THE DUOMAX twin

BIFACIAL DUAL GLASS 144 CELL MULTI BUSBAR MODULE

144-Cell MONOCRYSTALLINE MODULE

390-415W POWER OUTPUT RANGE

20.5% MAXIMUM EFFICIENCY

0~+5W POSITIVE POWER TOLERANCE

High power output
- Up to 415W front power and 20.5% module efficiency with half-cut and MBB (Multi Busbar) 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>390</th>
<th>395</th>
<th>400</th>
<th>405</th>
<th>410</th>
<th>415</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-VMAX (V)</td>
<td>40.2</td>
<td>40.5</td>
<td>40.8</td>
<td>41.1</td>
<td>41.4</td>
<td>41.5</td>
</tr>
<tr>
<td>Maximum Power Current-ISCM (A)</td>
<td>9.71</td>
<td>9.76</td>
<td>9.81</td>
<td>9.86</td>
<td>9.91</td>
<td>10.02</td>
</tr>
<tr>
<td>Open Circuit Voltage-VOC (V)</td>
<td>48.5</td>
<td>48.7</td>
<td>48.9</td>
<td>49.1</td>
<td>49.3</td>
<td>49.4</td>
</tr>
<tr>
<td>Short Circuit Current-ISC (A)</td>
<td>10.25</td>
<td>10.29</td>
<td>10.33</td>
<td>10.37</td>
<td>10.41</td>
<td>10.52</td>
</tr>
<tr>
<td>Module Efficiency η (%</td>
<td>19.2</td>
<td>19.5</td>
<td>19.7</td>
<td>20.0</td>
<td>20.2</td>
<td>20.5</td>
</tr>
</tbody>
</table>

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

### ELECTRICAL DATA (NMOT)

<table>
<thead>
<tr>
<th>Maximum Power-PMAX (Wp)</th>
<th>395</th>
<th>399</th>
<th>302</th>
<th>306</th>
<th>310</th>
<th>315</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Voltage-VMAX (V)</td>
<td>37.7</td>
<td>38.0</td>
<td>38.3</td>
<td>38.6</td>
<td>38.9</td>
<td>39.0</td>
</tr>
<tr>
<td>Maximum Power Current-ISCM (A)</td>
<td>7.82</td>
<td>7.86</td>
<td>7.90</td>
<td>7.93</td>
<td>7.97</td>
<td>8.05</td>
</tr>
<tr>
<td>Open Circuit Voltage-VOC (V)</td>
<td>45.7</td>
<td>45.9</td>
<td>46.1</td>
<td>46.3</td>
<td>46.5</td>
<td>46.7</td>
</tr>
<tr>
<td>Short Circuit Current-ISC (A)</td>
<td>8.26</td>
<td>8.29</td>
<td>8.33</td>
<td>8.36</td>
<td>8.39</td>
<td>8.47</td>
</tr>
</tbody>
</table>

NMOT: Irradiance at 900W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

Electrical characteristics with different rear side power gains (referenced specifically to 405 Wp front)**

<table>
<thead>
<tr>
<th>Maximum Power-PMAX (Wp)</th>
<th>425</th>
<th>446</th>
<th>466</th>
<th>486</th>
<th>506</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Voltage-VMAX (V)</td>
<td>41.1</td>
<td>41.1</td>
<td>41.1</td>
<td>41.1</td>
<td>41.1</td>
</tr>
<tr>
<td>Maximum Power Current-ISCM (A)</td>
<td>10.35</td>
<td>10.85</td>
<td>11.34</td>
<td>11.83</td>
<td>12.33</td>
</tr>
<tr>
<td>Open Circuit Voltage-VOC (V)</td>
<td>49.2</td>
<td>49.3</td>
<td>49.4</td>
<td>49.5</td>
<td>49.6</td>
</tr>
<tr>
<td>Short Circuit Current-ISC (A)</td>
<td>10.89</td>
<td>11.41</td>
<td>11.93</td>
<td>12.44</td>
<td>12.96</td>
</tr>
<tr>
<td>P_MAX gain</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
<td>20%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Power Bifaciality: 70±15%

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

### MECHANICAL DATA

- **Solar Cells**: Monocrystalline
- **Module Dimensions**: 2024 × 1002 × 30 mm (79.69 × 39.45 × 1.18 inches)
- **Weight**: 26.0 kg (57.3 lb)
- **Front Glass**: 2.0 mm (0.08 inches), High Transmission, AR Coated Heat Strengthened Glass
- **Back Glass**: 2.0 mm (0.08 inches), Heat Strengthened Glass (White Grid Glass)
- **Frame**: 30mm (1.18 inches) Anodized Aluminium Alloy
- **J-Box**: IP 68 rated
- **Cables**: Photovoltaic Technology Cable 4.0 mm² (0.006 inches²)
- **Connector**: Trina TS4/MC4

### TEMPERATURE RATINGS

- **NOM/Temperature Coefficient of VMAX** | 41°C (±3°C)
- **Temperature Coefficient of PMAX** | -0.35%/°C
- **Temperature Coefficient of VOC** | -0.25%/°C
- **Temperature Coefficient of ISC** | 0.04%/°C

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

### MAXIMUM RATINGS

- **Operational Temperature**: -40°C to +85°C
- **Maximum System Voltage**: 1500V DC (IEC)
- **Max Series Fuse Rating**: 20A

### WARRANTY

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

(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

- **Modules per box**: 35 pieces
- **Modules per 40’ container**: 665 pieces
- **Pallet dimensions (L x W x H)**: 2060 x 1120 x 1178 mm
- **Modules per 40’ container**: 665 pieces
- **Pallet weight**: 973 kg (2,145 lb)