

Vertex S

BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-XXXDE09.05

POWER RANGE: 380-395W

395W+

MAXIMUM POWER OUTPUT

0~+5W

BINNING 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



Small in size, big on power

- Small form factor. Generate a huge amount of energy even in limited space.
- Up to 395W, 20.5% module efficiency with high density interconnect technology
- Mono Perc Cell and Multi-busbar technology for better light trapping effect, lower series resistance and improved current collection
- Reduce installation cost with higher power bin and efficiency
- Boost performance in warm weather lower temperature coefficient (-0.34%) and operating temperature



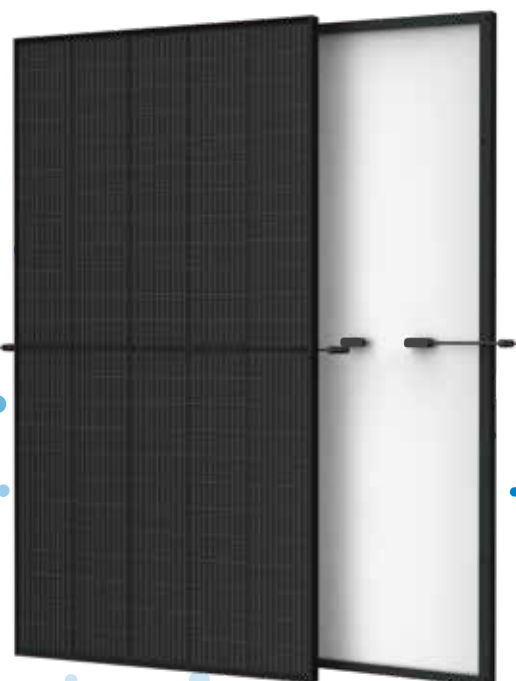
Universal solution for residential and C&I rooftops

- Designed for compatibility with existing mainstream optimizers, inverters and mounting systems
- Perfect size and low weight. Easy for handling. Economy for transporting
- Diverse installation solutions. Flexible for system deployment

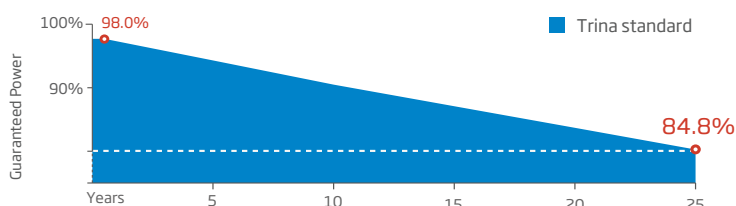


High Reliability

- 15 year product warranty
- 25 year performance warranty with lowest degradation;
- Minimized micro-cracks with innovative non-destructive cutting technology
- Fire Class rating C



