

# THE DUOMAX

## DUAL GLASS 144 HALF-CELL MODULE



**144-Cell**  
MONOCRYSTALLINE MODULE

**385-405W**  
POWER OUTPUT RANGE

**19.7%**  
MAXIMUM EFFICIENCY

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

PRODUCTS	POWER RANGE
TSM-DEG15H.20(II)	385-405W



### Increased value

- Reduce BOS cost with high power bin and 1500V system voltage
- 30 year linear warranty
- 0.5% annual degradation
- Low thermal coefficients for greater energy production at higher temperature



### Half-cell design brings higher efficiency

- New cell string layout and split J-box location to reduce the energy loss caused by inter-row shading
- Integrated LRF(Light Redirecting Film) to enhance power, specially for ground-mount applications
- Lower cell connection power losses due to half-cell layout(144 monocrystalline)



### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF etc)
- Increased module robustness to minimize micro-cracks
- PID resistant and free of snail trails
- Internal test requirement of Trina more stringent than certification authority



### Certified to withstand the most challenging environmental conditions

- 2400 Pa negative load
- 5400 Pa positive load

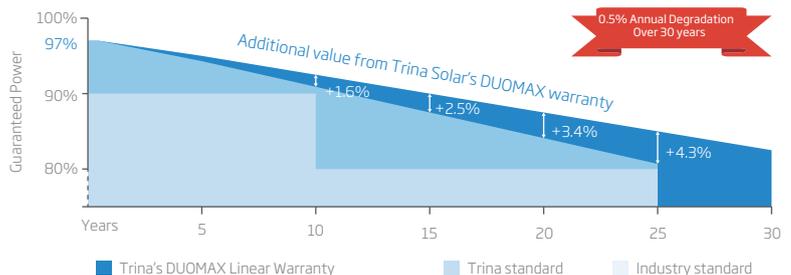
Founded in 1997, Trina Solar is the world's leading comprehensive solutions provider for solar energy. We believe close cooperation with our partners is critical to success. Trina Solar now distributes its PV products to over 60 countries all over the world. Trina is able to provide exceptional service 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 beneficial collaboration with installers, developers, distributors and other partners.

### Comprehensive Products And System Certificates

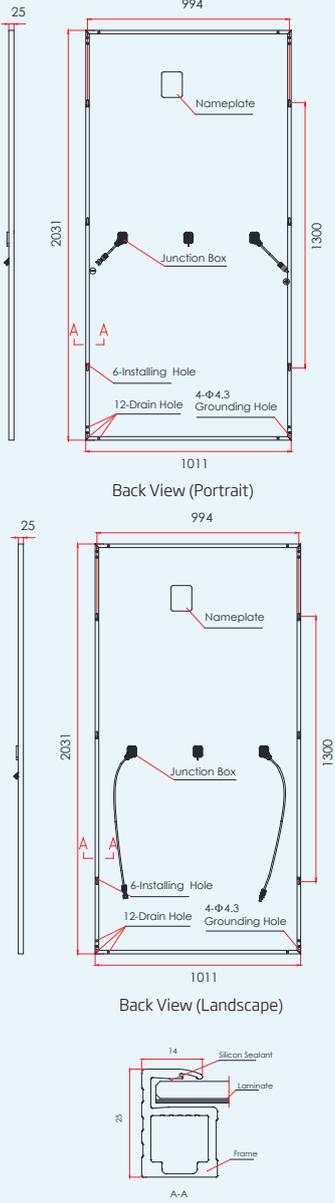
IEC61215/UL1703/IEC61730/IEC61701/IEC62716  
 ISO 9001: Quality Management System  
 ISO 14001: Environmental Management System  
 ISO14064: Greenhouse gases Emissions Verification  
 OHSAS 18001: Occupation Health and Safety Management System



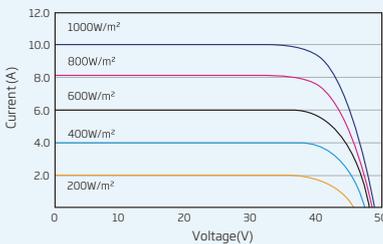
Trina Solar's DUOMAX Linear Performance Warranty



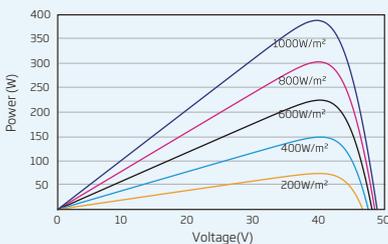
### DIMENSIONS OF PV MODULE(mm)



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



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



### ELECTRICAL DATA (STC)

Peak Power Watts- $P_{MAX}$ (Wp)*	385	390	395	400	405
Power Output Tolerance- $P_{MAX}$ (W)	0 ~ +5				
Maximum Power Voltage- $V_{MPP}$ (V)	40.1	40.5	40.8	41.1	41.4
Maximum Power Current- $I_{MPP}$ (A)	9.61	9.64	9.69	9.74	9.79
Open Circuit Voltage- $V_{OC}$ (V)	48.5	49.7	50.1	50.4	50.8
Short Circuit Current- $I_{SC}$ (A)	10.03	10.08	10.13	10.18	10.23
Module Efficiency $\eta_m$ (%)	18.7	19.0	19.2	19.5	19.7

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5.  
\*Measuring tolerance: ±3%.

### ELECTRICAL DATA (NMOT)

Maximum Power- $P_{MAX}$ (Wp)	291	295	298	302	306
Maximum Power Voltage- $V_{MPP}$ (V)	37.9	38.4	38.7	38.9	39.2
Maximum Power Current- $I_{MPP}$ (A)	7.66	7.68	7.71	7.76	7.81
Open Circuit Voltage- $V_{OC}$ (V)	45.6	46.8	47.2	47.4	47.9
Short Circuit Current- $I_{SC}$ (A)	8.09	8.13	8.17	8.21	8.27

NMOT: Irradiance at 800W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1m/s.

### MECHANICAL DATA

Solar Cells	Monocrystalline
Cell Orientation	144 cells (6 × 24)
Module Dimensions	2031 × 1011 × 25 mm (79.96 × 39.80 × 0.98 inches)
Weight	31.7 kg (69.9 lb)
Front Glass	2.5 mm (0.10 inches), High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA
Back Glass	2.5 mm (0.10 inches), Heat Strengthened Glass
Frame	25 mm (0.98 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	Trina TS4

### TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	41°C (±3°C)
Temperature Coefficient of $P_{MAX}$	-0.37%/°C
Temperature Coefficient of $V_{OC}$	-0.29%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°C

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

### MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC) 1000V DC (UL)
Max Series Fuse Rating	20A

### WARRANTY

- 10 year Product Workmanship Warranty
- 30 year Linear Power Warranty

(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

- Modules per box: 36 pieces
- Modules per 40' container: 792 pieces

