
<td>Module Efficiency (ηm)</td>
<td>%</td>
<td>18.6</td>
<td>18.9</td>
<td>19.2</td>
<td>19.5</td>
<td>19.8</td>
</tr>
</tbody>
</table>

STC: AM1.5, Irradiation 1000W/m², Module Temperature 25°C

### Electrical Characteristics at Nominal Module Operating Temperature (NMOT)

<table>
<thead>
<tr>
<th>Spec/Model</th>
<th>Unit</th>
<th>SPP305M60S</th>
<th>SPP310M60S</th>
<th>SPP315M60S</th>
<th>SPP320M60S</th>
<th>SPP325M60S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max-Power (Pm)</td>
<td>W</td>
<td>228</td>
<td>232</td>
<td>236</td>
<td>240</td>
<td>244</td>
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<tr>
<td>Max-Power Voltage (Vm)</td>
<td>V</td>
<td>29.8</td>
<td>30.0</td>
<td>30.2</td>
<td>30.4</td>
<td>30.6</td>
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<tr>
<td>Max-Power Current (Im)</td>
<td>A</td>
<td>7.64</td>
<td>7.73</td>
<td>7.81</td>
<td>7.89</td>
<td>7.97</td>
</tr>
<tr>
<td>Open-Circuit Voltage (Voc)</td>
<td>V</td>
<td>36.4</td>
<td>36.5</td>
<td>36.6</td>
<td>36.7</td>
<td>36.8</td>
</tr>
<tr>
<td>Short-Circuit Current (Isc)</td>
<td>A</td>
<td>7.94</td>
<td>8.05</td>
<td>8.12</td>
<td>8.20</td>
<td>8.30</td>
</tr>
</tbody>
</table>

NMOT: Irradiation 800W/m², ambient temperature 20°C, Wind Speed 1m/s

### Temperature Coefficient

- Nominal Module Operating Temperature: 43±2°C
- Temperature coefficient of Pmax: -0.36%/°C
- Temperature coefficient of Voc: -0.28%/°C
- Temperature coefficient of Isc: 0.06%/°C

### Mechanical Characteristics

- Dimension (L x W x H): 1660mm x 990mm x 14mm
- Weight: 4.0 kg
- Back Material: Back Sheet (white, transparent, black)
- Cell (quantity / material / type / dimensions): 60(10x6) / Monocrystalline / 158.75mm
- Encapsulant: EVA
- Frame: None
- Junction Box (protection degree): IP68
- Cable (length / cross-section area): customizable / 4mm²
- Connector: MC4 Compatible

### Operating Conditions

- Max. system voltage: DC1000V (IEC)
- Max. series fuse rating: 15A
- Operating temperature range: -40°C ~ +85°C
- Bending radius: ≥0.20 m

### Package

<table>
<thead>
<tr>
<th>Container Size</th>
<th>Quantity (pcs)</th>
<th>Quantity (per pallet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>40” HC</td>
<td>1196</td>
<td>46</td>
</tr>
</tbody>
</table>

### Module Size

![Module Size Diagram]

I-V Curve

- I-V Curves of SPP320M60S at different irradiance
- I-V Curves of SPP320M60S at different cell temperature

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