



# PNGNH60-B8(182)

## 470-500 Watt

N-type Mono TOPCon



### Key Features



#### Multi Busbar Solar Cell

Stronger current collection ability, Special circuit design with much lower hot spot temperature;



#### Anti PID

Excellent PID resistance at 96 hours (85°C/85%) test, and also can be improved to meet higher standards for the particularly harsh environment;



#### Anti-Crack

Excellent anti-microcracking performance with more balanced interior stress;



#### Module efficiency up to 23.16%

Half cell structure brings low resistance characteristic, higher lifetime generating capacity, simultaneously lower annual power attenuation;



#### Low-Light Performance

Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

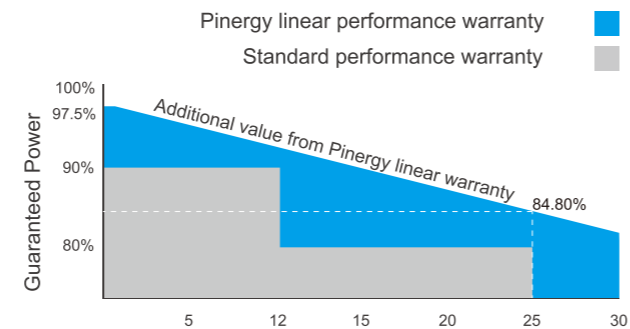


#### Strength and Durability

Certified for 5400Pa snow and 2400Pa Wind loads test;

### Linear Performance Warranty

12 Years Product Warranty · 30 Years Linear Power Warranty



### Certifications

- IEC 61215, IEC 61730, CE, CQC
- ISO9001: 2015: Quality management system
- ISO14001: 2015: Environmental management system
- ISO45001: 2018: Occupational health and safety management system



### Electrical Specifications

Module Type: PNGNH60-B8-xxx, (xxx=Pmax)

Module Type	470		475		480		485		490		495		500	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	470	303	475	357	480	361	485	364	490	368	495	372	500	376
Voltage at Max. Power (Vmp/V)	35.05	32.94	35.21	33.1	35.38	33.28	35.55	33.43	35.72	33.59	35.89	33.75	36.06	33.91
Current at Max. Power (Imp/A)	13.41	10.73	13.49	10.79	13.57	10.85	13.65	10.91	13.73	10.97	13.81	11.03	13.89	11.09
Open circuit voltage (Voc/V)	42.38	40.25	42.54	40.41	42.71	40.57	42.88	40.73	43.05	40.89	43.22	41.05	43.39	41.21
Short circuit current (Isc/A)	14.15	11.42	14.23	11.49	14.31	11.55	14.39	11.61	14.47	11.67	14.55	11.73	14.63	11.79
Module efficiency (%)	20.78%		22.01%		22.24%		22.47%		22.70%		22.93%		23.16%	
Power Tolerance (W)	0~+5													

Standard Test Condition (STC): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM1.5

Nominal Module Operating Temperature (NOCT): Irradiance 800W/m<sup>2</sup>, Ambient Temperature 20°C, AM1.5, Wind Speed 1m/s

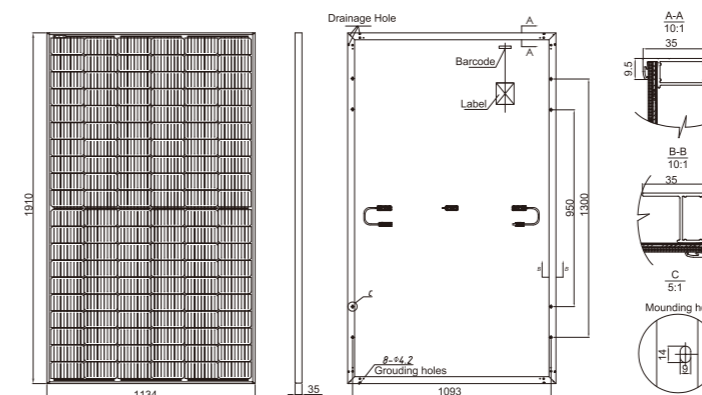
### Mechanical Specifications

Cell Type	10BB MONO 182×91mm
No. of Cells	120 (6×20)
Dimension	1910x1134x35mm
Weight	24kg
Glass	3.2mm, Low Iron Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm <sup>2</sup> , Length 300mm or customized
Connector type	MC4 compatible

### Packaging Configurations

Per Pallet	31 pcs
Per 40' HQ Container	744 pcs

### Engineering Drawings



### Temperature Characteristics

NOCT Temperature	44°C ±2°C
Temperature Coefficient (Pmax)	-0.36%/°C
Temperature Coefficient (Voc)	-0.28%/°C
Temperature Coefficient (Isc)	0.05%/°C

### Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40°C ~ +85°C
Maximum series fuse rating	20A

### Curve & Temperature Dependence

