



# Mono Crystalline 60 Cells 310-330 watt

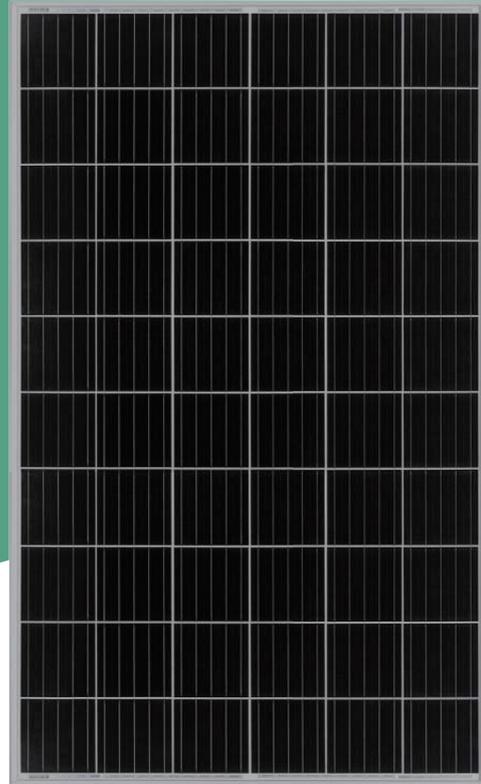
## MONO PERC MODULE

Positive power tolerance of 0~+3%

ISO9001:2015

Certified factory

IEC61215/IEC61730



### 5 Busbar Solar Cell

5 busbar solar cell adopts new technology to improve the efficiency of modules, offers a better aesthetic appearance making it perfect for rooftop installation.



### High Efficiency

Higher module conversion efficiency (up to 19.78%) benefit from Passivated Emitter Rear Contact (PERC) technology.



### PID Resistance

Excellent Anti-PID performance guarantee limited power degradation for mass production.



### Low-light Performance

Advanced glass and cell surface textured design ensure excellent performance in low-light environment.



### Severe Weather Resilience

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

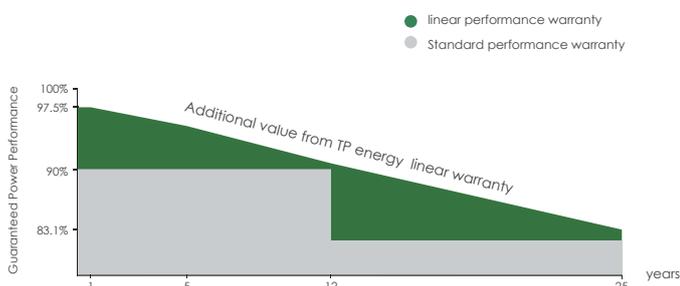


### Durability Against Extreme Environmental Conditions

High salt mist and ammonia resistance certified by TUV Rheinland.

## ► Superior Warranty

### TP ENERGY SOLAR PERFORMANCE WARRANTY



## ► Comprehensive Certificates

IEC61215/IEC61730/IEC61701/IEC62716

ISO 9001: Quality Management System

ISO 14001: Environmental Management System

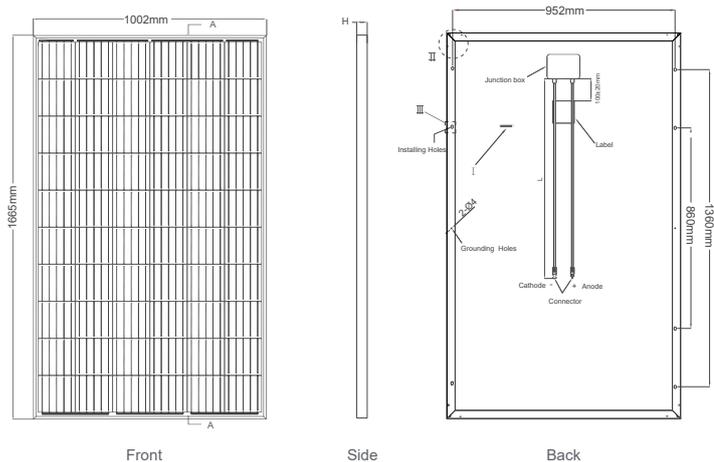
ISO14064: Greenhouse Gases Emissions Verification

OHSAS 18001: Occupation Health and Safety

Management System



### ► DIMENSIONS OF PV MODULE(mm)



### ► MECHANICAL DIAGRAMS

Cell Type	Mono PERC 158.75x158.75mm
No. of cells	60 (6 x 10)
Dimensions	1665x 1002x35 mm
Weight	18.0kg
Front Glass	3.2mm, Anti-Reflection Coating, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminium Alloy
J-Box	IP 67 rated
Output Cables	TÜV 1 x 4.0mm <sup>2</sup> Length 900mm or Customized Length

### ► Electrical Characteristics

Module Type	TP60-310M		TP60-315M		TP60-320M		TP60-325M		TP60-330M	
	STC	NOCT								
Maximum Power (Pmax)	310Wp	231Wp	315Wp	235Wp	320Wp	239Wp	325Wp	242Wp	330Wp	246Wp
Maximum Power Voltage (Vmp)	33.0V	31.0V	33.2V	31.2V	33.4V	31.4V	33.6V	31.6V	33.8V	31.8V
Maximum Power Current (Imp)	9.39A	7.46A	9.49A	7.56A	9.59A	7.62A	9.68A	7.66A	9.77A	7.74A
Open-circuit Voltage (Voc)	40.5V	37.4V	40.7V	37.6V	40.9V	37.8V	41.1V	38.0V	41.3V	38.2V
Short-circuit Current (Isc)	9.95A	8.24A	10.04A	8.33A	10.13A	8.42A	10.22A	8.51A	10.31A	8.60A
Module Efficiency STC (%)	18.58%		18.88%		19.18%		19.48%		19.78%	

### ► Temperature Ratings

NMOT (Nominal Module Operating Temperature)	45°C (±2°C)
Temperature Coefficient of Pmax	- 0.36%/°C
Temperature Coefficient of Voc	- 0.29%/°C
Temperature Coefficient of Isc	0.048%/°C

### ► Maximum Ratings

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

### ► Warranty

12 Years Product Workmanship Warranty
25 Years Power Warranty

### ► Packaging Configuration

Modules per pallet:	30 pcs
Modules per 40HQ container	780 pcs

### ► I-V-Curve

