



N-TYPE MODULE

PRODUCT: TSM-NE09RC.05

PRODUCT RANGE: 400W -425W

425W

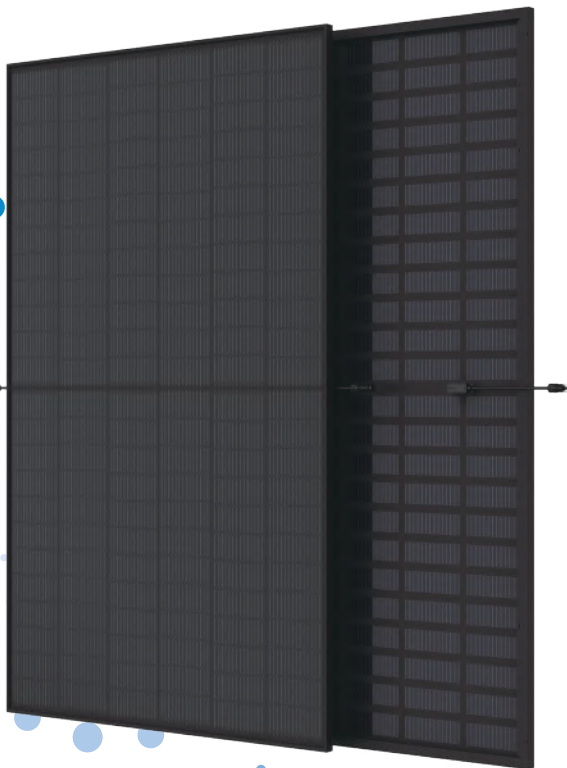
MAXIMUM POWER OUTPUT

0~+5W

POSITIVE POWER TOLERANCE

21.3%

MAXIMUM EFFICIENCY



Smaller panel, Bigger power generation

- Up to 425W, 21.3% module efficiency.
- Reduce installation cost with higher module power on the roof.
- Boost performance in warm weather with lower temperature coefficient



High Reliability

- Innovative non-destructive cell cutting technology for improved mechanical resistance and strength



Lower Degradation, longer warranty, higher output

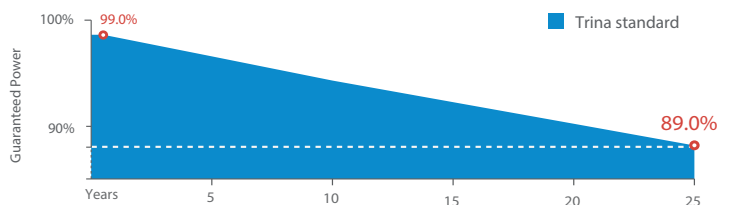
- First-year degradation 1% and annual degradation at 0.4%
- Up to 25 years product warranty and 25 years power warranty



Universal solution for residential and C&I rooftops

- Easy for integration, designed for compatibility with existing mainstream inverters and diverse mounting systems
- Perfect size and low weight for handling and installation
- Most valuable solution on low load capacity rooftops
- Mechanical performance up to 6000 Pa positive load and 4000 Pa negative load

Trina Solar's Vertex Bifacial Dual Glass Performance Warranty



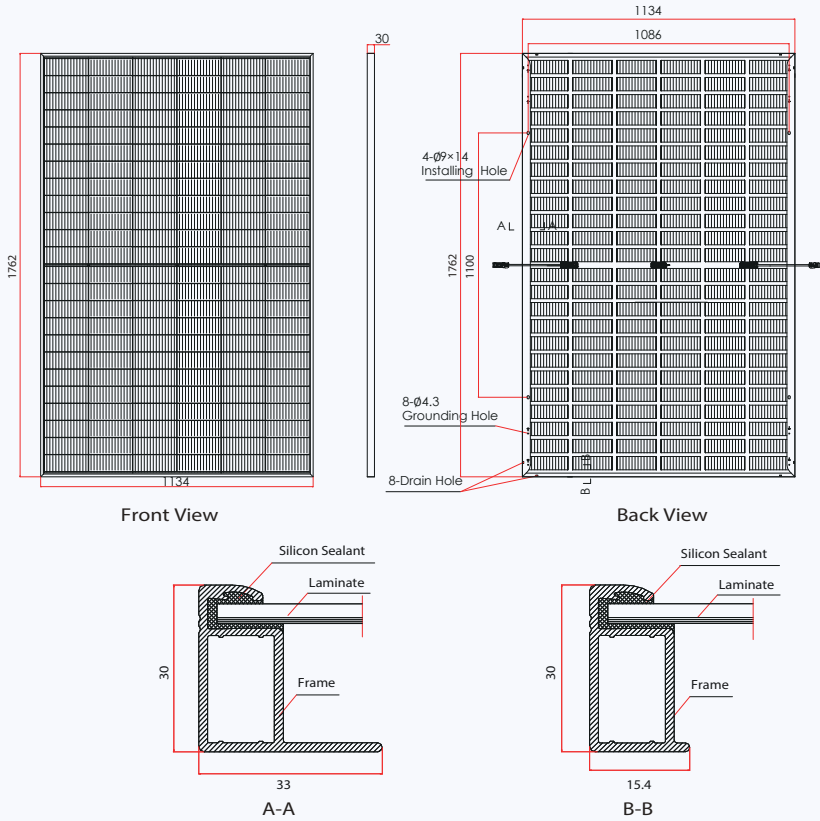
Comprehensive Products and System Certificates



