Enhanced safety
- Fire class A certified by TUV Rheinland according to fire test IEC 61730-2 / MST 23
- Certified for fire type13 (UL 1703)

Improved durability
- Anti PID
- Reduced soiling due to natural cleaning
- Increased module robustness to minimize micro-cracks

Increased value
- 1,500 V system voltage reduces BOS costs by increased string length
- 30 year linear warranty
- 0.5% annual degradation

Highly reliable due to stringent quality control
- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- All modules have to pass electroluminescence (EL) inspection
- PID resistant
- 1000 V UL/1500 V IEC certified

Certified to withstand challenging environmental conditions
- Module coating resistant to sand, acid, and alkali
- 2400 Pa wind load
- 5400 Pa snow load
- 35 mm hail stones at 97 km/h

Trina Solar’s DUOMAX Linear Performance Warranty
- Guaranteed Power
- +0.5% Annual Degradation Over 30 years

Comprehensive Product And System Certificates
IEC61215/IEC61730/UL1703/IEC61701/IEC62716
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gas Emissions Verification
OHSAS 18001: Occupational Health and Safety Management System

EU-28 WEEE COMPLIANT RECYCLABLE PACKAGING

Trina Solar is the world’s leading comprehensive solutions provider for solar energy. We believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina Solar is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina Solar as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

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Trina Solar and DUOMAX Linear Performance Warranty:
- Additional value from Trina Solar’s DUOMAX Linear Performance Warranty
- Guaranteed Power Over 30 years
- +0.5% Annual Degradation

Additional value from Trina Solar’s DUOMAX Linear Performance Warranty
- Year 5: +1.8%
- Year 10: +2.8%
- Year 15: +3.8%
- Year 20: +4.8%
- Year 25: +4.8%
- Year 30: +4.8%

Trina’s DUOMAX Linear Warranty
- 100%
- 97.5%
- 90%
- 80%
- Guaranteed Power

Years
- 5
- 10
- 15
- 20
- 25
- 30

Trina standard
- Industry standard

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ELECTRICAL DATA @ STC

<table>
<thead>
<tr>
<th>TSM-270</th>
<th>TSM-275</th>
<th>TSM-280</th>
<th>TSM-285</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Power Watts-P_{MAX} (Wp)*</td>
<td>270</td>
<td>275</td>
<td>280</td>
</tr>
<tr>
<td>Power Output Tolerance-P_{MAX} (W)</td>
<td>0/+5</td>
<td>0/+5</td>
<td>0/+5</td>
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<tr>
<td>Maximum Power Voltage-V_{MP} (V)</td>
<td>31.1</td>
<td>31.3</td>
<td>31.6</td>
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<tr>
<td>Maximum Power Current-I_{SC} (A)</td>
<td>8.69</td>
<td>8.78</td>
<td>8.87</td>
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<tr>
<td>Open Circuit Voltage-V_{OC} (V)</td>
<td>38.0</td>
<td>38.2</td>
<td>38.4</td>
</tr>
<tr>
<td>Short Circuit Current-I_{SC} (A)</td>
<td>9.28</td>
<td>9.31</td>
<td>9.32</td>
</tr>
<tr>
<td>Module Efficiency η_{m} (%)</td>
<td>16.4</td>
<td>16.7</td>
<td>17.0</td>
</tr>
</tbody>
</table>

STC: Irradiance 1000 W/m², Cell Temperature 25 °C, Air Mass AM1.5

* Measuring tolerance: ±3%

ELECTRICAL DATA @ NOCT

<table>
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<tr>
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<th>TSM-280</th>
<th>TSM-285</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power-P_{MAX} (Wp)</td>
<td>200</td>
<td>204</td>
<td>208</td>
</tr>
<tr>
<td>Maximum Power Voltage-U_{MP} (V)</td>
<td>28.8</td>
<td>29.0</td>
<td>29.2</td>
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<tr>
<td>Maximum Power Current-I_{SC} (A)</td>
<td>6.97</td>
<td>7.04</td>
<td>7.11</td>
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<tr>
<td>Open Circuit Voltage-U_{OC} (V)</td>
<td>35.2</td>
<td>35.4</td>
<td>35.6</td>
</tr>
<tr>
<td>Short Circuit Current-I_{SC} (A)</td>
<td>7.49</td>
<td>7.52</td>
<td>7.52</td>
</tr>
</tbody>
</table>

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

MECHANICAL DATA

Solar Cells | Multicrystalline 156.75 × 156.75 mm
Cell Orientation | 60 cells (6 x 10)
Module Dimensions | 1658 × 992 × 6 mm
| 1662 × 996 × 6 mm with edge banding
| 1664 × 998 × 7.6 mm with corner protector (Std)*
Weight | 23.0 kg
Front Glass | 2.5 mm, high transparency, AR coated and heat strengthened glass
EVA | White
Back Glass | 2.5 mm, heat strengthened glass
Frame | Frameless
J-Box | IP 67 rated or IP 68 rated
Cables | Photovoltaic Technology Cable 4.0 mm²
| Portrait: 140/285 mm, Landscape: 1200/1200 mm
Connector | MC4 EVO2/UTX/TS4

* Do not combine with slide-in solutions.

TEMPERATURE RATINGS

| Nominal Operating Cell Temperature (NOCT) | 44°C (±2K) |
| Temperature Coefficient of P_{MAX} | -0.41%/K |
| Temperature Coefficient of V_{OC} | -0.32%/K |
| Temperature Coefficient of I_{SC} | 0.05%/K |

WARRANTY

10 year Product Workmanship Warranty
30 year Linear Performance Warranty
(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 33 pieces
Modules per 40’ container: 858 pieces

MAXIMUM RATINGS

| Operational Temperature | -40 to +85°C |
| Maximum System Voltage | 1500VDC (IEC)
| | 1000VDC (UL) |
| Max Series Fuse Rating** | 15 A |
| Mechanical Load* | 5400Pa |
| Wind Load* | 2400Pa |

* Max. mechanical loading values depend on the mounting method applied and only clamps approved by Trina Solar should be used.
** DO NOT connect fuse in combiner box with two or more strings in parallel connection.

MORE OPTIONS

Compact AR (Antireflective) coating
POE (Polyolefin Elastomer) foil

CARA EN 2017 B

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