285 Watt
MONOCRYSTALLINE SOLAR MODULE

Features

- High module conversion efficiency
  - Module efficiency up to 17.4% achieved through advanced cell technology and manufacturing capabilities
- Positive tolerance
  - Positive tolerance of up to 5 W delivers higher output reliability
- Extended wind and snow load tests
  - Module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 Pascal) *
- High PID resistant
  - Advanced cell technology and qualified materials lead to high resistance to PID
- Suntech current sorting process
  - System output maximized by reducing mismatch losses up to 2% with modules sorted & packaged by amperage
- Withstanding harsh environment
  - Reliable quality leads to a better sustainability even in harsh environment like desert, farm and coastline
- Positive tolerance
  - Positive tolerance of up to 0/+5 W delivers higher output reliability

Trust Suntech to Deliver Reliable Performance Over Time

- World-class manufacturer of crystalline silicon photovoltaic modules
- Unrivaled manufacturing capacity and world-class technology
- Regular independently checked production process from international accredited institute/company
- Tested for harsh environments (salt mist, ammonia corrosion and sand blowing testing: IEC 61701, IEC 62716, DIN EN 60068-2-68)***
- Long-term reliability tests
- 2 x 100% EL inspection ensuring defect-free modules

Industry-leading Warranty based on nominal power

- 97% in the first year, thereafter, for years two (2) through twenty-five (25), 0.7% maximum decrease from MODULE’s nominal power output per year, ending with the 80.2% in the 25th year after the defined WARRANTY STARTING DATE.****
- 12-year product warranty
- 25-year linear performance warranty

Certifications and standards: IEC 61215, IEC 61730, conformity to CE

Special 5 busbar design

- The unique cell design leads reduction in electrodes resistance, shading area and raise in conversion efficiency. Residual stress distribution can be more even, reducing the micro-cracks risks.

IP68 Rated Junction Box

- The Suntech IP68 rated junction box ensures an outstanding waterproof level, supports installations in all orientations and reduces stress on the cables. High reliable performance, low resistance connectors ensure maximum output for the highest energy production.

* Please refer to Suntech Standard Module Installation Manual for details. **WEEE only for EU market.
Mechanical Characteristics

- Solar Cell: Monocrystalline silicon 6 inches
- No. of Cells: 60 (6 × 10)
- Dimensions: 1650 × 992 × 35mm (64.96 × 39.1 × 1.4 inches)
- Weight: 18.3 kgs (40.3 lbs.)
- Front Glass: 3.2 mm (0.13 inches) tempered glass
- Frame: Anodized aluminium alloy
- Junction Box: IP68 rated (3 bypass diodes)
- Output Cables: TUV (2Pgf1169:2007) 4.0 mm² (0.006 inches²), symmetrical lengths (-) 1000mm (39.4 inches) and (+) 1000 mm (39.4 inches)
- Connectors: MC4 compatible

Electrical Characteristics

<table>
<thead>
<tr>
<th>STC</th>
<th>STP285S-20/Wfm</th>
<th>STP280S-20/Wfm</th>
<th>STP275S-20/Wfm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Power at STC (Pmax)</td>
<td>285W</td>
<td>280 W</td>
<td>275W</td>
</tr>
<tr>
<td>Optimum Operating Voltage (Vmp)</td>
<td>31.6 V</td>
<td>31.5 V</td>
<td>31.1 V</td>
</tr>
<tr>
<td>Optimum Operating Current (Imp)</td>
<td>9.02 A</td>
<td>8.89 A</td>
<td>8.85 A</td>
</tr>
<tr>
<td>Open Circuit Voltage (Voc)</td>
<td>39.4 V</td>
<td>39.4 V</td>
<td>38.5 V</td>
</tr>
<tr>
<td>Short Circuit Current (Isc)</td>
<td>9.48 A</td>
<td>9.41 A</td>
<td>9.34 A</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>17.4%</td>
<td>17.1%</td>
<td>16.8%</td>
</tr>
<tr>
<td>Operating Module Temperature</td>
<td>-40°C to +85°C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum System Voltage</td>
<td>1000 V DC (IEC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power Tolerance</td>
<td>0/+5 W</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOCT Characteristics

<table>
<thead>
<tr>
<th>NOCT</th>
<th>STP285S-20/Wfm</th>
<th>STP280S-20/Wfm</th>
<th>STP275S-20/Wfm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Power at NOCT (Pmax)</td>
<td>210 W</td>
<td>207 W</td>
<td>202 W</td>
</tr>
<tr>
<td>Optimum Operating Voltage (Vmp)</td>
<td>28.9 V</td>
<td>28.9 V</td>
<td>28.3 V</td>
</tr>
<tr>
<td>Optimum Operating Current (Imp)</td>
<td>7.27 A</td>
<td>7.16 A</td>
<td>7.14 A</td>
</tr>
<tr>
<td>Open Circuit Voltage (Voc)</td>
<td>36.4 V</td>
<td>36.2 V</td>
<td>35.4 V</td>
</tr>
<tr>
<td>Short Circuit Current (Isc)</td>
<td>7.67 A</td>
<td>7.60 A</td>
<td>7.55 A</td>
</tr>
</tbody>
</table>

Temperature Characteristics

- Nominal Operating Cell Temperature (NOCT): 45±2°C
- Temperature Coefficient of Pmax: -0.41%/°C
- Temperature Coefficient of Voc: -0.34%/°C
- Temperature Coefficient of Isc: 0.060%/°C

Customer Service Hot Line: +86 400 8888 009    Fax:+86 510 8534 3321
E-mail: sales@suntech-power.com