Mission Solar Energy is headquartered in San Antonio, Texas where we manufacture our modules. We produce American, high-quality solar modules ensuring the highest-in-class power output and best-in-class reliability. Our product line is tailored for residential, commercial and utility applications. Every Mission Solar Energy solar module is certified and surpasses industry standard regulations, proving excellent performance over the long term.

Demand the best. Demand Mission Solar Energy.

Certified Reliability
- Tested to UL 61730 & IEC Standards
- PID resistant
- Resistance to salt mist corrosion

Advanced Technology
- 9 Busbar
- Passivated Emitter Rear Contact
- Ideal for all applications

Extreme Weather Resilience
- Up to 5,400 Pa front load & 3,600 Pa back load
- Tested load to UL 61730
- 40 mm frame

BAA Compliant for Government Projects
- Buy American Act
- American Recovery & Reinvestment Act

Certifications
- CEC
- TUV
- UL Listed
- UL 61730 / IEC 61215 / IEC 61730 / IEC 61701

If you have questions or concerns about certification of our products in your area, please contact Mission Solar Energy.
Mission Solar Energy reserves the right to make specification changes without notice.

**MSE PERC 72**

**BASIC DIMENSIONS**

**[UNITS: MM/IN]**

**CURRENT-VOLTAGE CURVE**

MSE415SX9Z: 415WP, 72 CELL SOLAR MODULE

Current-voltage characteristics with dependence on irradiance and module temperature

**ELECTRICAL SPECIFICATION**

<table>
<thead>
<tr>
<th>PRODUCT TYPE</th>
<th>MSEXXXXX9Z (XXXX = Pmax)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Output</td>
<td>Pmax Wp</td>
</tr>
<tr>
<td>Module Efficiency</td>
<td>% 19.3 19.6 19.8</td>
</tr>
<tr>
<td>Tolerance</td>
<td>% 0/+3 0/+3 0/+3</td>
</tr>
<tr>
<td>Short Circuit Current</td>
<td>Isc A 11.19 11.24 11.31</td>
</tr>
<tr>
<td>Open Circuit Voltage</td>
<td>Voc V 49.14 49.28 49.42</td>
</tr>
<tr>
<td>Rated Current</td>
<td>Iimp A 10.62 10.66 10.78</td>
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<tr>
<td>Rated Voltage</td>
<td>Vimp V 40.01 40.32 40.34</td>
</tr>
<tr>
<td>Fuse Rating</td>
<td>A 20 20 20</td>
</tr>
<tr>
<td>System Voltage</td>
<td>V 1,500 1,500 1,500</td>
</tr>
</tbody>
</table>

**TEMPERATURE COEFFICIENTS**

Normal Operating Cell Temperature (NOCT) 46.08°C (±3.7%)

Temperature Coefficient of Pmax -0.347%/°C

Temperature Coefficient of Voc -0.261%/°C

Temperature Coefficient of Isc 0.043%/°C

**OPERATING CONDITIONS**

- Maximum System Voltage: 1,500Vdc
- Operating Temperature Range: -40°F to 185°F (-40°C to +85°C)
- Maximum Series Fuse Rating: 20A
- Fire Safety Classification: Type 1
- Front & Back Load: (UL Standard) 5400 Pa front and 3600 Pa back load
- Hail Safety Impact Velocity: 25mm at 23 m/s

**MECHANICAL DATA**

- Solar Cells: P-type mono-crystalline silicon
- Cell Orientation: 72 cells (6x12)
- Module Dimension: 2.086mm x 1.054mm x 40mm
- Weight: 51.6 lbs. (23.4 kg)
- Front Glass: 3.2mm tempered, low-iron, anti-reflective
- Frame: 40mm Anodized
- Encapsulant: Ethylene vinyl acetate (EVA)
- Junction Box: Protection class IP67 with 3 bypass-diodes
- Cable: 1.4m, Wire 4mm² (12AWG)
- Connector: MC4 Staubli PV-KBT4-EV0 2/6II-UR and PV-KST4-EV0 2/6II-UR, Renhe 05-8, RHC2

**SHIPPING INFORMATION**

- Container Feet: 1450 lbs. (657 kg)
- Height: 47.5 in (120.65 cm)
- Width: 46 in (116.84 cm)
- Length: 83.75 in (212.72 cm)

**CERTIFICATIONS AND TESTS**

- IEC: 61215, 61730, 61701
- UL: 61730

Mission Solar Energy
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www.missionsolar.com | info@missionsolar.com

Mission Solar Energy uses quality sourced materials that result in a Type 1 fire rating. Please note, the ‘Fire Class’ Rating is designated for the fully-installed PV system, which includes, but is not limited to, the module, the type of mounting used, pitch and roof composition.