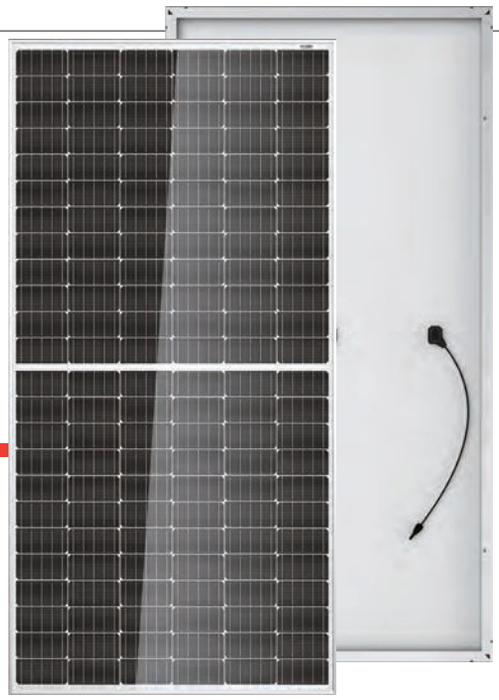
THE

TALLMAX M

FRAMED 144 HALF-CELL MODULE



PRODUCTS	COLOR OF FRAME	POWER RANGE
TSM-DE15H(II)	Silver	380-410W

144-Cell
MONOCRYSTALLINE MODULE

380-410W
POWER OUTPUT RANGE

20.2%
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

UL 61730
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

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High power output

- Reduce BOS cost with high power bin and 1500V system voltage
- New cell string layout and split J-box location reduces the energy loss caused by inter-row shading
- Lower resistance of half-cut cells ensures higher power

High energy generation, low LCOE

- Excellent 3rd party validated IAM and low light performance with cell process and module material optimization
- Integrated LRF(Light Redirecting Film) to enhance power
- Low P_{max} temp coefficient (-0.36%) increases energy production
- Better anti-shading performance and lower operating temperature

Certified to perform in highly challenging environments

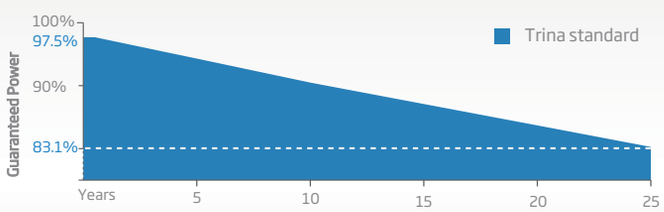
- High PID resistance through cell process and module material control
- Resistant to salt, acid, sand, and ammonia
- Certified to 5400 Pa positive load and 2400 Pa negative load

Easy to install, wide application

- Frame design enables compatibility with standard installation methods
- Deployable for ground mounted and rooftop projects
- Safe and easy to transport, handle, and install

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%.

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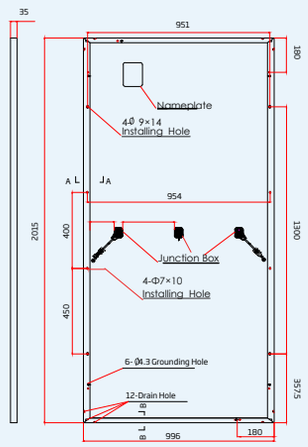
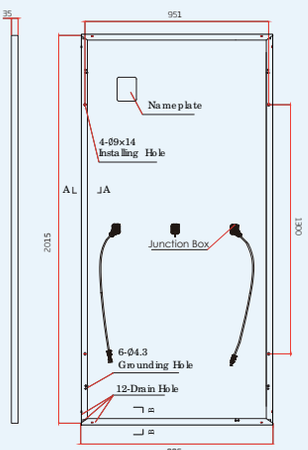
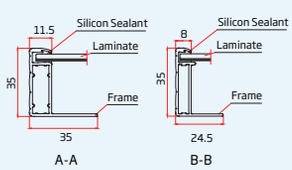
DIMENSIONS OF PV MODULE (mm)



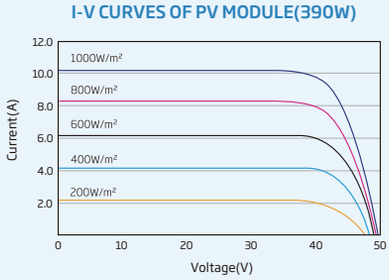
Back View(Portrait)



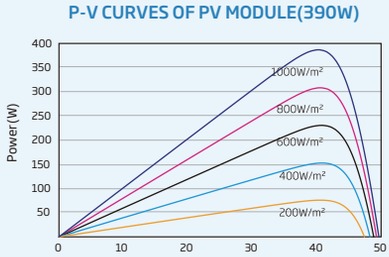
Back View(Landscape)



I-V CURVES OF PV MODULE(390W)



P-V CURVES OF PV MODULE(390W)



ELECTRICAL DATA (STC)

Peak Power Watts-P_{MAX} (Wp)*	380	385	390	395	400	405	410
Power Output Tolerance-P_{MAX} (W)	0 ~ +5						
Maximum Power Voltage-V_{MPP} (V)	39.6	40.1	40.5	40.8	41.1	41.4	41.7
Maximum Power Current-I_{MPP} (A)	9.59	9.61	9.64	9.69	9.74	9.79	9.84
Open Circuit Voltage-V_{OC} (V)	48.1	48.5	49.7	50.1	50.4	50.8	51.2
Short Circuit Current-I_{SC} (A)	9.99	10.03	10.08	10.13	10.18	10.23	10.29
Module Efficiency η_m (%)	18.9	19.2	19.4	19.7	19.9	20.2	20.4

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

ELECTRICAL DATA (NMOT)

Maximum Power-P_{MAX} (Wp)	287	291	296	299	303	307	311
Maximum Power Voltage-V_{MPP} (V)	37.6	37.9	38.6	38.9	39.1	39.4	39.7
Maximum Power Current-I_{MPP} (A)	7.64	7.68	7.66	7.70	7.74	7.78	7.82
Open Circuit Voltage-V_{OC} (V)	45.4	45.8	46.9	47.3	47.6	47.9	48.3
Short Circuit Current-I_{SC} (A)	8.05	8.08	8.12	8.16	8.20	8.24	8.29

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

MECHANICAL DATA

Solar Cells	Monocrystalline PERC
Cell Orientation	144 cells (6 × 24)
Module Dimensions	2015 × 996 × 35 mm (79.33× 39.21× 1.38 inches)
Weight	22.0kg (48.5lb)
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
Fire Type	Type 1 or 2
Connector	Trina TS4/MC4-Evo2
Cables	Photovoltaic Technology Cable 4.0mm² (0.006 inches²) Portrait: N 140mm/P 285mm (5.51/11.22 inches) Landscape: N 1400 mm /P 1400 mm (55.12/55.12 inches)

TEMPERATURE RATINGS

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

MAXIMUM RATINGS

Operational Temperature	-40~+85°C
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

12 year Product Workmanship Warranty

25 year Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per box: 30 pieces

Modules per 40' container: 660 pieces

Pallet dimensions (L x W x H): 2055 x 1120 x 1154 mm

Pallet weight: 701kg (1,546lb)

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

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