



# BIPRO

TM7G60M **120-cell**

475 - 495W

Bifacial Dual Glass

16BB Half-cut Mono N-type



## SYSTEM & PRODUCT CERTIFICATES

- IEC 61215 / IEC 61730 / UL 61730
- ISO 9001: 2015 Quality Management System
- ISO 14001: 2015 Environment Management System
- ISO 45001: 2018 Occupational Health and Safety Management Systems

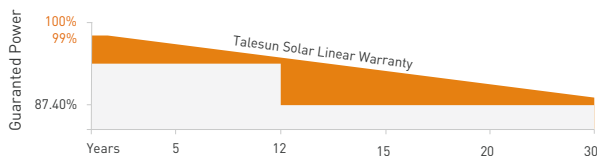


## PERFORMANCE WARRANTY

12 Years  
Quality Assurance

30 Years  
Power Output Guarantee

Linear Performance Warranty



## KEY FEATURES



### 16BB Half-cut Cell Technology

Lower LID/LeTID degradation and better low light performance  
Attenuation  $\leq 1\%$  (1st year) /  $\leq 0.4\%$  (Linear)



### Industry Leading High Yield

Bifacial TOPCon cell technology,  
Dual-sided power generation gain from back side depending on albedo, significantly reduce LCOE



### Excellent Anti-PID Performance

192 hours Anti-PID test



### Wider Application

No water-permeability and high wear-resistance,  
can be widely used in high-humid, windy and dusty area



### IP68 Junction Box

High waterproof level

## ELECTRICAL CHARACTERISTICS

Testing Condition	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power (Pmax/W)	475	357	480	361	485	365	490	369	495	373
Operating Voltage (Vmpp/V)	35.88	33.40	36.06	33.61	36.25	33.84	36.43	34.00	36.61	34.16
Operating Current (Impp/A)	13.24	10.69	13.31	10.74	13.38	10.80	13.45	10.86	13.52	10.92
Open-Circuit Voltage (Voc/V)	43.45	41.28	43.60	41.42	43.76	41.57	43.91	41.71	44.06	41.85
Short-Circuit Current (Isc/A)	13.77	11.12	13.85	11.18	13.93	11.24	14.01	11.31	14.09	11.38
Module Efficiency (%)	22.00		22.20		22.40		22.70		22.90	

STC: Irradiance 1000W/m<sup>2</sup>, Spectra at AM1.5, Module Temperature 25°C. Power output tolerance: 0~+5W, Test uncertainty for Pmax: ±3%  
 NMOT: Irradiance 800W/m<sup>2</sup>, Spectra at AM1.5, Ambient Temperature 20°C, Wind speed 1m/s

## REAR SIDE POWER GAIN(REFERENCE TO 490W FRONT)

Pmax gain	5%	10%	15%	20%	25%
Pmax/W	515	539	564	588	613
Vmpp/V	36.43	36.43	36.43	36.43	36.43
Impp/A	14.12	14.80	15.47	16.14	16.81
Voc/V	43.91	43.91	43.91	43.91	43.91
Isc/A	14.71	15.41	16.11	16.81	17.51

## MECHANICAL CHARACTERISTICS

Cell Type	N-type Mono-Crystallin (16Busbar)
No. of Cells	120pcs in series (6*20)
Module Dimensions	1908*1134*30mm (75.12*44.65*1.18inches)
Weight	27.0kg (59.5lbs)
Front Glass	2.0mm AR Coating Semi-tempered Glass
Back Glass	2.0mm Glazed Semi-tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 Bypass Diodes
Output Cables	4mm <sup>2</sup> (IEC), 12AWG(UL) 350mm(+),250mm(-) or Customized Length
Connectors	T01/LJQ-3-CSY/MC4/MC4-EV02

## APPLICATION CONDITIONS

Maximun System Voltage	1500V/DC
Operating Temperature	-40°C~+85°C
Maximun Series Fuse	30A
Safety Protection Class	Class II
Mechanical Load*	Front side 5400Pa, Back side 2400Pa
Refer. Bifaciality Factor	80%±5%

\*Refer to the installation manual for details

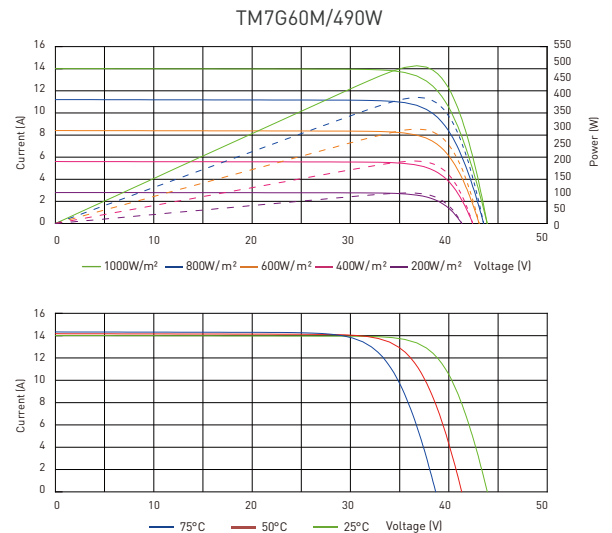
## TEMPERATURE CHARACTERISTICS

Temperature Coefficient of Pmax	-0.29%/°C
Temperature Coefficient of Voc	-0.24%/°C
Temperature Coefficient of Isc	+0.043%/°C
Nominal Module Operating Temperature(NMOT)	43±2°C

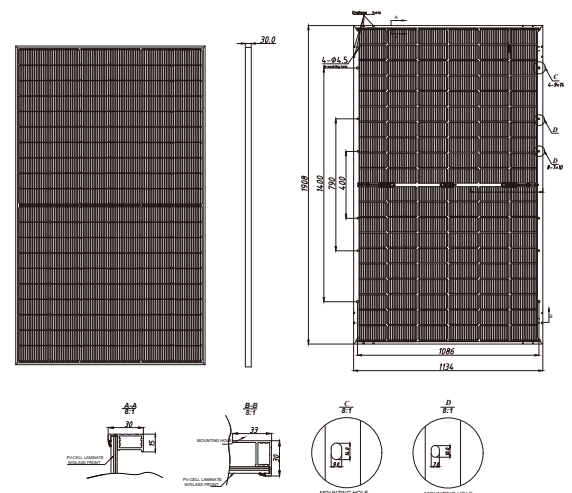
## PACKING CONFIGURATION

Pieces Per Pallet	36	36(USA)
Pieces Per Container(40'HQ)	864	684

## I-V CURVE



## TECHNICAL DRAWINGS



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