

Vertex S

TRANSPARENT BACKSHEET MODULE

PRODUCT: TSM-DE09C.07

PRODUCT RANGE: 380-400W

400W

MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

20.8%

MAXIMUM EFFICIENCY



High value

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



Smaller panel, bigger power generation

- Small format module allow greater energy generation in limited space.
- Up to 400W, 20.8% 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.



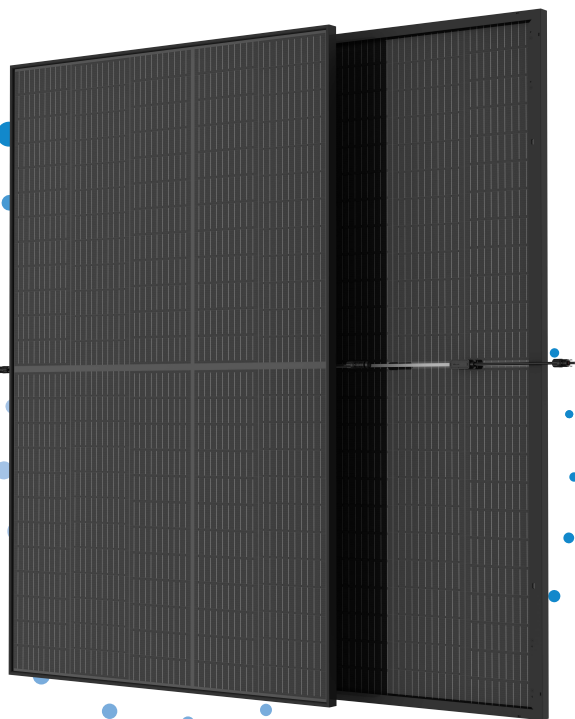
Universal solution for residential and C&I rooftops

- 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.

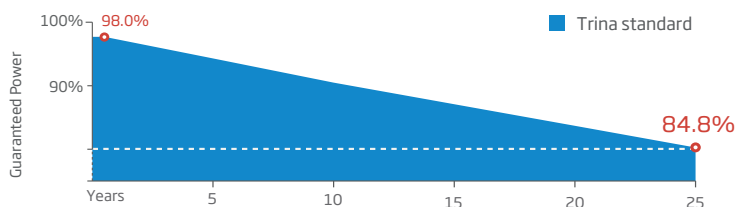


High Reliability

- 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.



Trina Solar's Backsheet Performance Warranty



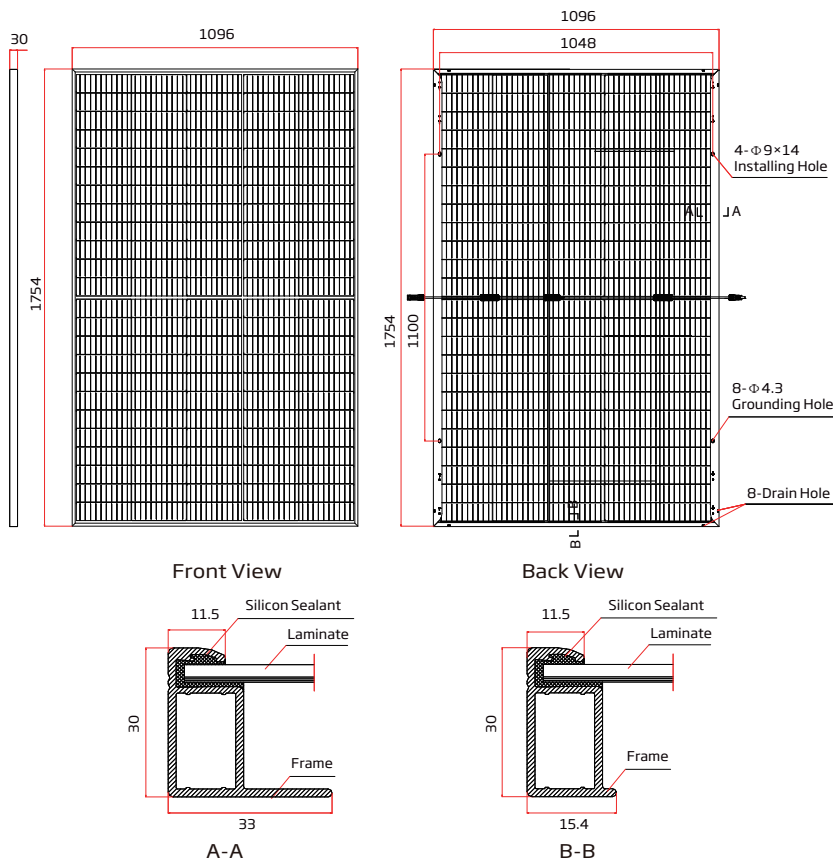
Comprehensive Products and System Certificates



