THE TALMAX® FRAMED 144 LAYOUT MODULE

144 LAYOUT MONOCRYSTALLINE MODULE

440-465W

POWER OUTPUT RANGE

21.3% 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.

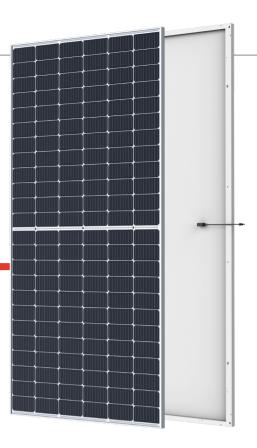
Comprehensive Products and System Certificates

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





PRODUCTS TSM-DE17M(II) POWER RANGE



High power

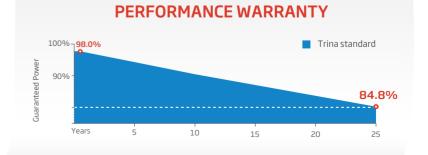
- Up to 465W front power and 21.3% module efficiency with half-cut and MBB (Multi Busbar) technology bringing more BOS savings
- Lower resistance of half-cut and good reflection effect of MBB ensure high power

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

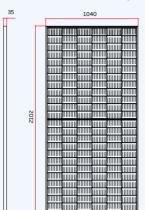
High energy generation

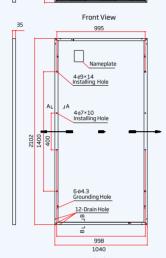
- Excellent IAM and low light performance validated by 3rd party with cell process and module material optimization
- Better anti-shading performance and lower operating temperature



TALLMAX[™]

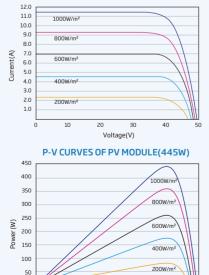
DIMENSIONS OF PV MODULE(mm)





Back View con Sealan Laminate Laminate Frame 24.5 35 A-A B-B

I-V CURVES OF PV MODULE(445W)



30

Voltage(V)

40

ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	440	445	450	455	460	465
Power Tolerance-P _{MAX} (W)			0 ~	+5		
Maximum Power Voltage-V _{MPP} (V)	40.7	40.8	41.0	41.2	41.3	41.8
Maximum Power Current-Impp (A)	10.82	10.90	10.98	11.06	11.13	11.14
Open Circuit Voltage-Voc (V)	49.2	49.4	49.6	49.8	50.0	50.0
Short Circuit Current-Isc (A)	11.39	11.46	11.53	11.61	11.68	11.69
Module Efficiency η_m (%)	20.1	20.4	20.6	20.8	21.0	21.3

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

ELECTRICAL DATA (NOCT)

Maximum Power-P _{MAX} (Wp)	332	336	340	344	347	351
Maximum Power Voltage-V _{MPP} (V)	38.4	38.5	38.7	38.9	39.1	39.4
Maximum Power Current-Impp (A)	8.66	8.71	8.77	8.84	8.89	8.90
Open Circuit Voltage-Voc (V)	46.3	46.5	46.6	46.8	47.0	47.0
Short Circuit Current-Isc (A)	9.18	9.24	9.29	9.36	9.41	9.42

NOCT: 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/POE
Backsheet	White
Frame	35 mm (1.38 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0mm ² (0.006 inches ²), Portrait: N 280mm/P 280mm(11.02/11.02inches) Length can be customized
Connector	MC4 EVO2 / TS4*

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	43°C (±2°C)
Temperature Coefficient of PMAX	- 0.34%/ °C
Temperature Coefficient of Voc	- 0.25%/ °C
Temperature Coefficient of Isc	0.04%/°C

(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)

MAXIMUMRATINGS

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

PACKAGING CONFIGUREATION

Modules per 40' container: 682 pieces

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



www.trinasolar.com

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