



BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-DE18M.08(II)

PRODUCT RANGE: 490-515W

515W

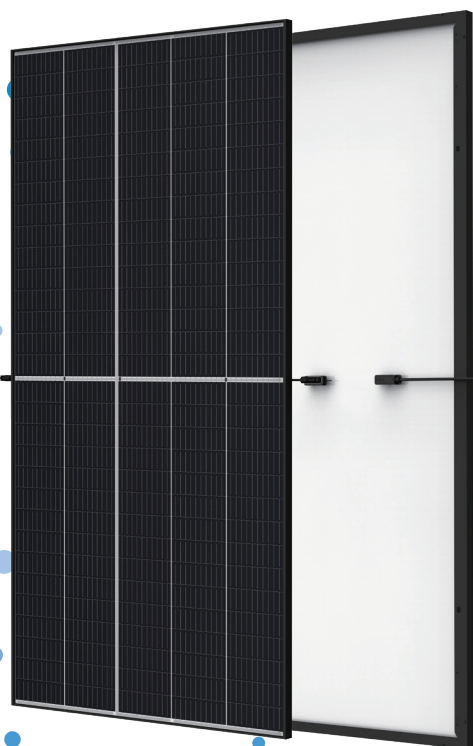
MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

21.4%

MAXIMUM EFFICIENCY



High power & efficiency

- Maximum energy harvesting from roofs
- 60W higher than the previous generation



Aesthetics

- Black frame design for an attractive appearance



Cutting edge technology

- Industry-leading 210mm triple-cut solar cells
- Best-in-class engineering, manufacturing processes and quality control
- Assembly in fully automated and newly built state-of-the-art factories



High quality

- Extra protection with extended 15-year product warranty and 25-year performance warranty
- Beyond industry-standard hail test passed: 35mm hail size
- Carefully selected materials for the best reliability also in demanding climates
- Snow load up to 6000 pa, wind load up to 2400pa



Easy design & installation

- Mainstream rooftop mounting methods approved
- High compatibility with mainstream inverters and optimizers



Optimized BOS cost

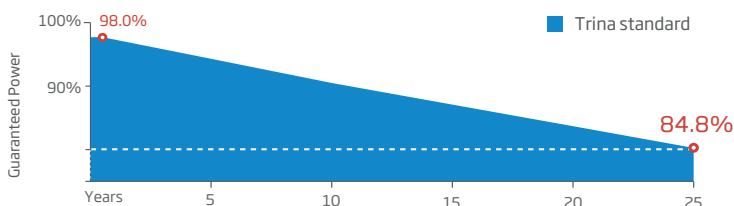
- Lower cost for structure, cable, workmanship per Wp



Stock efficiency

- Only one stock item to fit all application scenarios on larger rooftops

Trina Solar's Vertex Backsheet Performance Warranty



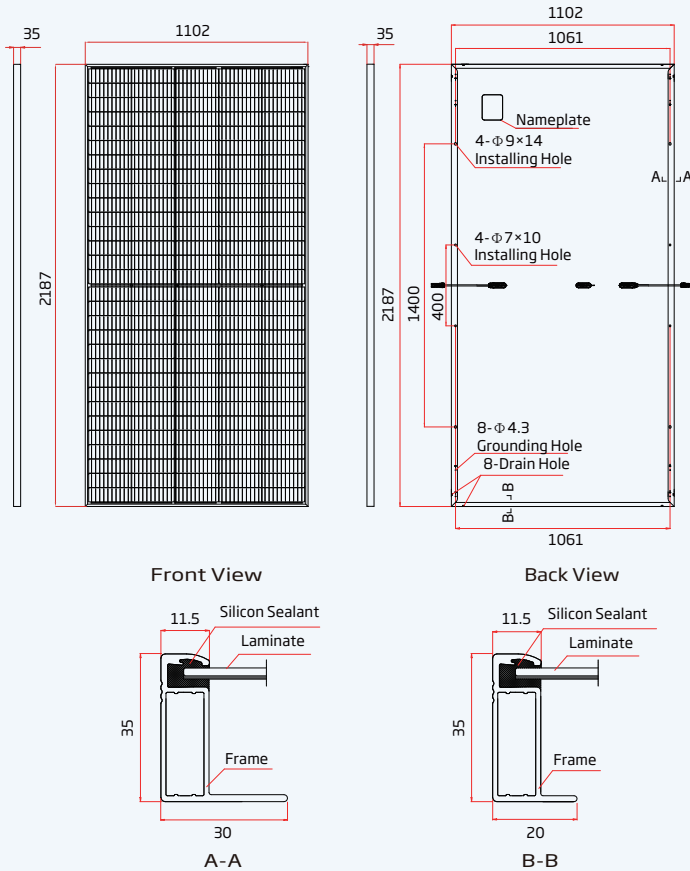
Comprehensive Products and System Certificates