Trina Solar's Backsheet Performance Warranty



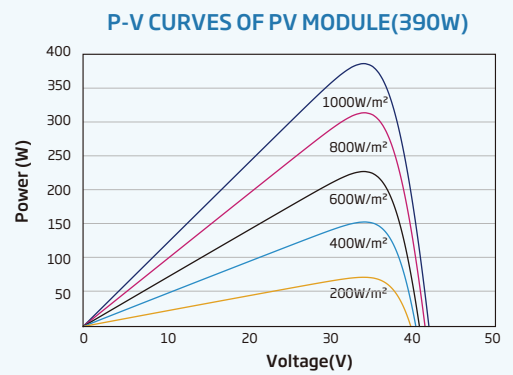
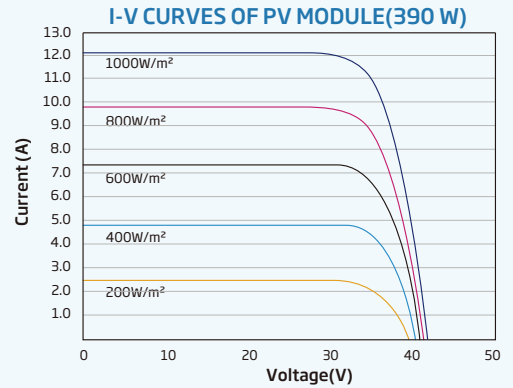
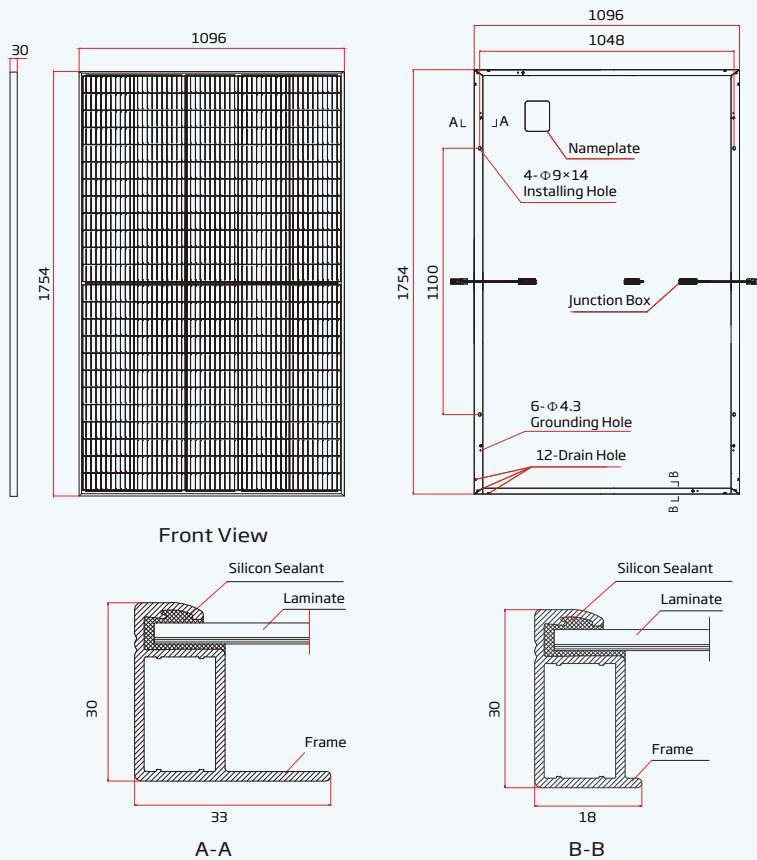
Comprehensive Products and System Certificates



IEC61215/IEC61730
 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)



ELECTRICAL DATA (STC) TSM-XXXDE09.05(XXX=380-395)

| Peak Power Watts-P _{MAX} (Wp)* | 380 | 385 | 390 | 395 |
|--|-------|--------|-------|-------|
| Binning Tolerance-P _{MAX} (W) | | 0 ~ +5 | | |
| Maximum Power Voltage-V _{MPP} (V) | 33.4 | 33.6 | 33.8 | 34.0 |
| Maximum Power Current-I _{MPP} (A) | 11.38 | 11.46 | 11.54 | 11.62 |
| Open Circuit Voltage-V _{OC} (V) | 40.4 | 40.6 | 40.8 | 41.0 |
| Short Circuit Current-I _{SC} (A) | 12.00 | 12.07 | 12.14 | 12.21 |
| 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)

| | | | | |
|--|------|------|------|------|
| Maximum Power-P _{MAX} (Wp) | 286 | 290 | 294 | 298 |
| Maximum Power Voltage-V _{MPP} (V) | 31.4 | 31.6 | 31.8 | 31.9 |
| Maximum Power Current-I _{MPP} (A) | 9.12 | 9.18 | 9.24 | 9.32 |
| Open Circuit Voltage-V _{OC} (V) | 38.0 | 38.2 | 38.4 | 38.6 |
| Short Circuit Current-I _{SC} (A) | 9.67 | 9.73 | 9.78 | 9.84 |

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 | 1754×1096×30 mm (69.06×43.15×1.18 inches) |
| Weight | 21.0 kg (46.3 lb) |
| Glass | 3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass |
| Encapsulant material | EVA/POE |
| Backsheet | Black-White |
| Frame | 30mm(1.18 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 EV02 / 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* | 20A / 25A |

*Default 20A / 25A upon special request

WARRANTY

15 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: 936 pieces