Hefei Pinergy Solar Technology Co.,Ltd
info@pnsolarpv.com

Keep in Touch

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PNG Solar

PINERGY SOLAR

Hefei Pinergy Solar Technology Co.,Ltd
info@pnsolarpv.com

GLOBAL LEADING
PV MANUFACTURER

Hefei Pinergy Solar Technology Co.,Ltd is a professional and fast growing company.The business covers the R&D, production and sales of PV modules.Power station and PV system products, power generation and operation and maintenance services,etc.The company is located in Hefei City, Anhui Province, which is one of the main production bases of the photovoltaic industry in the world.We are world-reno wned manufacturer and supplier of solar cells, solar PV modules and solar systems.

Covering an area of 46000 square meters,we have more than 200 employees now,the annual capacity of photovoltaic modules is 1.5GW and 90% were exported all over the world.The advanced production system and excellent quality control have enabled us to win the trust and support of our customers.We have got certificates of TUV,CE,etc.At present, PINERGY has established a global sales network covering 80 countries/regions.Mainly covering Europe, Asia and South America, customers all over the world.

PINERGY has a complete PV product system:solar cells, PV modules, inverters,batteries and PV systems, etc.The goal of PINERGY is to create a new first-class PV product brand, provide clean energy to the world, and assume future responsibility.

Excellent quality, PINERGY manufacturing.

STAND
THE TEST OF TIME

GLOBAL BUSINESS FOOTPRINT

PINERGY has it sales covered more than 80 countries around the world.

150+
GLOBAL PARTNERS

PINERGY has more than 150 industry leading partners worldwide.

LEADING TECHNOLOGY

PINERGY has standard and half-cell MBB production lines,supply high quality products.

Manufacturer bases

Business footprint

Headquarter

GLOBAL NETWORK

Pinergy's business footprint covers more than 80 countries around the world,with more than 150 industry-leading partners.

FROM MANUFACTURING
TO INTELLIGENT MANUFACTURING

AUTOMATIC MANUFACTURING

PINERGY module factory can work for various advanced technology production requirements, and achieved the transition from manufacturing to intelligent manufacturing

1.AUTOMATIC CUTTING

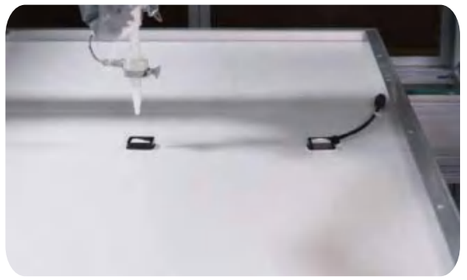
2.AUTOMATIC WELDING

3.AUTOMATIC SPLICING

4.LAMINATED

5.EL TEST

6.AUTOMATIC FRAMING



7.AUTOMATIC GLUE FILLING

8.VISUAL INSPECTION

9.AUTOMATIC PACKING

TRUSTWORTHY QUALITY

GUARANTEED QUALITY

- **15 steps quality control and inspection process,2*100% EL test；**
- **12 years quality guarantee,25 years power output warranty.**

RIGOROUS CONTROL

- **Stringent triple IEC test；**
- **FQC 100% appearance inspection,OBA appearance spot inspection,OQC delivery inspection.**

MANAGEMENT SYSTEM

- **Cerfication of ISO9001 quality system,ISO14001 environmental management system,OHASA18001 occupational health and safety management system.**

