THE
TALLMAX ᴹ

FRAMED 144 LAYOUT MODULE

144 LAYOUT
MONOCRYSTALLINE MODULE

PRODUCTS	POWER RANGE
TSM-DE17M(II)	430-450W

430-450W
POWER OUTPUT RANGE

20.6%
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
OHSAS 18001: Occupation Health and Safety
              Management System

High power mono perc

• Up to 450W front power and 20.6% 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
• Certified 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
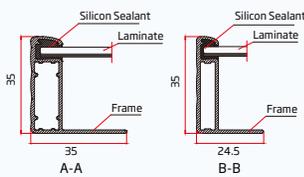• Better anti-shading performance and lower operating temperature

PERFORMANCE WARRANTY

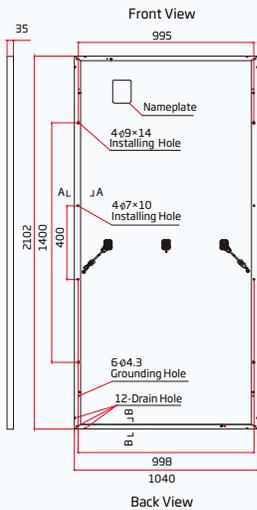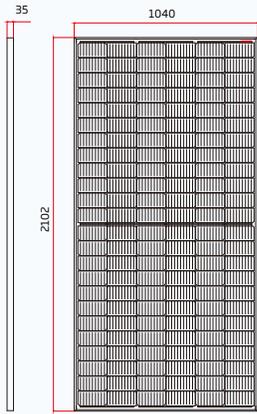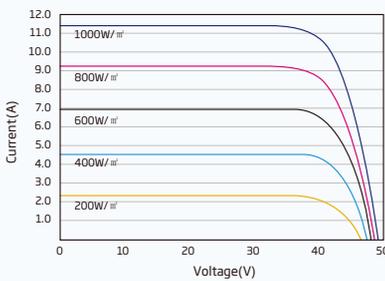#### 10 Year Product Warranty · 25 Year Power Warranty

Guaranteed Power

100%
97.5%
90%
83.1%

Years   5   10   15   20   25

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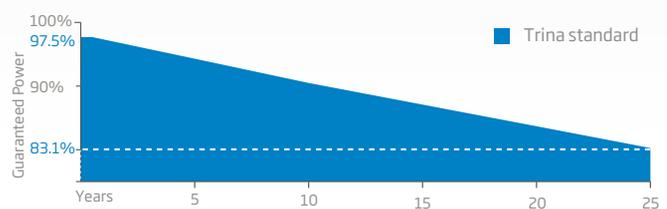
From the 2nd year to the 25th year, the average annual power decline will be no more than 0.6%.

Trinasolar

DIMENSIONS OF PV MODULE(mm)

35 | 1040

2102

Front View

35 | 995

Nameplate

4-φ9×14
Installing Hole

4-φ7×10
Installing Hole

2102 | 1400 | 400

6-φ4.3
Grounding Hole

12-Drain Hole

998
1040

Back View

Silicon Sealant | Silicon Sealant
Laminate | Laminate

35 | 35

Frame | Frame

35 | 24.5

A-A | B-B

I-V CURVES OF PV MODULE(440W)

1000W/㎡
800W/㎡
600W/㎡
400W/㎡
200W/㎡

Current(A) / Voltage(V)

P-V CURVES OF PV MODULE(440W)

1000W/㎡
800W/㎡
600W/㎡
400W/㎡
200W/㎡
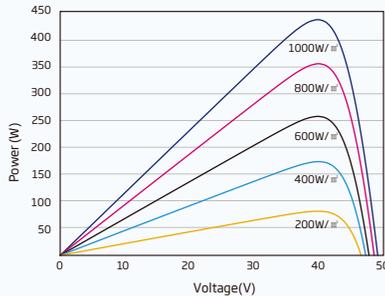
Power (W) / Voltage(V)

ELECTRICAL DATA (STC)

Peak Power Watts-P$_{MAX}$ (Wp)*	430	435	440	445	450
Power Output Tolerance-P$_{MAX}$ (W)	0 ~ +5				
Maximum Power Voltage-V$_{MPP}$ (V)	40.3	40.5	40.7	40.8	41.0
Maximum Power Current-I$_{MPP}$ (A)	10.67	10.74	10.82	10.90	10.98
Open Circuit Voltage-V$_{OC}$ (V)	48.7	49.0	49.2	49.4	49.6
Short Circuit Current-I$_{SC}$ (A)	11.22	11.31	11.39	11.46	11.53
Module Efficiency η$_m$ (%)	19.7	19.9	20.1	20.4	20.6

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

ELECTRICAL DATA (NMOT)

Maximum Power-P$_{MAX}$ (Wp)	325	329	333	336	340
Maximum Power Voltage-V$_{MPP}$ (V)	38.0	38.2	38.4	38.5	38.7
Maximum Power Current-I$_{MPP}$ (A)	8.56	8.61	8.68	8.73	8.80
Open Circuit Voltage-V$_{OC}$ (V)	46.0	46.3	46.4	46.6	46.8
Short Circuit Current-I$_{SC}$ (A)	9.03	9.11	9.17	9.23	9.28

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	TS4

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) 1500V DC (UL)
Max Series Fuse Rating	20A

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

WARRANTY

10 year Product Workmanship Warranty

25 year Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGUREATION

Modules per box: 30 pieces

Modules per 40' container: 660 pieces

Sold in India by: Loop Solar | P: 9971136369 | E: info@loopsolar.com | W: www.loopsolar.com