



BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-DE09.05

PRODUCT RANGE: 380-395W

395W+

MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

20.5%

MAXIMUM EFFICIENCY



Outstanding visual appearance

- Designed with aesthetics in mind
- Excellent cell color control by dedicated cell blackening treatment and machine selection.
- Thinner wires that appear all black at a distance



High customer value

- Lowest guaranteed first year and annual degradation;
- Designed for compatibility with existing mainstream system components
- Higher return on Investment



High power up to 395W

- Up to 20.5% module efficiency with high density interconnect technology
- Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection



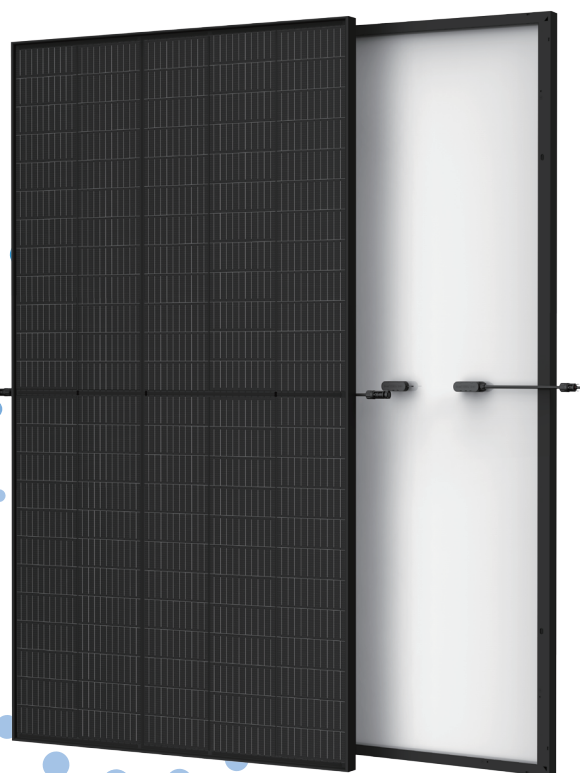
High reliability

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

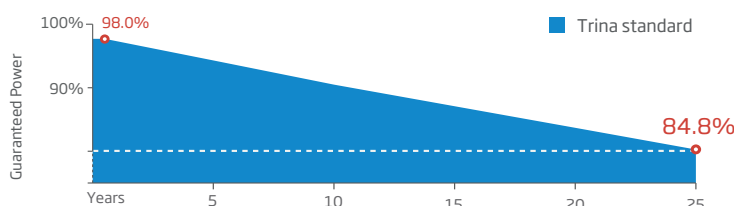


High energy yield

- 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



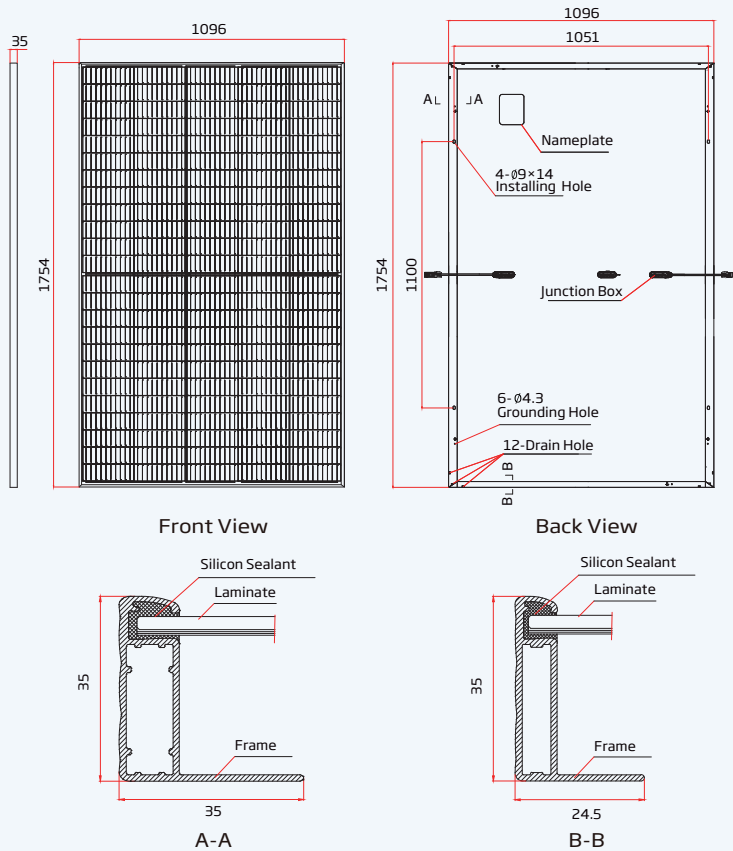
Comprehensive Products and System Certificates