Certificate of qualification System certification

▲ Patent certificate ▼

▲ Verified Supplier Certificate

▲ Management system certification

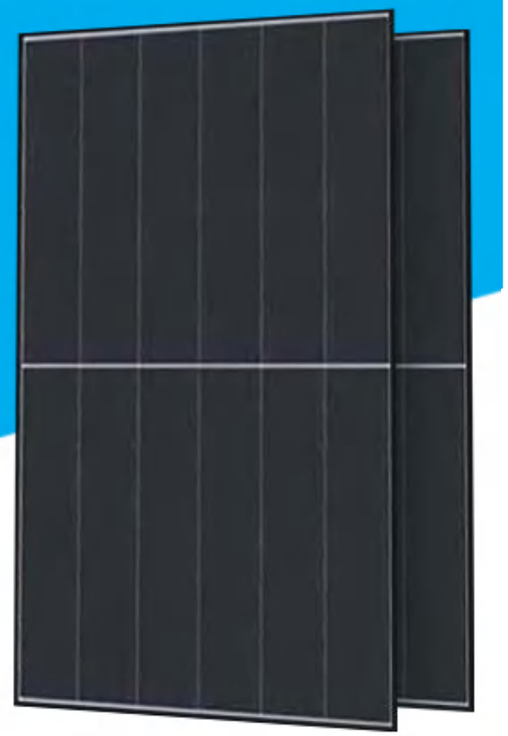
▲ East China—Brand Huishang

Solar

PNGNH48-B8(182)

460-485 Watt (BF)

Mono-facial with Dual Glass



Key Features

Multi Busbar Solar Cell

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

PID Resistant

Anti PID

Excellent PID resistance at 96 hours (85℃/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 24.27%

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

Low-Light Performance

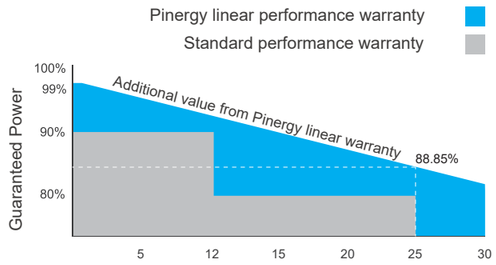
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH48-B8-xxx , (xxx=Pmax)

Module Type	460	465	470	475	480	485
Testing Condition	STC	STC	STC	STC	STC	STC
Max. Power (Pmax/W)	460	465	470	475	480	485
Voltage at Max. Power (Vmp/V)	30.63	30.80	30.97	31.13	31.32	31.50
Current at Max. Power (Imp/A)	15.02	15.10	15.18	15.26	15.33	15.40
Open circuit voltage (Voc/V)	35.69	35.94	36.19	36.44	36.69	36.94
Short circuit current (Isc/A)	15.70	15.75	15.80	15.85	15.89	15.94
Module efficiency (%)	23.02%	23.27%	23.52%	23.77%	24.02%	24.27%
Power Tolerance	0~+3%					

Standard Test Condition (STC)：Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)：Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

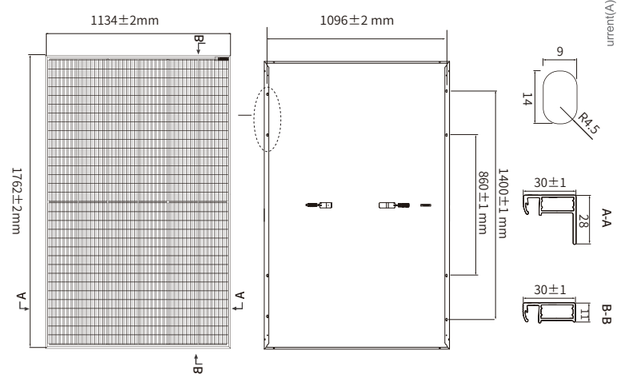
Mechanical Specifications

Cell Type	N-Type Mono
No. of Cells	192 (4×48)
Dimension	1762x1134x30mm
Weight	24.4kg
Front/Back Glass	2.0mm, Anti-reflection Coating/Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	37 pcs
Per 40' HQ Container	962 pcs

