THE
DUOMAX twin
BIFACIAL DUAL GLASS 144 HALF-CELL MODULE

144-Cell
MONOCRYSTALLINE MODULE

380-405W POWER OUTPUT RANGE

19.7% MAXIMUM EFFICIENCY

0~+5W POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world’s leading total solution provider for solar energy. With local presence around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneficial collaborations with installers, developers, distributors and other partners in driving smart energy together.

Comprehensive Products and System Certificates
IEC61215/IEC61730/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO 14064: Greenhouse Gases Emissions Verification
OHSAS 18001: Occupation Health and Safety Management System

High power output
- Up to 405W front power and 19.7% module efficiency with half-cut technology enabling higher BOS savings
- Lower resistance of half-cut cells ensures higher power

Certified to perform in highly challenging environments
- High PID resistance through cell process and module material control
- Resistant to salt, acid, sand, and ammonia
- Proven to be reliable in high temperature and humidity areas
- Certified to the best fire class A
- Minimizes micro-crack and snail trails
- Certified to 5400 Pa positive load and 2400 Pa negative load

High energy generation, low LCOE
- Up to 25% additional power gain from back side, depending on the albedo
- Excellent 3rd party validated IAM and low light performance with cell process and module material optimization
- Low temp coefficient (-0.35%) and NMOT increases energy production
- Better anti-shading performance and lower operating temperature
- Higher power from same installation footprint as standard modules

Easy to install, wide application
- Frame design enables compatibility with standard installation methods
- Deployable for ground mounted utility, carports, and agricultural projects
- Safe and easy to transport, handle, and install like normal framed modules

Trina Solar’s DUOMAX Performance Warranty

From the 2nd year to the 30th year, the average annual power decline will be no more than 0.5%.
### ELECTRICAL DATA (STC)

<table>
<thead>
<tr>
<th>Peak Power Watts - Pmax (Wp)*</th>
<th>380</th>
<th>385</th>
<th>390</th>
<th>395</th>
<th>400</th>
<th>405</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Output Tolerance - Pmax (W)</td>
<td>0 - 5%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Power Voltage - Vmp (V)</td>
<td>4.03</td>
<td>4.04</td>
<td>4.05</td>
<td>4.06</td>
<td>4.07</td>
<td>4.08</td>
</tr>
<tr>
<td>Maximum Power Current - Impp (A)</td>
<td>9.43</td>
<td>9.53</td>
<td>9.63</td>
<td>9.73</td>
<td>9.83</td>
<td>9.93</td>
</tr>
<tr>
<td>Open Circuit Voltage - Voc (V)</td>
<td>49.2</td>
<td>49.4</td>
<td>49.6</td>
<td>49.7</td>
<td>49.9</td>
<td>50.1</td>
</tr>
<tr>
<td>Short Circuit Current - Isc (A)</td>
<td>9.99</td>
<td>10.09</td>
<td>10.19</td>
<td>10.29</td>
<td>10.39</td>
<td>10.49</td>
</tr>
<tr>
<td>Module Efficiency $\eta$ (%)*</td>
<td>18.5</td>
<td>18.7</td>
<td>19.0</td>
<td>19.2</td>
<td>19.5</td>
<td>19.7</td>
</tr>
</tbody>
</table>

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
*Measurement tolerance: ±3%.

### ELECTRICAL DATA (NMOT)

<table>
<thead>
<tr>
<th>Maximum Power - Pmax (Wp)</th>
<th>289</th>
<th>292</th>
<th>296</th>
<th>300</th>
<th>304</th>
<th>308</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Voltage - Vmp (V)</td>
<td>39.1</td>
<td>38.2</td>
<td>38.3</td>
<td>38.4</td>
<td>38.6</td>
<td>38.7</td>
</tr>
<tr>
<td>Maximum Power Current - Impp (A)</td>
<td>7.58</td>
<td>7.65</td>
<td>7.73</td>
<td>7.81</td>
<td>7.88</td>
<td>7.95</td>
</tr>
<tr>
<td>Open Circuit Voltage - Voc (V)</td>
<td>46.6</td>
<td>46.8</td>
<td>47.0</td>
<td>47.1</td>
<td>47.2</td>
<td>47.4</td>
</tr>
<tr>
<td>Short Circuit Current - Isc (A)</td>
<td>8.05</td>
<td>8.13</td>
<td>8.21</td>
<td>8.29</td>
<td>8.37</td>
<td>8.45</td>
</tr>
</tbody>
</table>

NMOT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

### Electrical characteristics with different rear side power gains (referenced specific to 400 Wp front)**

<table>
<thead>
<tr>
<th>Maximum Power - Pmax (Wp)</th>
<th>420</th>
<th>440</th>
<th>460</th>
<th>480</th>
<th>500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Voltage - Vmp (V)</td>
<td>40.7</td>
<td>40.7</td>
<td>40.7</td>
<td>40.7</td>
<td>40.7</td>
</tr>
<tr>
<td>Maximum Power Current - Impp (A)</td>
<td>10.32</td>
<td>10.81</td>
<td>11.30</td>
<td>11.80</td>
<td>12.29</td>
</tr>
<tr>
<td>Open Circuit Voltage - Voc (V)</td>
<td>49.9</td>
<td>50.0</td>
<td>50.0</td>
<td>50.0</td>
<td>50.0</td>
</tr>
<tr>
<td>Short Circuit Current - Isc (A)</td>
<td>10.91</td>
<td>11.43</td>
<td>11.95</td>
<td>12.47</td>
<td>12.99</td>
</tr>
<tr>
<td>Pmax gain</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
<td>25%</td>
</tr>
</tbody>
</table>

**Back-side power gain varies depending upon the specific project albedo.

### MECHANICAL DATA

- **Solar Cells**: Monocrystalline
- **Cell Orientation**: 144 cells (6 × 24)
- **Module Dimensions**: 2031 × 1011 × 30 mm (79.96 × 39.80 × 1.18 inches)
- **Weight**: 31.4 kg (69.2 lb)
- **Front Glass**: 2.5 mm (0.10 inches), High Transmission, AR Coated Heat Strengthened Glass
- **Encapsulant Material**: POE/EVA
- **Back Glass**: 2.5 mm (0.10 inches), Heat Strengthened Glass (White Grid Glass)
- **Frame**: 30 mm (1.18 inches) Anodized Aluminium Alloy
- **J-Box**: IP 68 rated
- **Cables**: Photovoltaic Technology Cable 4.0 mm² (0.006 inches²)
- **Connector**: TS4

### TEMPERATURE RATINGS

- **NMOT (Nominal Module Operating Temperature)**: 41°C (±3°C)
- **Temperature Coefficient of Pmax**: -0.35%/°C
- **Temperature Coefficient of Voc**: -0.25%/°C
- **Temperature Coefficient of Impp**: 0.04%/°C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

### WARRANTY

- **10 year Product Workmanship Warranty**
- **30 year Power Warranty**

(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

- **Modules per box**: 32 pieces
- **Modules per 40’ container**: 704 pieces