TSM-PC05 TSM-PC05.08
THE UNIVERSAL MODULE

60 CELL
MULTICRYSTALLINE MODULE

235-245W
POWER OUTPUT RANGE

15.0%
MAXIMUM EFFICIENCY

0~+3%
POWER OUTPUT GUARANTEE

As a leading global manufacturer of next generation photovoltaic products, we believe close cooperation with our partners is critical to success. With local presence around the globe, Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners as the backbone of our shared success in driving Smart Energy Together.

Trina Solar Limited
www.trinasolar.com

Our most versatile product
• Compatible with all major BOS components and system designs

One of the industry’s most trusted modules
• Over 2 GW sold across all major global markets
• Field proven performance

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

Certified to withstand challenging environmental conditions
• 130 km/hr wind load (2400 Pa)
• 900 kg snow load per module (5400 Pa)

LINEAR PERFORMANCE WARRANTY
10 Year Product Warranty • 25 Year Linear Power Warranty

Additional value from Trina Solar’s linear warranty
**CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.**

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**ELECTRICAL DATA @ STC**

<table>
<thead>
<tr>
<th>Module</th>
<th>TSM-235 PC05/05.08</th>
<th>TSM-240 PC05/05.08</th>
<th>TSM-245 PC05/05.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Power Watts-P_{MAX} (Wp)</td>
<td>236</td>
<td>240</td>
<td>245</td>
</tr>
<tr>
<td>Power Output Tolerance-P_{MAX} (%)</td>
<td>0/+3</td>
<td>0/+3</td>
<td>0/+3</td>
</tr>
<tr>
<td>Maximum Power Voltage-V_{MPPP} (V)</td>
<td>29.3</td>
<td>29.7</td>
<td>30.2</td>
</tr>
<tr>
<td>Maximum Power Current-I_{MPPP} (A)</td>
<td>8.03</td>
<td>8.10</td>
<td>8.13</td>
</tr>
<tr>
<td>Open Circuit Voltage-V_{OC} (V)</td>
<td>37.2</td>
<td>37.3</td>
<td>37.5</td>
</tr>
<tr>
<td>Short Circuit Current-I_{SC} (A)</td>
<td>8.55</td>
<td>8.62</td>
<td>8.68</td>
</tr>
<tr>
<td>Module Efficiency $\eta_m$ (%)</td>
<td>14.4</td>
<td>14.7</td>
<td>15.0</td>
</tr>
</tbody>
</table>

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3. Average efficiency reduction of 4.5% at 200 W/m² according to EN 60904-1.

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**ELECTRICAL DATA @ NOCT**

<table>
<thead>
<tr>
<th>Module</th>
<th>TSM-235 PC05/05.08</th>
<th>TSM-240 PC05/05.08</th>
<th>TSM-245 PC05/05.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power-P_{MAX} (Wp)</td>
<td>171</td>
<td>174</td>
<td>178</td>
</tr>
<tr>
<td>Maximum Power Voltage-V_{MPPP} (V)</td>
<td>26.4</td>
<td>26.6</td>
<td>26.8</td>
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<tr>
<td>Maximum Power Current-I_{MPPP} (A)</td>
<td>6.48</td>
<td>6.55</td>
<td>6.64</td>
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<tr>
<td>Open Circuit Voltage-V_{OC} (V)</td>
<td>34.0</td>
<td>34.1</td>
<td>34.2</td>
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<tr>
<td>Short Circuit Current-I_{SC} (A)</td>
<td>6.97</td>
<td>7.04</td>
<td>7.10</td>
</tr>
</tbody>
</table>

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

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**MECHANICAL DATA**

- Solar cells: Multicrystalline 156 × 156 mm
- Cell orientation: 60 cells (6 × 10)
- Module dimensions: 1650 × 992 × 35 mm
- Weight: 18.6 kg
- Glass: High Transparency solar glass 3.2 mm
- Backsheet: White
- Frame: Silver Anodized Aluminium Alloy (PC05), Black (PC05.08)
- J-Box: IP 65 or IP 67 rated
- Cables: Photovoltaic Technology cable 4.0 mm², 1000 mm
- Connector: Original MC4

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**TEMPERATURE RATINGS**

- Nominal Operating Cell Temperature (NOCT): 45°C (±2°C)
- Temperature Coefficient of P_{MAX}: -0.43%/°C
- Temperature Coefficient of V_{OC}: -0.32%/°C
- Temperature Coefficient of I_{SC}: 0.047%/°C

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**MAXIMUM RATINGS**

- Operational Temperature: -40~+85°C
- Maximum System Voltage: 1000V DC (IEC)
- Max Series Fuse Rating: 15A

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**WARRANTY**

- 10 year Product Workmanship Warranty
- 25 year Linear Power Warranty

(Please refer to product warranty for details)

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**PACKAGING CONFIGURATION**

- Modules per box: 29 pieces
- Modules per 40’ container: 812 pieces

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**CERTIFICATION**

- IEC 61701:2008
- EN 61215:2015
- IEC 61730:2013
- UL 1703:2014
- TUV
- ISO 9001:2015
- CE
- PV Cycle

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**DIMENSIONS OF PV MODULE TSM-PC05/05.08**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Width</td>
<td>1650mm</td>
</tr>
<tr>
<td>Height</td>
<td>992mm</td>
</tr>
<tr>
<td>Depth</td>
<td>35mm</td>
</tr>
</tbody>
</table>

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**I-V CURVES OF PV MODULE TSM-245 PC05/05.08**

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

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**PACKAGING**

- Recyclable packaging

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**OPERATIONAL DATA**

- Operational Temperature: -40~+85°C
- Maximum System Voltage: 1000V DC (IEC)
- Max Series Fuse Rating: 15A