Engineering Drawings



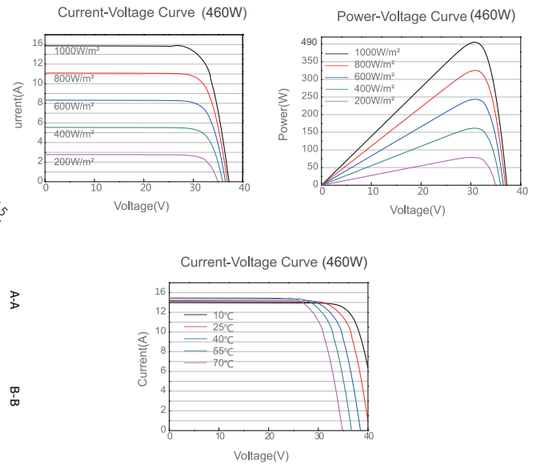
Temperature Characteristics

NOCT Temperature	44℃ ±2℃
Temperature Coefficient (Pmax)	-0.26%/℃
Temperature Coefficient (Voc)	-0.24%/℃
Temperature Coefficient (Isc)	0.046%/℃

Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +70℃
Maximum series fuse rating	30A

Curve & Temperature Dependence



Solar

PNGNH48-B8(182)

460-485 Watt (FB)

Mono-facial with Dual Glass

Key Features

Multi Busbar Solar Cell

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

PID Resistant

Anti PID

Excellent PID resistance at 96 hours (85℃/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 24.27%

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

Low-Light Performance

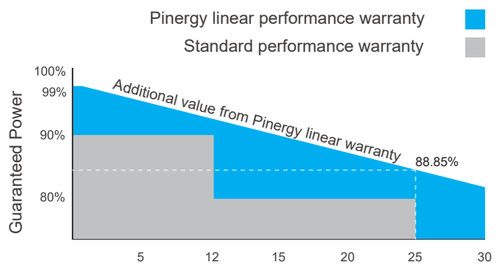
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH48-B8-xxx , (xxx=Pmax)

Module Type	460	465	470	475	480	485
Testing Condition	STC	STC	STC	STC	STC	STC
Max. Power (Pmax/W)	460	465	470	475	480	485
Voltage at Max. Power (Vmp/V)	30.63	30.80	30.97	31.13	31.32	31.50
Current at Max. Power (Imp/A)	15.02	15.10	15.18	15.26	15.33	15.40
Open circuit voltage (Voc/V)	35.69	35.94	36.19	36.44	36.69	36.94
Short circuit current (Isc/A)	15.70	15.75	15.80	15.85	15.89	15.94
Module efficiency (%)	23.02%	23.27%	23.52%	23.77%	24.02%	24.27%
Power Tolerance	0~+3%					

Standard Test Condition (STC)：Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)：Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Mechanical Specifications

Cell Type	N-Type Mono
No. of Cells	192 (4×48)
Dimension	1762x1134x30mm
Weight	24.4kg
Front/Back Glass	2.0mm, Anti-reflection Coating/Heat Strengthened Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Temperature Characteristics

NOCT Temperature	44℃ ±2℃
Temperature Coefficient (Pmax)	-0.26%/℃
Temperature Coefficient (Voc)	-0.24%/℃
Temperature Coefficient (Isc)	0.046%/℃

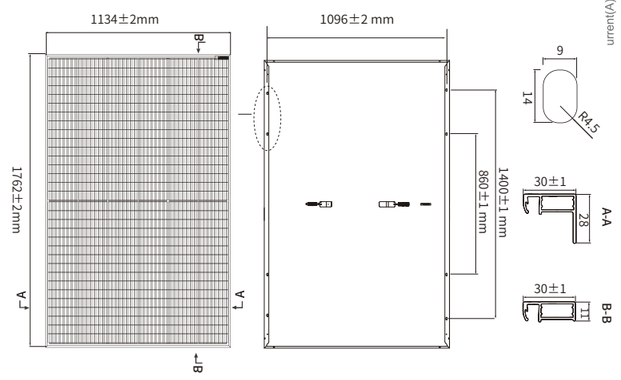
Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +70℃
Maximum series fuse rating	30A

