**PRODUCT:** TSM-DE09C.D7  
**PRODUCT RANGE:** 380-405W

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**405W**  
MAXIMUM POWER OUTPUT

**0~+5W**  
POSITIVE POWER TOLERANCE

**21.1%**  
MAXIMUM EFFICIENCY

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**High value**
- More productivity from same roof size.
- Outstanding visual appearance.
- Leading 210mm cell technology.

**Small in size, big on power**
- Small format module allow greater energy generation in limited space.
- Up to 405W, 21.1% module efficiency with high density interconnect technology.
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current.
- Reduce installation cost with higher power bin and efficiency.
- Boost performance in warm weather with lower temperature coefficient (-0.34%) and operating temperature.

**Universal solution for residential and C&I rooftops**
- Designed for compatibility with existing mainstream optimizers, inverters and mounting systems.
- Perfect size and low weight makes handling and transportation easier and more cost-effective.
- Diverse installation solutions for flexibility in system deployment.

**High Reliability**
- 25 year product warranty.
- 25 year performance warranty with lowest degradation.
- Minimized micro-cracks with innovative non-destructive cutting technology.
- Ensured PID resistance through cell process and module material control.
- Mechanical performance up to +6000 Pa and -4000 Pa negative load.

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**Trina Solar's Backsheet Performance Warranty**

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**Comprehensive Products and System Certificates**

IEC61215/IEC61730/IEC61701/IEC62716/UL61730  
ISO 9001: Quality Management System  
ISO 14001: Environmental Management System  
ISO14064: Greenhouse Gases Emissions Verification  
ISO45001: Occupational Health and Safety Management System
**ELECTRICAL DATA (STC)**

- **Peak Power Watts-PMAX (Wp)**: 400
- **Power Tolerance-PMAX (W)**: 0 ~ +5
- **Maximum Power Voltage-VMPP (V)**: 33.4
- **Maximum Power Current-IMPP (A)**: 11.38
- **Open Circuit Voltage-VOC (V)**: 40.4
- **Short Circuit Current-ISC (A)**: 12.00
- **Module Efficiency ηm (%)**: 19.8

**Electrical characteristics with different power bin (reference to 10% Irradiance ratio)**

<table>
<thead>
<tr>
<th>Irradiance ratio (year/front)</th>
<th>Power Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td>70.1</td>
</tr>
</tbody>
</table>

**MECHANICAL DATA**

- **Solar Cells**: Monocrystalline
- **No. of cells**: 120
- **Module Dimensions**: 1754×1096×30 mm (69.06×43.15×1.18 inches)
- **Weight**: 21.0 kg (46.3 lb)
- **Glass**: 3.2 mm (0.13 inches), High Transmission, All Coated Heat Strengthened Glass
- **Encapsulant material**: EVA/POE
- **Backsheet**: Transparent backsheet
- **Frame**: 30mm (1.18 inches) Anodized Aluminum Alloy
- **Connector**: MC4 EVO2 / TS4*
- **Cables**: Photovoltaic Technology Cable 4.0mm² (0.006 inches²), Portrait: 350/280 mm (13.78/11.02 inches), Landscape: 1100 mm /P 1100 mm (43.31/43.31 inches)

**DIMENSIONS OF PV MODULE(mm)**

- **Portrait**: 350/280 mm (13.78/11.02 inches)
- **Landscape**: 1100 mm /P 1100 mm (43.31/43.31 inches)
- **Total Equivalent power-PMAX (Wp)**: 400
- **Frame**: 30 x 30
- **Laminate**: 3.2 mm (0.13 inches)
- **Silicon Sealant**: 4.3
- **Grounding Hole**: 8-9×14
- **Drain Hole**: 8-9
- **Installing Hole**: 9×14

**TEMPERATURE RATINGS**

| NCT Nominal Operating Cell Temperature | -3°C to 72°C |
| Temperature Coefficient of PMAX | -0.15%/°C |
| Temperature Coefficient of Voc | -0.04%/°C |
| Temperature Coefficient of ISC | -0.3%/°C |

**WARRANTY**

- **25 year Product Workmanship Warranty**
- **25 year Power Warranty**
- **2% first year degradation**
- **0.55% Annual Power Attenuation**

**MAXIMUM RATINGS**

- **Operational Temperature**: 40°C ~ +85°C
- **Maximum System Voltage**: 1500V DC (IEC)
- **Max Series Fuse Rating**: 25A

**PACKAGING CONFIGURATION**

- **Modules per box**: 36 pieces
- **Modules per 40’ container**: 828 pieces

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*Please refer to regional datasheet for specified connector.*