



**BACKSHEET MONOCRYSTALLINE MODULE**

PRODUCT: TSM-DE19R

PRODUCT RANGE: 565-585W

**585W**

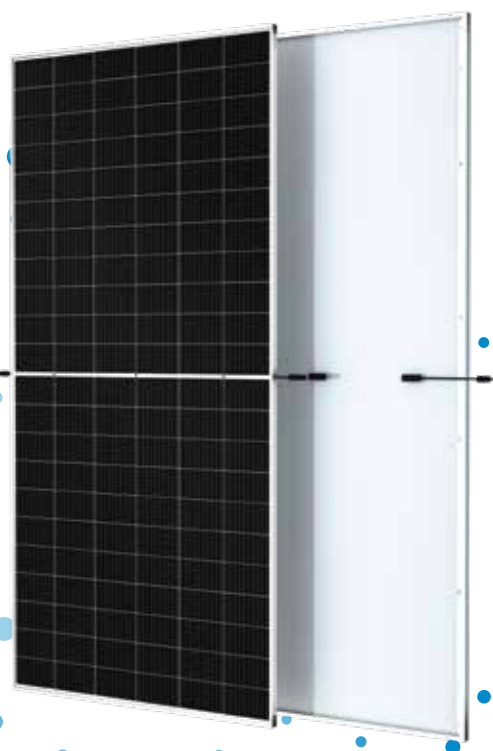
MAXIMUM POWER OUTPUT

**0~+5W**

POSITIVE POWER TOLERANCE

**21.7%**

MAXIMUM EFFICIENCY



**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 585W**

- Up to 21.7% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



**High reliability**

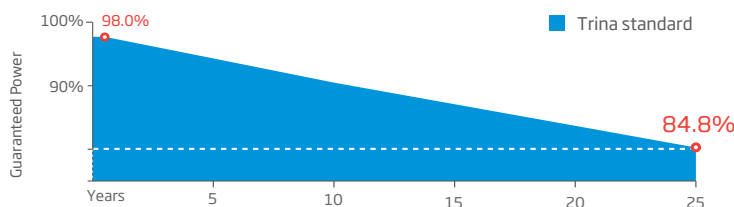
- Minimized micro-cracks with innovative non-destructive cutting technology
- Ensured PID resistance through cell process and module material control
- Mechanical performance up to 5400 Pa positive load and 2400 Pa negative load



**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

**Trina Solar's Backsheet Performance Warranty**

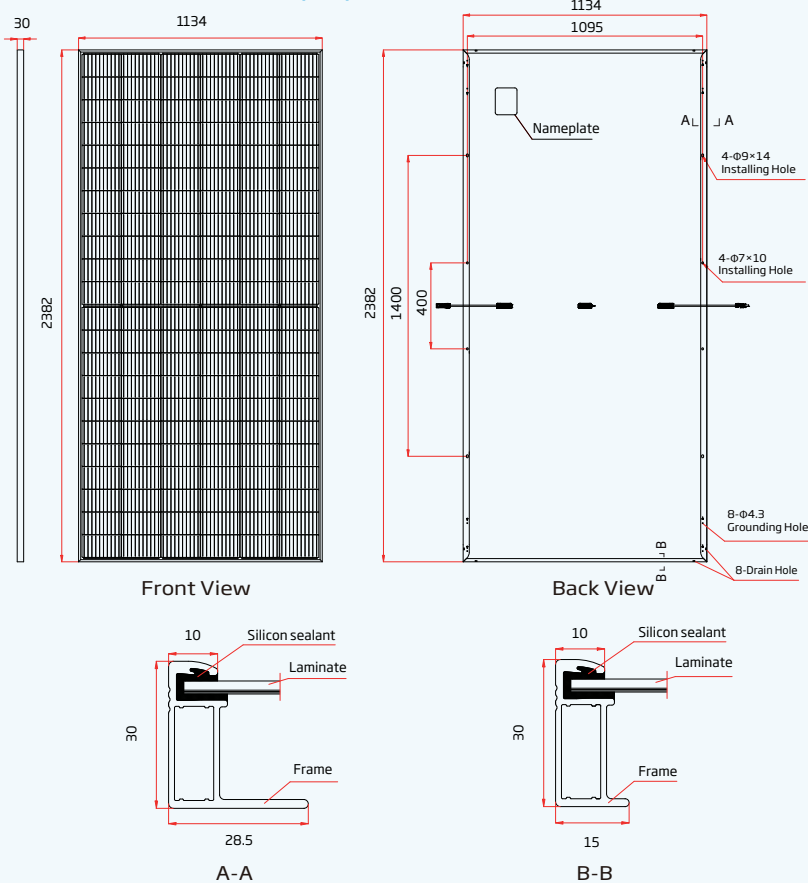
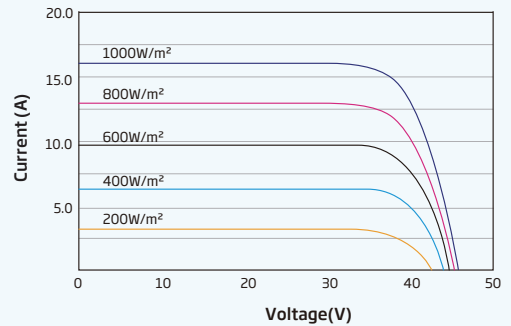
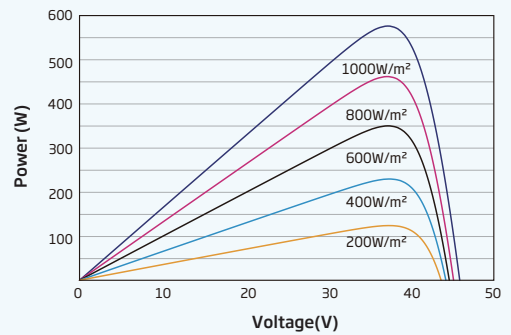