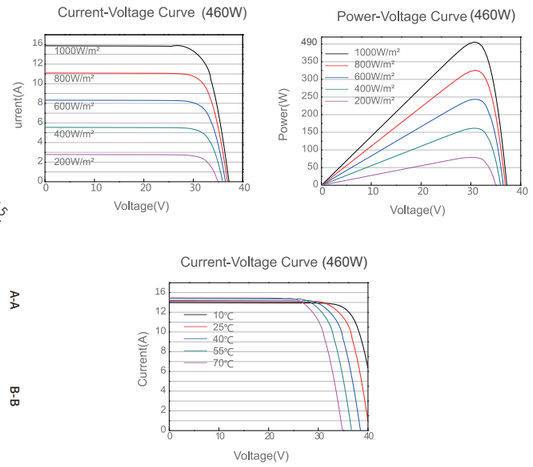
Packaging Configurations

Per Pallet	37 pcs
Per 40' HQ Container	962 pcs

Engineering Drawings



Curve & Temperature Dependence



PNGNH54-B8(182)

440-460 Watt

N-type Mono TOPCon

Key Features

Multi Busbar Solar Cell

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

PID Resistant

Excellent PID resistance at 96 hours (85℃/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 23.56%

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

Low-Light Performance

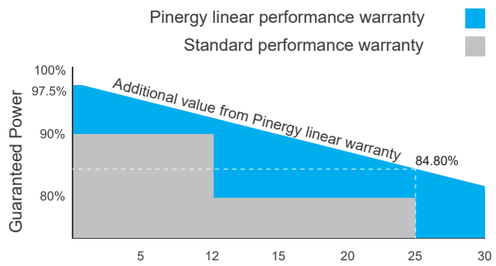
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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: PNGNH54-B8-xxx , (xxx=Pmax)

Module Type	440		445		450		455		460	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	440	334	445	338	450	342	455	346	460	350
Voltage at Max. Power (Vmp/V)	32.35	30.72	32.55	30.92	32.75	31.12	32.95	31.32	33.15	31.52
Current at Max. Power (Imp/A)	13.60	10.87	13.67	10.93	13.74	10.99	13.81	11.05	13.88	11.11
Open circuit voltage (Voc/V)	38.95	36.98	39.15	37.18	39.35	37.38	39.55	37.58	39.75	37.78
Short circuit current (Isc/A)	14.29	11.45	14.36	11.52	14.43	11.59	14.50	11.65	14.57	11.71
Module efficiency (%)	22.53%		22.79%		23.04%		23.30%		23.56%	
Power Tolerance (W)	0~+5									

Standard Test Condition（STC）: Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature（NOCT）: Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Mechanical Specifications

Cell Type	N-Type Mono 182×91mm
No. of Cells	108 (6×18)
Dimension	1722x1134x30mm
Weight	21.5kg
Glass	3.2mm, Low Iron Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Temperature Characteristics

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

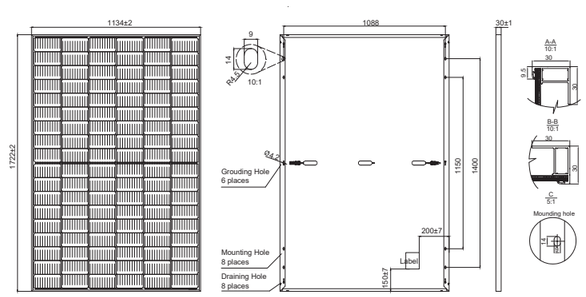
Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	25A

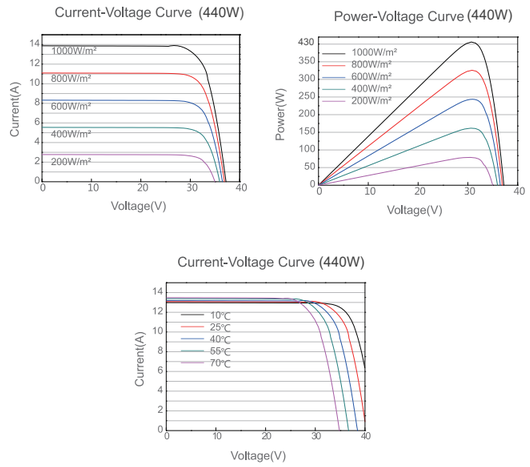
Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	936 pcs

