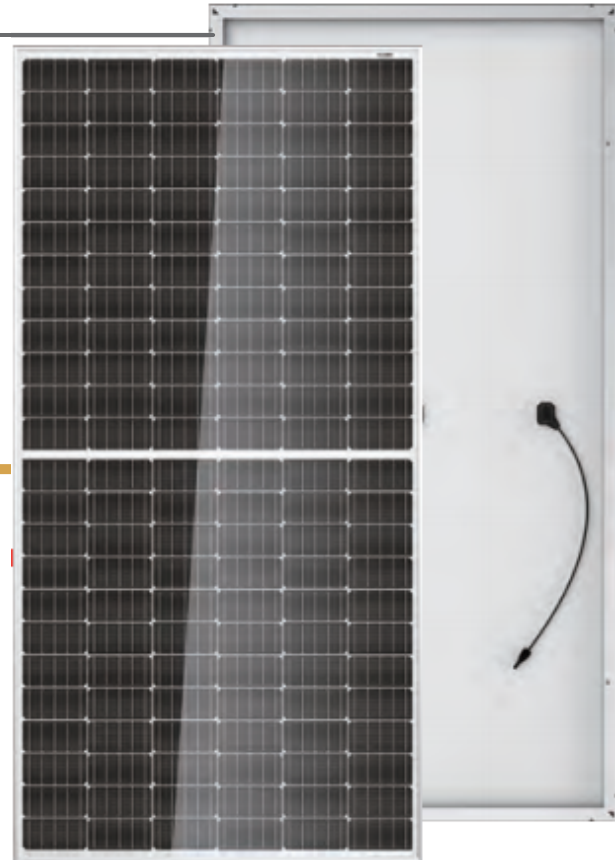


THE  
**TALLMAX**  
FRAMED 144 HALF-CELL MODULE



**144-CELL**  
MONOCRYSTALLINE MODULE

**380-410W**  
POWER OUTPUT RANGE

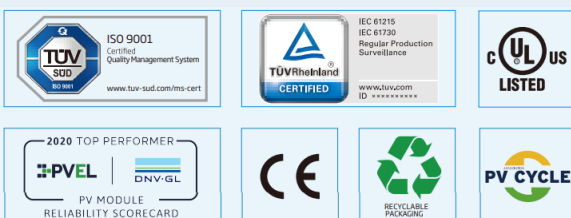
**20.2%**  
MAXIMUM EFFICIENCY

**0~+5W**  
POSITIVE POWER TOLERANCE

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

**Comprehensive Products  
and System Certificates**

UL 61730  
IEC 61215 / IEC 61730 / IEC 61701 / IEC 62716  
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 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 a 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 Pmax temp coefficient (-0.36%) increases energy production
- Better anti-shading performance and lower operating temperature



**Certified to perform in highly challenging environments**

- 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.

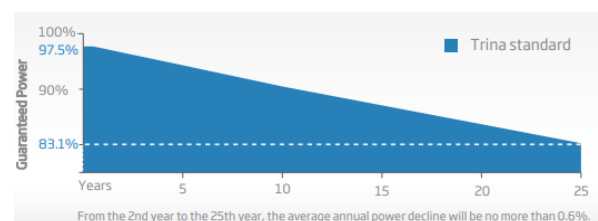


**Easy to install, wide application**

- 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**

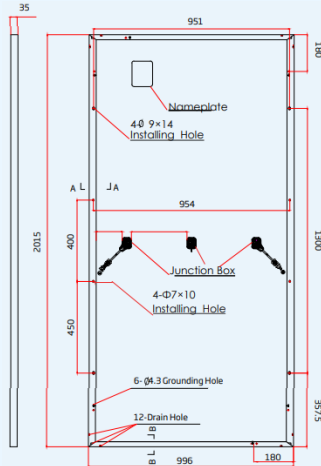
**12 Year Product Warranty · 25 Year Power Warranty**