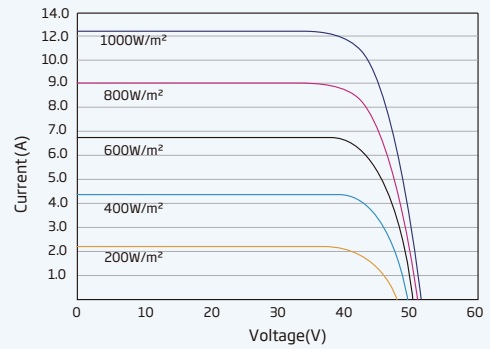
IEC61215/IEC61730/IEC61701/IEC62716/UL61730
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



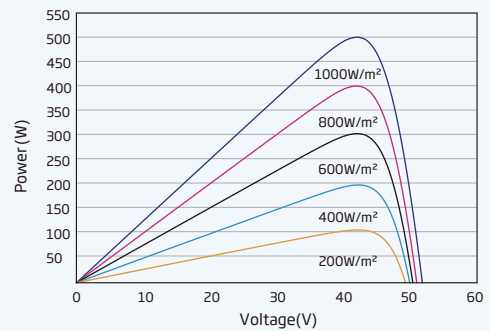
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(500 W)



P-V CURVES OF PV MODULE(500W)



ELECTRICAL DATA (STC)

Peak Power Watts -P _{MAX} (Wp)*	490	495	500	505	510	515
Power Tolerance-P _{MAX} (W)	0 ~ +5					
Maximum Power Voltage -V _{MPP} (V)	42.4	42.6	42.8	43.0	43.2	43.4
Maximum Power Current -I _{MPP} (A)	11.56	11.63	11.69	11.75	11.81	11.87
Open Circuit Voltage -V _{OC} (V)	51.3	51.5	51.7	51.9	52.1	52.3
Short Circuit Current -I _{SC} (A)	12.14	12.21	12.28	12.35	12.42	12.49
Module Efficiency η _m (%)	20.3	20.5	20.7	21.0	21.2	21.4

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

ELECTRICAL DATA (NOCT)

Maximum Power -P _{MAX} (Wp)	369	373	377	381	385	388
Maximum Power Voltage -V _{MPP} (V)	40.0	40.2	40.4	40.6	40.5	40.7
Maximum Power Current -I _{MPP} (A)	9.22	9.28	9.33	9.38	9.50	9.53
Open Circuit Voltage -V _{OC} (V)	48.2	48.4	48.6	48.8	49.0	49.2
Short Circuit Current -I _{SC} (A)	9.78	9.84	9.90	9.95	10.01	10.06

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

MECHANICAL DATA

Solar Cells	Monocrystalline
No. of cells	150 cells
Module Dimensions	2187x1102x35 mm (86.10×43.39×1.38 inches)
Weight	26.3 kg (58.0 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA
Backsheet	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) Length can be customized
Connector	MC4 EV02 / 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) 1500V DC (UL)
Max Series Fuse Rating	20A

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: 31 pieces
 Modules per 40' container: 620 pieces