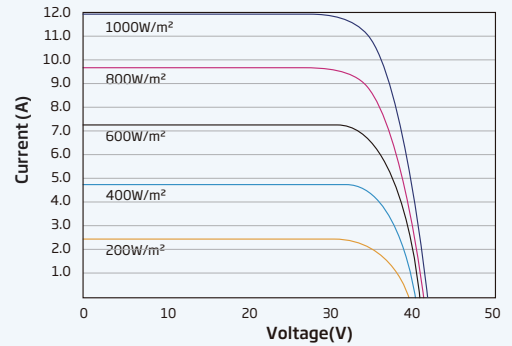
IEC61215/IEC61730/IEC61701/IEC62716
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



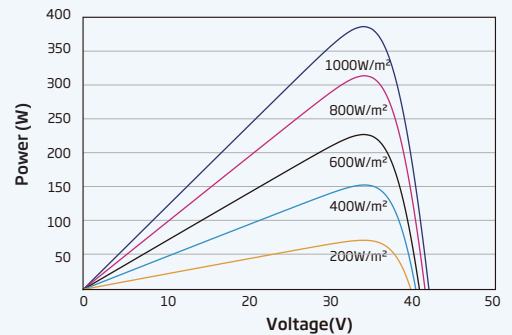
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(390 W)



P-V CURVES OF PV MODULE(390W)



ELECTRICAL DATA (STC)

| Parameter | 380 | 385 | 390 | 395 |
|--|--------|-------|-------|-------|
| Peak Power Watts-P _{MAX} (Wp)* | 380 | 385 | 390 | 395 |
| Power Tolerance-P _{MAX} (W) | 0 ~ +5 | | | |
| Maximum Power Voltage-V _{MPP} (V) | 33.6 | 33.8 | 34.0 | 34.0 |
| Maximum Power Current-I _{MPP} (A) | 11.31 | 11.39 | 11.47 | 11.62 |
| Open Circuit Voltage-V _{OC} (V) | 40.6 | 40.8 | 41.0 | 41.2 |
| Short Circuit Current-I _{SC} (A) | 11.83 | 11.90 | 11.97 | 12.03 |
| Module Efficiency η _m (%) | 19.8 | 20.0 | 20.3 | 20.5 |

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5. *Measuring tolerance: ±3%.

ELECTRICAL DATA (NOCT)

| Parameter | 287 | 290 | 295 | 298 |
|--|------|------|------|------|
| Maximum Power-P _{MAX} (Wp) | 287 | 290 | 295 | 298 |
| Maximum Power Voltage-V _{MPP} (V) | 31.7 | 31.9 | 32.3 | 32.5 |
| Maximum Power Current-I _{MPP} (A) | 9.04 | 9.10 | 9.13 | 9.18 |
| Open Circuit Voltage-V _{OC} (V) | 38.2 | 38.4 | 38.6 | 38.7 |
| Short Circuit Current-I _{SC} (A) | 9.53 | 9.59 | 9.65 | 9.69 |

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

MECHANICAL DATA

| | |
|----------------------|---|
| Solar Cells | Monocrystalline |
| No. of cells | 120 cells |
| Module Dimensions | 1754×1096×35 mm (69.06×43.15×1.38 inches) |
| Weight | 21.2 kg (46.7 lb) |
| Glass | 3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass |
| Encapsulant material | EVA |
| Backsheet | Black-White |
| Frame | 35mm(1.38 inches) Anodized Aluminium Alloy |
| J-Box | IP 68 rated |
| Cables | Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), Portrait: 280/280 mm(11.02/11.02 inches) Landscape: 1100/1100 mm(43.31/43.31 inches) |
| Connector | MC4 EVO2 / TS4* |

*Please refer to regional datasheet for specified connector.

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 | 20A |

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: 31 pieces
Modules per 40' container: 806 pieces