



## BACKSHEET MONOCRYSTALLINE MODULE

PRODUCT: TSM-XXXDE18M.08(II)

PRODUCT RANGE: 485-510W

# 510W

MAXIMUM POWER OUTPUT

# 0~+5W

BINNING TOLERANCE

# 21.2%

MAXIMUM EFFICIENCY



### High Mono Perc 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



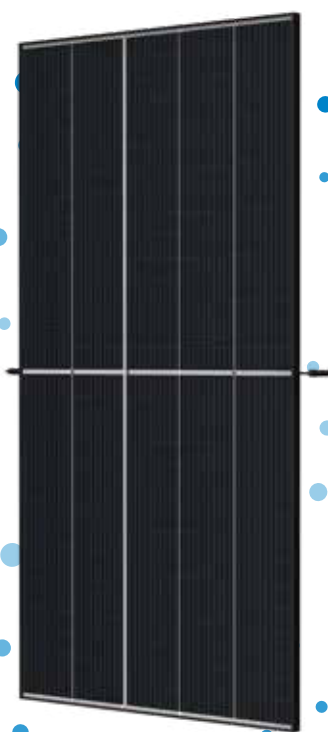
### Optimized BOS cost

- Lower cost for structure, cable, workmanship per Wp

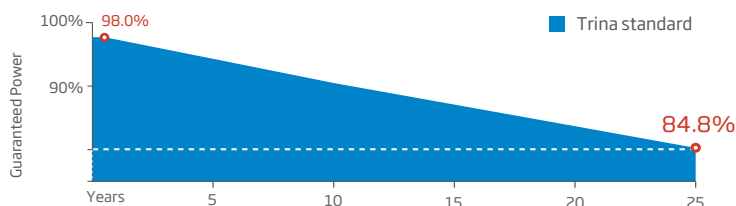


### Stock efficiency

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



### Trina Solar's Vertex Backsheet Performance Warranty



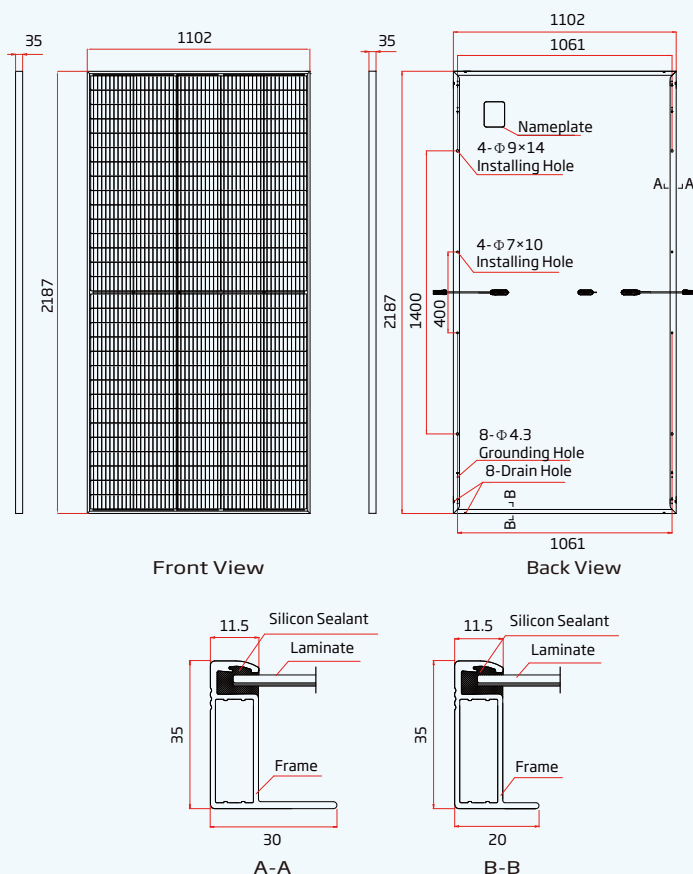
### Comprehensive Products and System Certificates



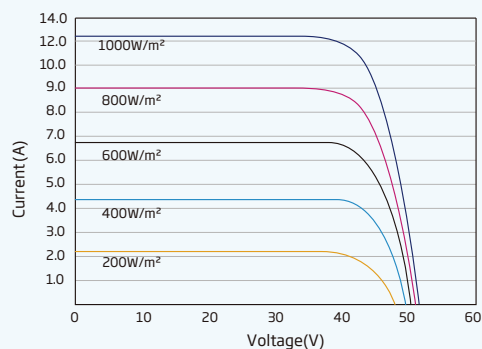
IEC61215/IEC61730/IEC61701/IEC62716/UL61730  
 ISO 9001: Quality Management System  
 ISO 14001: Environmental Management System  
 ISO14064: Greenhouse Gases Emissions Verification  
 ISO45001: Occupational Health and Safety Management System



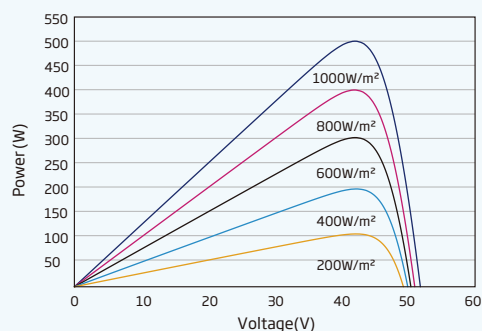
## DIMENSIONS OF PV MODULE(mm)



## I-V CURVES OF PV MODULE(500 W)



## P-V CURVES OF PV MODULE(500W)



## ELECTRICAL DATA (STC) - TSM-XXXDE18M.08(II) (XXX=480-510)

Peak Power Watts-P <sub>MAX</sub> (Wp)*	485	490	495	500	505	510
Binning Tolerance-P <sub>MAX</sub> (W)	0 ~ +5					
Maximum Power Voltage-V <sub>MPP</sub> (V)	42.2	42.4	42.6	42.8	43.0	43.2
Maximum Power Current-I <sub>MPP</sub> (A)	11.49	11.56	11.63	11.69	11.75	11.81
Open Circuit Voltage-V <sub>OC</sub> (V)	51.1	51.3	51.5	51.7	51.9	52.1
Short Circuit Current-I <sub>SC</sub> (A)	12.07	12.14	12.21	12.28	12.35	12.42
Module Efficiency η <sub>m</sub> (%)	20.1	20.3	20.5	20.7	21.0	21.2

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

## ELECTRICAL DATA (NOCT)

Maximum Power-P <sub>MAX</sub> (Wp)	365	369	373	377	381	385
Maximum Power Voltage-V <sub>MPP</sub> (V)	39.9	40.0	40.2	40.4	40.6	40.5
Maximum Power Current-I <sub>MPP</sub> (A)	9.17	9.22	9.28	9.33	9.38	9.50
Open Circuit Voltage-V <sub>OC</sub> (V)	48.1	48.2	48.4	48.6	48.8	49.0
Short Circuit Current-I <sub>SC</sub> (A)	9.73	9.78	9.84	9.90	9.95	10.01

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 4.0mm² (0.006 inches²), Portrait: 280/280 mm (11.02/11.02 inches) Length can be customized
Connector	Staubli MC4 EVO 2 / Trina Solar TS4

## TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P <sub>MAX</sub>	-0.34%/°C
Temperature Coefficient of V <sub>OC</sub>	-0.25%/°C
Temperature Coefficient of I <sub>SC</sub>	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