**Vertex**

**BIFACIAL DUAL GLASS MONOCRystalline Module**

**PRODUCT:** TSM-DEG19RC.20  
**PRODUCT RANGE:** 560-580W

<table>
<thead>
<tr>
<th>580W</th>
<th>0~+5W</th>
<th>21.5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAXIMUM POWER OUTPUT</td>
<td>POSITIVE POWER TOLERANCE</td>
<td>MAXIMUM EFFICIENCY</td>
</tr>
</tbody>
</table>

**High customer value**
- Lower LCOE (Levelized Cost Of Energy), reduced BOS (Balance of System) cost, shorter payback time
- Lower first year and annual degradation
- Designed for compatibility with existing mainstream system components
- Higher return on Investment

**High power up to 580W**
- Up to 21.5% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection

**High reliability**
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Resistant to harsh environments such as salt, ammonia, sand, high temperature and high humidity areas
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load

**High energy yield**
- Excellent IAM (Incident Angle Modifier) and low irradiation performance, validated by 3rd party certifications
- The unique design provides optimized energy production under inter-row shading conditions
- Lower temperature coefficient (-0.34%) and operating temperature
- Up to 25% additional power gain from back side depending on albedo

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**Trina Solar’s Vertex Bifacial Dual Glass Performance Warranty**

![Graph showing the warranty performance](image)

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**Comprehensive Products and System Certificates**

- IEC61215/IEC61730/IEC61701/IEC62716
- ISO 9001: Quality Management System
- ISO 14001: Environmental Management System
- ISO14064: Greenhouse Gases Emissions Verification
- ISO45001: Occupational Health and Safety Management System
CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.
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Version number: TSM_EN_2023_B

**DIMENSIONS OF PV MODULE(mm)**

**MECHANICAL DATA**
- **Temperature Ratings**
  - Operational Temperature: -40°C to +85°C
  - Maximum System Voltage: 1500V DC (IEC)
- **Max Series Fuse Rating**: 35A

**ELECTRICAL DATA (STC)**
- **Peak Power Watts-PMAX (Wp)**: 560 W
- **Power Tolerance—PMAX (%)**: 0 ~ +5%
- **Maximum Power Voltage—VMPP (V)**: 37.9 V
- **Maximum Power Current—IMPP (A)**: 14.76 A
- **Open Circuit Voltage—VOC (V)**: 45.2 V
- **Short Circuit Current—ISC (A)**: 15.86 A
- **Module Efficiency (m, %)**: 20.7%

**I-V CURVES OF PV MODULE (570 W)**

**P-V CURVES OF PV MODULE (570 W)**

**ELECTRICAL CHARACTERISTICS WITH DIFFERENT POWER BIN (REFERENCE TO 10% IRRADIANCE RATIO)**

<table>
<thead>
<tr>
<th>Irradiance Ratio (rear/front)</th>
<th>Power Efficiency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Irradiance (%)</th>
<th>10</th>
<th>20</th>
<th>30</th>
<th>40</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power (Wp)</td>
<td>560</td>
<td>565</td>
<td>570</td>
<td>575</td>
<td>580</td>
</tr>
</tbody>
</table>

**MECHANICAL DATA**
- **Solar Cells**: Monocrystalline
- **No. of cells**: 132 cells
- **Module Dimensions**: 2384 × 1134 × 30 mm (93.86 × 44.65 × 1.18 in)
- **Weight**: 33.7 kg (74.3 lb)
- **Front Glass**: 2.0 mm (0.08 in), High Transmission, AR Coated Heat Strengthened Glass
- **Back Glass**: 2.0 mm (0.08 in), Heat Strengthened Glass (White Grid Glass)
- **Frame**: 30 mm (1.18 in) Anodized Aluminium Alloy
- **J-Box**: IP 68 rated
- **Cables**: Photovoltaic Technology Cable 4.0 mm² (0.006 in²)
- **Connector**: MC4 EVO2 / TS4 Plus/ TS4*

**PACKAGING CONFIGURATION**
- Modules per box: 36 pieces
- Modules per 40’ container: 720 pieces

**TEMPERATURE RATINGS**
- **NOCT Nominal Operating Cell Temperature**: 48°C ±2°C
- **Temperature Coefficient of Voc**: -0.25%/°C
- **Temperature Coefficient of Isc**: -0.45%/°C

**WARRANTY**
- **12 year Product Workmanship Warranty**
- **30 year Power Warranty**
- **2% first year degradation**
- **0.45% Annual Power Attenuation**

*Please refer to regional datasheet for specified connector.

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*STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.
*NOCT: Irradiance at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.
*Please refer to regional datasheet for specified connector.