**Comprehensive Products and System Certificates**



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



**DIMENSIONS OF PV MODULE(mm)**

**I-V CURVES OF PV MODULE(575W)**

**P-V CURVES OF PV MODULE(575W)**

**ELECTRICAL DATA (STC)**

|                                      |       |       |        |       |       |
|--------------------------------------|-------|-------|--------|-------|-------|
| Peak Power Watts- $P_{MAX}$ (Wp)*    | 565   | 570   | 575    | 580   | 585   |
| Power Tolerance- $P_{MAX}$ (W)       |       |       | 0 ~ +5 |       |       |
| Maximum Power Voltage- $V_{MPP}$ (V) | 38.3  | 38.5  | 38.8   | 39.0  | 39.3  |
| Maximum Power Current- $I_{MPP}$ (A) | 14.76 | 14.79 | 14.83  | 14.86 | 14.90 |
| Open Circuit Voltage- $V_{OC}$ (V)   | 45.6  | 45.8  | 46.1   | 46.3  | 46.6  |
| Short Circuit Current- $I_{SC}$ (A)  | 15.81 | 15.85 | 15.90  | 15.94 | 15.99 |
| Module Efficiency $\eta_m$ (%)       | 20.9  | 21.1  | 21.3   | 21.5  | 21.7  |

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5. \*Measuring tolerance: ±3%.

**ELECTRICAL DATA (NOCT)**

|                                      |       |       |       |       |       |
|--------------------------------------|-------|-------|-------|-------|-------|
| Maximum Power- $P_{MAX}$ (Wp)        | 428   | 431   | 435   | 439   | 443   |
| Maximum Power Voltage- $V_{MPP}$ (V) | 35.3  | 35.5  | 35.8  | 35.9  | 36.2  |
| Maximum Power Current- $I_{MPP}$ (A) | 12.10 | 12.13 | 12.17 | 12.20 | 12.24 |
| Open Circuit Voltage- $V_{OC}$ (V)   | 42.9  | 43.1  | 43.4  | 43.6  | 43.9  |
| Short Circuit Current- $I_{SC}$ (A)  | 12.74 | 12.77 | 12.81 | 12.84 | 12.88 |

NOCT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

**MECHANICAL DATA**

|                      |  |
|----------------------|--|
| Solar Cells          | Monocrystalline  |
| No. of cells         | 132 cells  |
| Module Dimensions    | 2382×1134×30 mm (93.78×44.65×1.18 inches)  |
| Weight               | 28.6kg (63.1 lb)   |
| Glass                | 3.2 mm (0.13 inches), High Transmission, Tempered Glass  |
| Encapsulant material | EVA/POE  |
| Backsheet            | White  |
| Frame                | 30mm(1.18 inches) Anodized Aluminium Alloy   |
| J-Box                | IP 68 rated  |
| Cables               | Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ),<br>Portrait: 350/280 mm(13.78/11.02 inches)<br>Length can be customized |
| Connector            | TS4 Plus / TS4   |

**TEMPERATURE RATINGS**

|   |             |
|---|-------------|
| NOCT (Nominal Operating Cell Temperature) | 43°C (±2°C) |
| Temperature Coefficient of $P_{MAX}$      | -0.34%/°C   |
| Temperature Coefficient of $V_{OC}$       | -0.25%/°C   |
| Temperature Coefficient of $I_{SC}$       | 0.04%/°C    |

**MAXIMUM RATINGS**

|                         |                |
|-------------------------|----------------|
| Operational Temperature | -40~+85°C      |
| Maximum System Voltage  | 1500V DC (IEC) |
| Max Series Fuse Rating  | 30A            |

**WARRANTY**

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

(Please refer to product warranty for details)

**PACKAGING CONFIGURATION**

Modules per box: 36 pieces  
Modules per 40' container: 720 pieces