THE

TALLMAX M

FRAMED 252 LAYOUT MODULE

252 LAYOUT
MONOCRYSTALLINE MODULE

470-490W
POWER OUTPUT RANGE

20.8%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

PRODUCTS	POWER RANGE
TSM-DE15V(II)	470-490W

High power

- Up to 490W front power and 20.8% module efficiency with third-cut and MBB (Multi Busbar) technology bringing more BOS savings
- Lower resistance and good reflection effect of MBB ensures higher power

High reliability

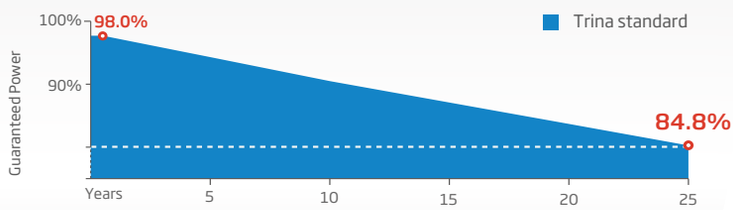
- Improved PID resistance through cell process and module material control
- Resistant to salt, acid, and ammonia
- Proven to be reliable in high temperature and humidity areas
- Mechanical performance: Up to 5400 Pa positive load and 2400 Pa negative load

High energy generation

- Excellent IAM and low light performance validated by 3rd party with cell process and module material optimization
- Better anti-shading performance and lower operating temperature

PERFORMANCE WARRANTY

12 Year Product Warranty · 25 Year Power Warranty



From the 2nd year to the 25th year, the average annual power decline will be no more than 0.6%.

Founded in 1997, Trina Solar is the world's leading total solution provider for solar energy. With local presence around the globe, Trina Solar is able to provide exceptional service to each customer in each market and deliver our innovative, reliable products with the backing of Trina as a strong, bankable brand. Trina Solar now distributes its PV products to over 100 countries all over the world. We are committed to building strategic, mutually beneficial collaborations with installers, developers, distributors and other partners in driving smart energy together.

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716/UL61703
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupation Health and Safety Management System

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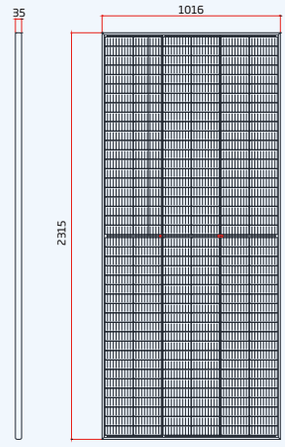
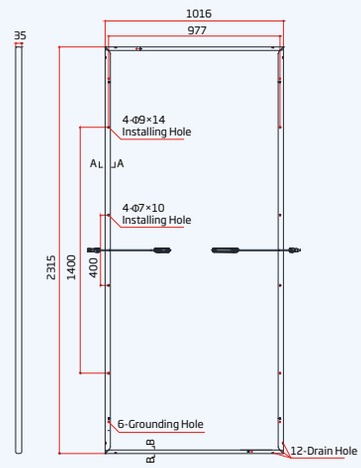
TALLMAX

252 LAYOUT MODULE

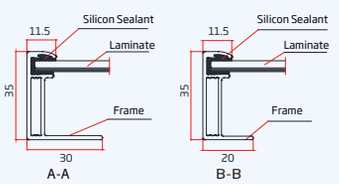
DIMENSIONS OF PV MODULE(mm)



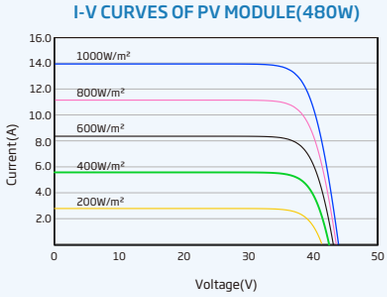
Front View



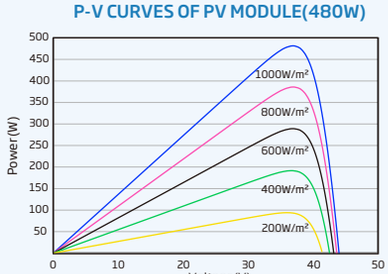
Back View



I-V CURVES OF PV MODULE(480W)



P-V CURVES OF PV MODULE(480W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	470	475	480	485	490
Power Tolerance-P_{MAX} (W)	0 ~ +5				
Maximum Power Voltage-V_{MPP} (V)	36.1	36.2	36.3	36.4	36.5
Maximum Power Current-I_{MPP} (A)	13.02	13.12	13.23	13.33	13.43
Open Circuit Voltage-V_{OC} (V)	43.0	43.1	43.2	43.3	43.4
Short Circuit Current-I_{SC} (A)	13.73	13.80	13.92	13.97	14.07
Module Efficiency η_m (%)	20.0	20.2	20.4	20.6	20.8

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

ELECTRICAL DATA (NOCT)

Maximum Power-P_{MAX} (Wp)	354	358	362	365	369
Maximum Power Voltage-V_{MPP} (V)	33.6	33.8	33.9	34.0	34.1
Maximum Power Current-I_{MPP} (A)	10.53	10.59	10.68	10.72	10.80
Open Circuit Voltage-V_{OC} (V)	40.5	40.6	40.7	40.7	40.8
Short Circuit Current-I_{SC} (A)	11.06	11.12	11.22	11.26	11.34

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

MECHANICAL DATA

Solar Cells	Monocrystalline PERC
Cell Orientation	252 cells (12 × 21)
Module Dimensions	2315 × 1016 × 35 mm (91.14 × 40 × 1.38 inches)
Weight	26.0 kg (57.3 lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA
Backsheet	White
Frame	35 mm (1.38 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²), Portrait: N 450 mm/P 450 mm (17.72/17.72 inches), Landscape: N 1400/P 1400 mm (55.12/55.12 inches)
Connector	MC4 EVO2 / 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℃
Maximum System Voltage	1500V DC (IEC) 1500V DC (UL)
Max Series Fuse Rating	25A

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

WARRANTY

12 year Product Workmanship Warranty
25 year Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 31 pieces
Modules per 40′ container: 620 pieces

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CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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