Mono Multi Solutions

THE

TALLMAX™

FRAMED 144 LAYOUT MODULE

PRODUCTS	POWER RANGE
TSM-DE17M(II)	435-455W

144 LAYOUT
MONOCRYSTALLINE MODULE

435-455W
POWER OUTPUT RANGE

20.8%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

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
ISO 9001: Quality Management System
ISO 14001: Environmental Management System
ISO14064: Greenhouse Gases Emissions Verification
ISO45001: Occupational Health and Safety Management System

High power

- Up to 455W front power and 20.8% module efficiency with half-cut and MBB (Multi Busbar) technology bringing more BOS savings
- Lower resistance of half-cut and good reflection effect of MBB ensure high power

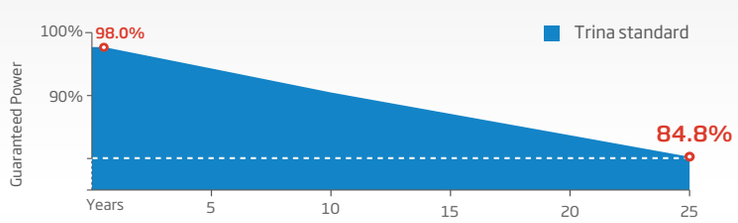
High reliability

- Ensured PID resistance through cell process and module material control
- Resistant to salt, acid and ammonia
- 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
- Lower temp coefficient (-0.36%) and NMOT bring more energy leading to lower LCOE
- Better anti-shading performance and lower operating temperature

PERFORMANCE WARRANTY



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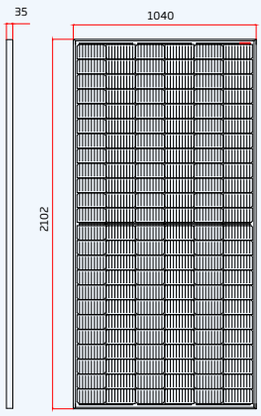
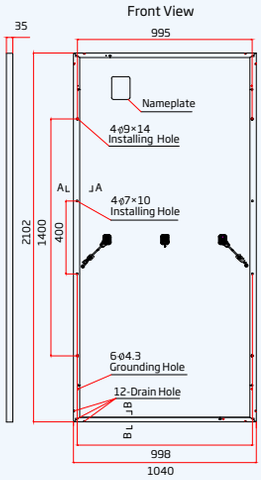
TALLMAX M

144 LAYOUT MODULE

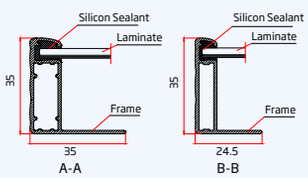
DIMENSIONS OF PV MODULE(mm)



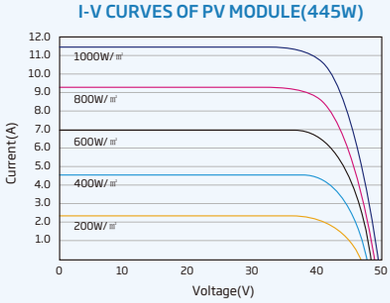
Front View



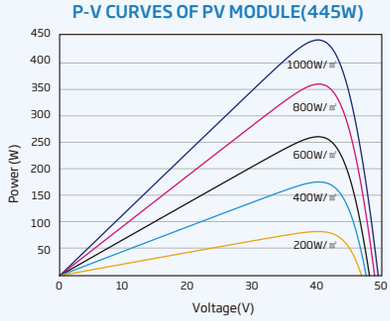
Back View



I-V CURVES OF PV MODULE(445W)



P-V CURVES OF PV MODULE(445W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	435	440	445	450	455
Power Tolerance-P_{MAX} (W)	0 ~ +5				
Maximum Power Voltage-V_{MPP} (V)	40.5	40.7	40.8	41.0	41.2
Maximum Power Current-I_{MPP} (A)	10.74	10.82	10.90	10.98	11.06
Open Circuit Voltage-V_{OC} (V)	49.0	49.2	49.4	49.6	49.8
Short Circuit Current-I_{SC} (A)	11.31	11.39	11.46	11.53	11.61
Module Efficiency η_m (%)	19.9	20.1	20.4	20.6	20.8

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

ELECTRICAL DATA (NMOT)

Maximum Power-P_{MAX} (Wp)	329	333	336	340	344
Maximum Power Voltage-V_{MPP} (V)	38.2	38.4	38.5	38.7	38.9
Maximum Power Current-I_{MPP} (A)	8.61	8.68	8.73	8.80	8.86
Open Circuit Voltage-V_{OC} (V)	46.3	46.4	46.6	46.8	47.0
Short Circuit Current-I_{SC} (A)	9.11	9.17	9.23	9.28	9.35

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

MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	144 cells (6 × 24)
Module Dimensions	2102 ×1040× 35 mm (82.76 × 40.94 × 1.38 inches)
Weight	24.0 kg (52.9lb)
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 280mm/P 280mm(11.02/11.02inches) Landscape: N 1400 mm /P 1400 mm (55.12/55.12 inches)
Connector	MC4 EVO2 / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	41℃ (±3℃)
Temperature Coefficient of P_{MAX}	- 0.36%/℃
Temperature Coefficient of V_{OC}	- 0.26%/℃
Temperature Coefficient of I_{SC}	0.04%/℃

MAXIMUMRATINGS

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

(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
- 2% first year degradation
- 0.55% Annual Power Attenuation

(Please refer to product warranty for details)

PACKAGING CONFIGUREATION

- Modules per box: 30 pieces
- Modules per 40' container: 660 pieces

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

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