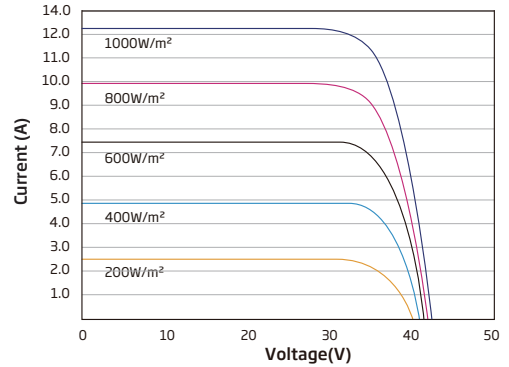
IEC61215/IEC61730/IEC61701/IEC62716/UL61730
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



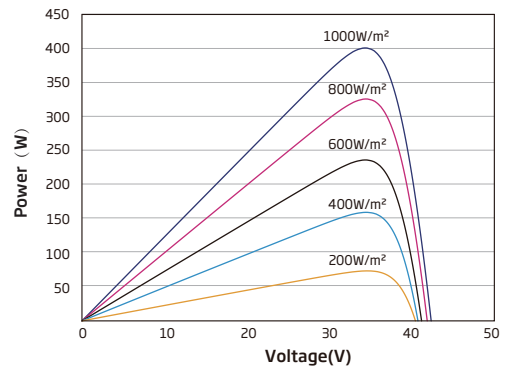
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(400W)



P-V CURVES OF PV MODULE(400W)



ELECTRICAL DATA (STC)

Peak Power Watts – P _{MAX} (Wp)*	380	385	390	395	400
Power Tolerance – P _{MAX} (W)	0 ~ +5				
Maximum Power Voltage – V _{MPP} (V)	33.4	33.6	33.8	34.0	34.2
Maximum Power Current – I _{MPP} (A)	11.38	11.46	11.54	11.62	11.70
Open Circuit Voltage – V _{OC} (V)	40.4	40.6	40.8	41.0	41.2
Short Circuit Current – I _{SC} (A)	12.00	12.07	12.14	12.21	12.28
Module Efficiency η _m (%)	19.8	20.0	20.3	20.5	20.8

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

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

Total Equivalent power – P _{MAX} (Wp)	407	412	417	423	428
Maximum Power Voltage – V _{MPP} (V)	33.4	33.6	33.8	34.0	34.2
Maximum Power Current – I _{MPP} (A)	12.19	12.26	12.34	12.44	12.51
Open Circuit Voltage – V _{OC} (V)	40.4	40.6	40.8	41.0	41.2
Short Circuit Current – I _{SC} (A)	12.92	13.00	13.08	13.20	13.25
Irradiance ratio (rear/front)	10%				

Power Bifaciality: 70±5%.

ELECTRICAL DATA (NOCT)

Maximum Power – P _{MAX} (Wp)	286	290	294	298	302
Maximum Power Voltage – V _{MPP} (V)	31.4	31.6	31.8	31.9	32.1
Maximum Power Current – I _{MPP} (A)	9.12	9.18	9.24	9.32	9.38
Open Circuit Voltage – V _{OC} (V)	38.0	38.2	38.4	38.6	38.8
Short Circuit Current – I _{SC} (A)	9.67	9.73	9.78	9.84	9.90

MECHANICAL DATA

Solar Cells	210mm Monocrystalline Bifacial
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	Transparent
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) Length can be customized
Connector	MC4 EVO2

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) 1500V DC (UL)
Max Series Fuse Rating	20A

WARRANTY

25 year Product Workmanship Warranty
25 year Power Warranty
2% first year degradation
0.55% annual power degradation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box:	36 pieces
Modules per 40' container:	828 pieces