

# 120 HALF-CUT **MULTICRYSTALLINE CELLS**

# 285-300W

**POWER OUTPUT RANGE** 

**17.6% 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 Solar is able to provide exceptional service to each customer in each market and supplement our innovative, reliable products with the backing of Trina Solar as a strong, bankable partner We are committed to building strategic, mutually beneficial collaboration with installers, developers, distributors and other partners.

# **Comprehensive Product And System Certificates**

IEC61215/IEC61730/UL1703 IEC61701 Salt Mist Corrosion IEC62716 Ammonia Corrosion IEC60068 Blowing Sand ISO9001; ISO14001; OHSAS18001





















# Ideal for large scale installations

- Reduced BOS costs with higher power bins and 1,500V system voltage
- Consistently high bankability ratings by BNEF, banks and investors



## Half-cut cell design brings higher efficiency

- Optimized power output under inter-row shading conditions
- Low thermal coefficients for higher energy yield at elevated operating temperatures
- Reduced interconnection losses



## Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant
- 2x 100% inline EL inspection



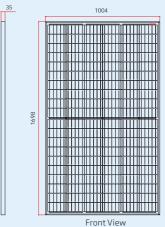
# Certified to withstand challenging environmental conditions

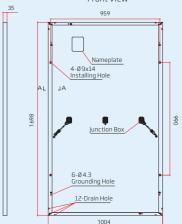
- Salt Mist Corrosion
- Ammonia Corrosion
- Blowing Sand





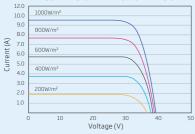
# DIMENSIONS OF PV MODULE TSM-PE06H (unit: mm)







### I-V CURVES OF PV MODULE (290W)



	P-V CU	RVES	OF PV	MODUL	.E (290V	V)
350						$\neg$
300						
250				1000W/m <sup>2</sup>		
Dower (W) 200			//	800W/m <sup>2</sup>		-
o 150			//	600W/m <sup>2</sup>		+
100		$/\!/\!-$	-	400W/m²	1	-
50				200W/m <sup>2</sup>		
	0 :	10	<sup>20</sup> Voltage	30 (V)	40	50

ELECTRICAL DATA @ STC	TSM-285 PE06H	TSM-290 PE06H	TSM-295 PE06H	TSM-300 PE06H
Peak Power Watts-PMAX (Wp)*	285	290	295	300
Power Output Tolerance-PMAX (W)	0/+5	0/+5	0/+5	0/+5
Maximum Power Voltage-UMPP(V)	31.5	31.8	32.1	32.3
Maximum Power Current-Impp (A)	9.05	9.12	9.19	9.29
Open Circuit Voltage-Uoc (V)	38.8	39.2	39.5	39.8
Short Circuit Current-Isc (A)	9.53	9.60	9.67	9.77
Module Efficiency ηπ (%)	16.7	17.0	17.3	17.6

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

<sup>\*</sup> Measuring tolerance: ±3%

ELECTRICAL DATA @ NMOT	TSM-285 PE06H	TSM-290 PE06H	TSM-295 PE06H	TSM-300 PE06H
Maximum Power-P <sub>MAX</sub> (Wp)	216	219	223	227
Maximum Power Voltage-UMPP (V)	29.8	30.1	30.4	30.6
Maximum Power Current-Impp (A)	7.24	7.29	7.35	7.42
Open Circuit Voltage-Uoc (V)	36.5	36.9	37.2	37.4
Short Circuit Current-Isc (A)	7.69	7.74	7.80	7.88

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

#### **MECHANICAL DATA**

"	
Solar Cells	Multicrystalline
Cell Orientation	120 cells (6 x 20)
Module Dimensions	1698 × 1004 × 35 mm
Weight	18.7 kg
Glass	3.2 mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA
Backsheet	White
Frame	35 mm Anodized Aluminium Alloy
J-Box	IP 68 rated
Cables	Photovoltaic Cable 4.0mm², Portrait: N 140mm/P 285mm, Landscape: N 1200 mm/P 1200 mm
Connector	TS4

#### **TEMPERATURE RATINGS**

NMOT (Nominal Module Operating Temperature)	41°C (±3K)
Temperature Coefficient of PMAX	- 0.38%/K
Temperature Coefficient of Uoc	- 0.31%/K
Temperature Coefficient of Isc	0.05%/K

#### PACKAGING CONFIGURATION

Modules per box:	30 pieces
Modules per 40' container:	720 pieces

#### WARRANTY

10 year Product Workmanship Warranty 25 year Linear Performance Warranty

(Please refer to product warranty for details)

#### **MAXIMUM RATINGS**

Operational Temperature	-40 to +85°C	
Maximum System Voltage	1500 V DC (IEC) 1500 V DC (UL)	
Max Series Fuse Rating	20 A	
Snow Load	5400 Pa (3600 Pa*)	
Wind Load	2400 Pa (1600 Pa*)	

\*design load with safety factor 1.5 (DO NOT connect Fuse in Combiner Box with two or more strings in parallel connection)