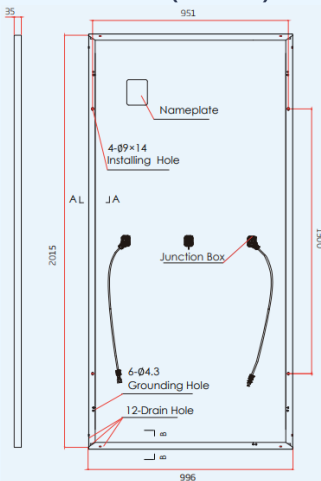
# TALLMAX

## FRAMED 144 HALF-CELL MODULE

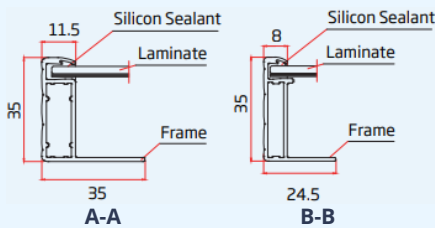
### DIMENSIONS OF PV MODULE(mm)



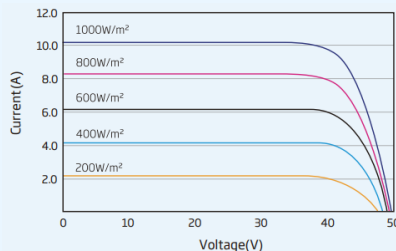
Back View (Portrait)



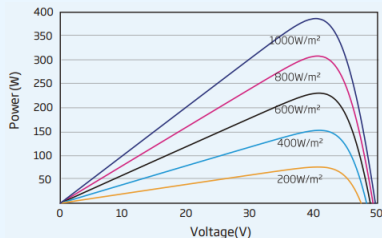
Back View(Landscape)



### I-V CURVES OF PV MODULE(390W)



### P-V CURVES OF PV MODULE(390W)



### ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	380	385	390	395	400	405	410
Power Output Tolerance-PMAX (W)	0 ~ +5						
Maximum Power Voltage-VMPP (V)	39.6	40.1	40.5	40.8	41.1	41.4	41.7
Maximum Power Current-IMPP (A)	9.59	9.61	9.64	9.69	9.74	9.79	9.84
Open Circuit Voltage-VOC (V)	48.1	48.5	49.7	50.1	50.4	50.8	51.2
Short Circuit Current-ISC (A)	9.99	10.03	10.08	10.13	10.18	10.23	10.29
Module Efficiency $\eta_m$ (%)	18.9	19.2	19.4	19.7	19.9	20.2	20.4

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.

\*Measurement tolerance:  $\pm 3\%$ .

### ELECTRICAL DATA (NMOT)

Maximum Power-PMAX (Wp)	287	291	296	299	303	307	311
Maximum Power Voltage-VMPP (V)	37.6	37.9	38.6	38.9	39.1	39.4	39.7
Maximum Power Current-IMPP (A)	7.64	7.68	7.66	7.70	7.74	7.78	7.82
Open Circuit Voltage-VOC (V)	45.4	45.8	46.9	47.3	47.6	47.9	48.3
Short Circuit Current-ISC (A)	8.05	8.08	8.12	8.16	8.20	8.24	8.29

NMOT: Irradiance at 800W/m<sup>2</sup>, 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
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> ), Portrait: N 450 mm/P 450 mm (17.72/17.72 inches), Landscape: N 1400 mm /P 1400 mm (55.12/55.12 inches)
Connector	Trina TS4/MC4-Evo2
Fire Type	Type 1 or 2

### TEMPERATURE RATINGS

NMOT	41°C ( $\pm 3^\circ\text{C}$ )
Temperature Coefficient of PMAX	- 0.36%/°C
Temperature Coefficient of VOC	- 0.26%/°C
Temperature Coefficient of ISC	0.04%/°C

### MAXIMUM RATINGS

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

### WARRANTY

12 year Product Workmanship Warranty  
25 year Linear Power Warranty

### 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)