

# THE DUOMAX<sup>tw</sup>

## BIFACIAL DUAL GLASS 144 HALF-CELL MODULE

### 144-Cell MONOCRYSTALLINE MODULE

### 380-400W POWER OUTPUT RANGE

### 19.5% MAXIMUM EFFICIENCY

### 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 beneficial collaboration with installers, developers, distributors and other partners.

### Comprehensive Products And System Certificates

IEC61215/IEC61730/IEC61701/IEC62716

ISO 9001: Quality Management System

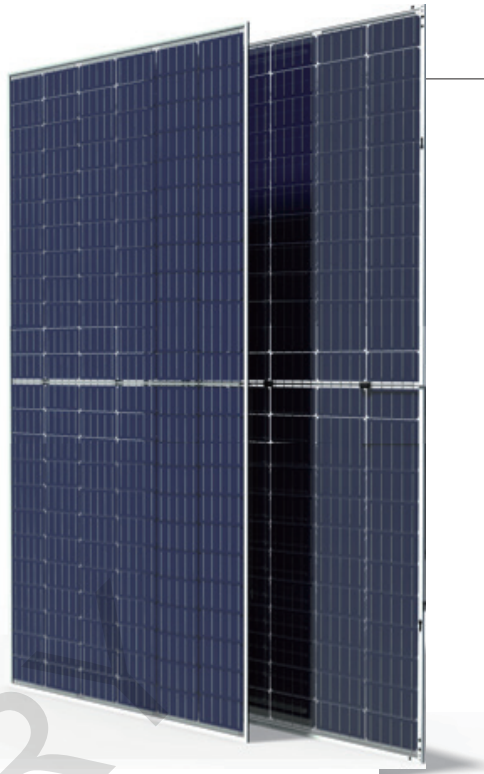
ISO 14001: Environmental Management System

ISO14064: Greenhouse gases Emissions Verification

OHSAS 18001: Occupation Health and Safety Management System



PRODUCTS	MODULE COLOR	POWER RANGE
TSM-DEG15HC.20(II)	White	380-400W



### High power output

- Increased total power output through generation from front and back side
- Backside power gain up to 25% depending on albedo
- Unique J-box design and installation method to avoid shading on the back side



### Low LCOE

- Maximize limited space, savings in BOS and labour cost
- Higher power from same installation footprint as standard modules



### Wide application

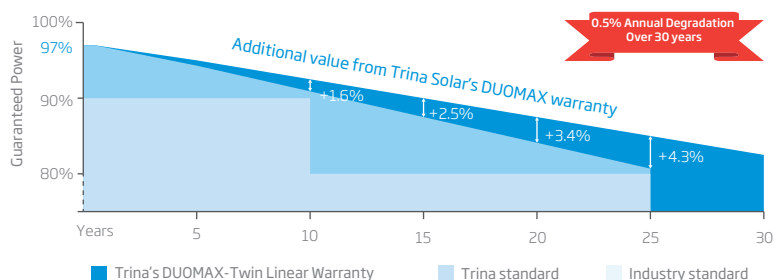
- Deployable for ground mounted utility, greenhouse and agricultural projects
- Special application like sound barriers on expressways
- Compatible with major tracker systems



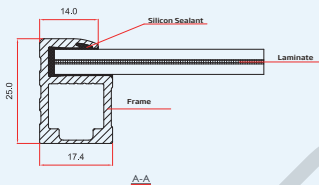
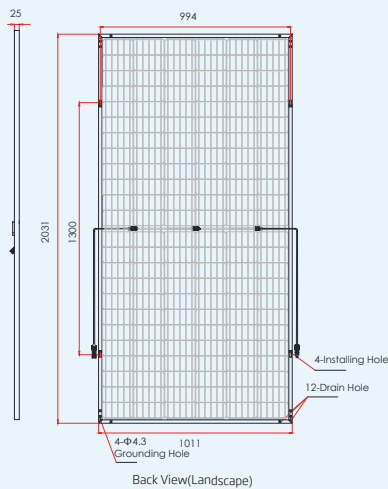
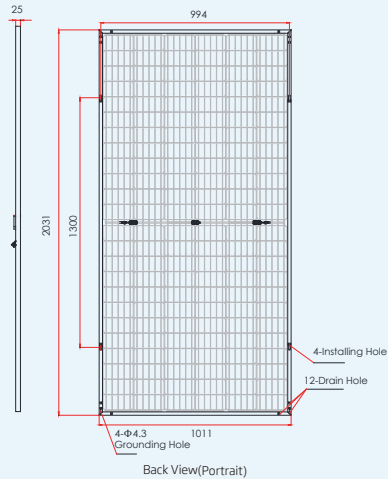
### Environmental conditions