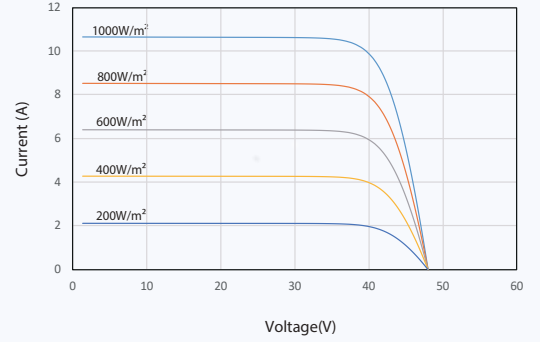
IEC61215/IEC61730/IEC61701/IEC62716/UL61730
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO14064: Greenhouse Gases Emissions Verification
 ISO45001: Occupational Health and Safety Management System



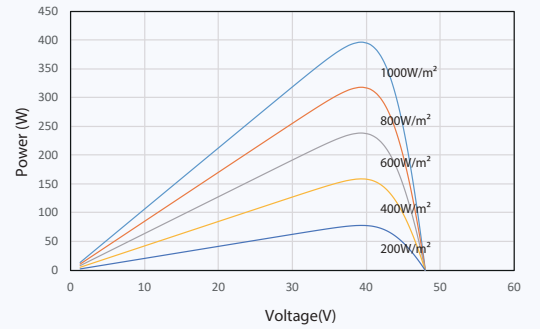
DIMENSIONS OF PV MODULE(mm)



I-V CURVES OF PV MODULE(420 W)



P-V CURVES OF PV MODULE(420W)



ELECTRICAL DATA (STC)

Peak Power Watts-P _{MAX} (Wp)*	400	405	410	415	420	425
Power Tolerance-P _{MAX} (W)	0 ~ +5					
Maximum Power Voltage-V _{MPP} (V)	41.3	41.7	42.1	42.5	42.8	43.2
Maximum Power Current-I _{MPP} (A)	9.68	9.71	9.73	9.77	9.80	9.84
Open Circuit Voltage-V _{OC} (V)	49.2	49.6	50.1	50.5	50.9	51.4
Short Circuit Current-I _{SC} (A)	10.30	10.33	10.37	10.40	10.43	10.47
Module Efficiency η _m (%)	20.0	20.3	20.5	20.8	21.0	21.3

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)	426	431	437	442	447	453
Maximum Power Voltage-V _{MPP} (V)	41.3	41.7	42.1	42.5	42.8	43.2
Maximum Power Current-I _{MPP} (A)	10.31	10.34	10.36	10.41	10.44	10.48
Open Circuit Voltage-V _{OC} (V)	49.2	49.6	50.1	50.5	50.9	51.4
Short Circuit Current-I _{SC} (A)	10.97	11.00	11.04	11.08	11.11	11.15
Irradiance ratio (rear/front)	10%					

Power Bifaciality:65±10%.

ELECTRICAL DATA (NOCT)

Maximum Power-P _{MAX} (Wp)	302	308	312	316	319	324
Maximum Power Voltage-V _{MPP} (V)	38.6	39.0	39.3	39.7	40.0	40.4
Maximum Power Current-I _{MPP} (A)	7.88	7.91	7.93	7.96	7.98	8.01
Open Circuit Voltage-V _{OC} (V)	46.6	47.0	47.5	47.8	48.2	48.7
Short Circuit Current-I _{SC} (A)	8.30	8.32	8.36	8.38	8.41	8.44

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

MECHANICAL DATA

Solar Cells	Topcon Bifacial
No. of cells	144cells
Module Dimensions	1762x1134x30 mm (69.37x44.65x1.18 inches)
Weight	21.8kg (48.06 lb)
Front Glass	3.2 mm (0.12inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant material	EVA/POE
BackSheet	Black Grid Transparent Backsheet
Frame	30mm (1.18 inches) Anodized Aluminium Alloy, Black
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), Landscape: N 1100 mm /P 1100 mm (43.31/43.31 inches)
Connector	MC4 Evo2
Fire Type	Type 1 or Type 2

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of P _{MAX}	- 0.30%/°C
Temperature Coefficient of Voc	- 0.25%/°C
Temperature Coefficient of Isc	0.04%/°C

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
Max Series Fuse Rating	20A

WARRANTY

- 25 year Product Workmanship Warranty
- 25 year Power Warranty
- 1% first year degradation
- 0.4% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

- Modules per box: 36 pieces
- Modules per 40' container: 792 pieces