## THE

# **TALMAX**<sup>®</sup> FRAMED 72 LAYOUT MODULE

# 72 LAYOUT

MONOCRYSTALLINE MODULE

## **390-415W** POWER OUTPUT RANGE

# 20.4%

0~+5W POSITIVE POWER TOLERANCE

Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. we believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina as a strong, bankable partner. We are committed to building strategic, mutually bene cial collaboration with installers, developers, distributors and other partners.

#### Comprehensive Products And System Certificates

IEC61215/IEC61730 ISO 9001: Quality Management System ISO 14001: Environmental Management System ISO14064: Greenhouse gases Emissions Verification OHSAS 18001: Occupation Health and Safety Management System





PRODUCTS TSM-DD15M(II) POWER RANGE





### **High power output**

- Combined with MBB technology, maximum 415W
- Reduce BOS cost with higher power bin



## Half-cell design brings higher efficiency

- Half-Cell layout (144 monocrystalline)
- Low thermal coefficients for greater energy production at high operating temperature
- Low cell connection power loss due to half-cell layout (144 monocrystalline)
- Passivated Emitter and Rear Cell (PERC Technology)



### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF etc)
- Internal test requirement of Trina more stringent than certification authority
- 100% EL double inspection

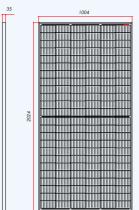
# Certificated to withstand the most challenging environmental conditions:

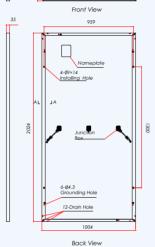
- 2400 Pa negative load
- 5400 Pa positive load
- \* 2400/5400 is the measured load, and the safety factor is 1.5 times



# TALLMAX®

#### DIMENSIONS OF PV MODULE(mm)

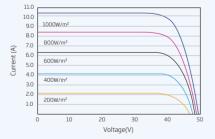




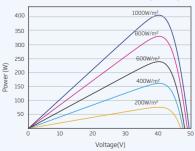
11.5 Silkon S

н

#### (A-A) I-V CURVES OF PV MODULE(405W)



#### P-V CURVES OF PV MODULE(405W)



#### ELECTRICAL DATA (STC)

Peak Power Watts-P <sub>MAX</sub> (Wp)*	390	395	400	405	410	415
Power Output Tolerance-P <sub>MAX</sub> (W)			0 ~	+5		
Maximum Power Voltage-V <sub>MPP</sub> (V)	40.0	40.1	40.3	40.5	40.7	40.9
Maximum Power Current-Impp (A)	9.75	9.86	9.92	10.00	10.07	10.15
Open Circuit Voltage-Voc (V)	48.5	48.7	49.0	49.2	49.4	49.6
Short Circuit Current-Isc (A)	10.30	10.37	10.45	10.52	10.59	10.66
Module Efficiency $\eta_m$ (%)	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. \*Measuring tolerance: ±3%.

#### ELECTRICAL DATA (NMOT)

Maximum Power-P <sub>MAX</sub> (Wp)	294	298	302	305	309	313
Maximum Power Voltage-V <sub>MPP</sub> (V)	37.6	37.7	37.9	38.1	38.3	38.4
Maximum Power Current-Impp (A)	7.83	7.90	7.96	8.02	8.08	8.13
Open Circuit Voltage-Voc (V)	45.6	45.8	46.1	46.3	46.5	46.7
Short Circuit Current-Isc (A)	8.30	8.36	8.43	8.48	8.54	8.60

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	2024 × 1004 × 35 mm (79.69 × 39.53 × 1.38 inches)
Weight	22.8kg ( 50.3lb)
Glass	3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA
Backsheet	White
Frame	35 mm ( 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 140mm/P 285mm(5.51/11.22inches) Landscape: N 1400 mm /P 1400 mm (55.12/55.12 inches)
Connector	MC4 / TS4

TEMPERATURE RATINGS				
NMOT (Nominal Module Operating Temperature)	41°C (±3°C)			
Temperature Coefficient of PMAX	- 0.37%/°C			
Temperature Coefficient of Voc	- <b>0.29%/</b> °C			
Temperature Coefficient of Isc	0.05%/°C			

(DO NOT connect Fuse in Combiner Box with two or more strings in parallel connect

#### WARRANTY

#### 10 year Product Workmanship Warranty

#### 25 year Linear Power Warranty

(Please refer to product warranty for details)

# MAXIMUMRATINGS

operational remperature	-40 1830	
Maximum System Voltage	1000V DC (IEC)	
	1000V DC (UL)	
Max Series Fuse Rating	20A	
onnection)		

#### PACKAGING CONFIGUREATION

Modules per box: 30 pieces

Modules per 40' container: 660 pieces



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

© 2019 Trina Solar Limited. All rights reserved. Specifications included in this datasheet are subject to change without notice. Version number: TSM\_EN\_2019\_A www.trinasolar.com