- Resistant to sand, acid, alkaline
- 2400 Pa negative load
- 2400 Pa positive load (no back shading)

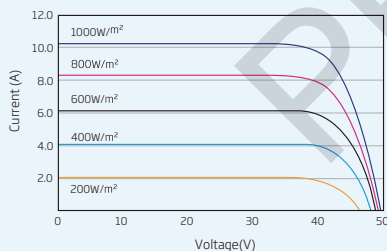
Trina Solar's DUOMAX-Twin Linear Performance Warranty



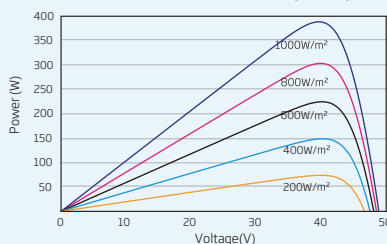
### DIMENSIONS OF PV MODULE(mm)



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



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



### ELECTRICAL DATA (STC)

Peak Power Watts-PMAX (Wp)*	380	385	390	395	400
Power Output Tolerance-PMAX (W)	0 ~ +5				
Maximum Power Voltage-VMPP (V)	40.3	40.4	40.6	40.8	40.9
Maximum Power Current-IMPP (A)	9.43	9.53	9.61	9.68	9.78
Open Circuit Voltage-VOC (V)	49.2	49.4	49.6	49.8	50.0
Short Circuit Current-ISC (A)	9.99	10.09	10.19	10.29	10.39
Module Efficiency $\eta$ (%)	18.5	18.7	19.0	19.2	19.5

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5.

\*Measurement tolerance: ±3%.

### BI-FACIAL OUTPUT - Backside Power Gain\*\*

10%	Power Output(W)	418	424	429	435	440
	Module Efficiency(%)	20.4	20.6	20.9	21.2	21.4
15%	Power Output(W)	437	443	449	454	460
	Module Efficiency(%)	21.3	21.6	21.9	22.1	22.4
25%	Power Output(W)	475	481	488	494	500
	Module Efficiency(%)	23.1	23.4	23.8	24.1	24.4

### ELECTRICAL DATA (NMOT)

Maximum Power-PMAX (Wp)	285	289	293	297	301
Maximum Power Voltage-VMPP (V)	37.7	37.9	38.0	38.1	38.2
Maximum Power Current-IMPP (A)	7.57	7.64	7.71	7.79	7.87
Open Circuit Voltage-VOC (V)	46.2	46.4	46.5	46.7	46.9
Short Circuit Current-ISC (A)	8.06	8.14	8.22	8.30	8.38

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	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	POE /EVA
Back Glass	2.5 mm (0.10 inches), Heat Strengthened(White Grid Glass)
Frame	25 mm( 0.98 inches) Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Technology Cable 4.0 mm² (0.006 inches²) Portrait: 280/280 mm(11.02/11.02 inches) Landscape: 1900/1900 mm(74.80/74.80 inches)
Connector	Trina TS4

### TEMPERATURE RATINGS

NMOT(Nominal Module Operating Temperature)	41°C (±3°C)
Temperature Coefficient of P <sub>MAX</sub>	- 0.37%/°C
Temperature Coefficient of V <sub>OC</sub>	- 0.29%/°C
Temperature Coefficient of I <sub>SC</sub>	0.05%/°C

### MAXIMUM RATINGS

Operational Temperature	-40~+85°C
Maximum System Voltage	1500V DC (IEC)
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
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

\*\* Back-side power gain varies depending upon the specific project albedo