Engineering Drawings



Curve & Temperature Dependence



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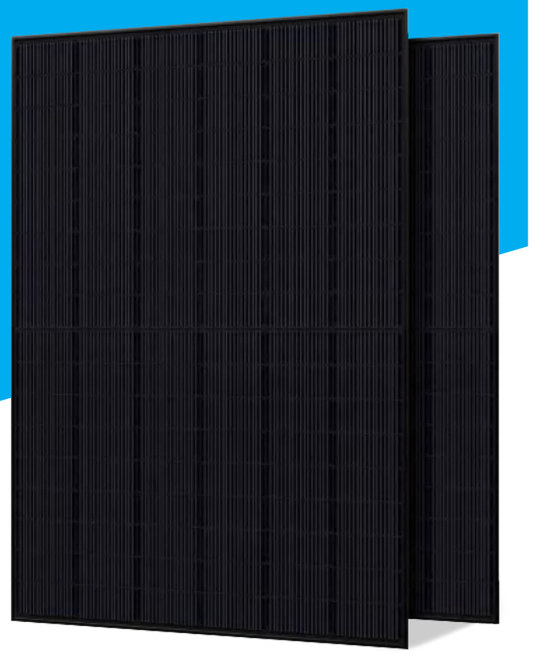
Solar

PNGNH54-B8(182)

435-455 Watt (FB)

N-type Mono TOPCon



Key Features

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Excellent PID resistance at 96 hours (85℃/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 23.30%

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

Low-Light Performance

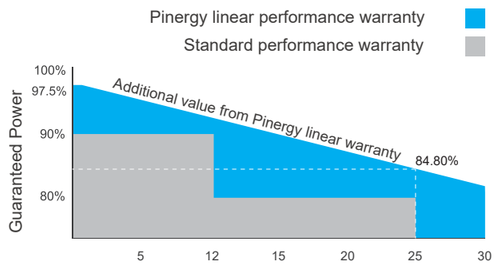
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH54-B8-xxx , (xxx=Pmax)

Module Type	435		440		445		450		455	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	435	330	440	334	445	338	450	342	455	346
Voltage at Max. Power (Vmp/V)	32.15	30.52	32.35	30.72	32.55	30.92	32.75	31.12	32.95	31.32
Current at Max. Power (Imp/A)	13.53	10.81	13.60	10.87	13.67	10.93	13.74	10.99	13.81	11.05
Open circuit voltage (Voc/V)	38.75	36.78	38.95	36.98	39.15	37.18	39.35	37.38	39.55	37.58
Short circuit current (Isc/A)	14.22	11.38	14.29	11.45	14.36	11.52	14.43	11.59	14.50	11.65
Module efficiency (%)	22.28%		22.53%		22.79%		23.04%		23.30%	
Power Tolerance (W)	0~+5									

Standard Test Condition（STC）: Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature（NOCT）: Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

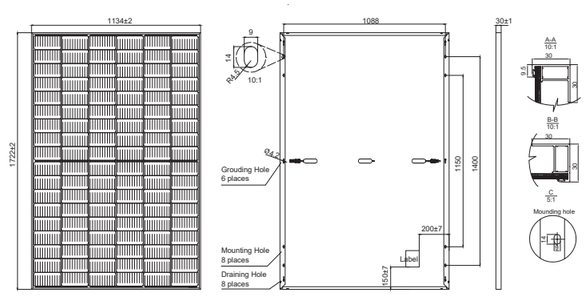
Mechanical Specifications

Cell Type	N-Type Mono 182×91mm
No. of Cells	108 (6×18)
Dimension	1722x1134x30mm
Weight	21.5kg
Glass	3.2mm, Low Iron Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	936 pcs

Engineering Drawings



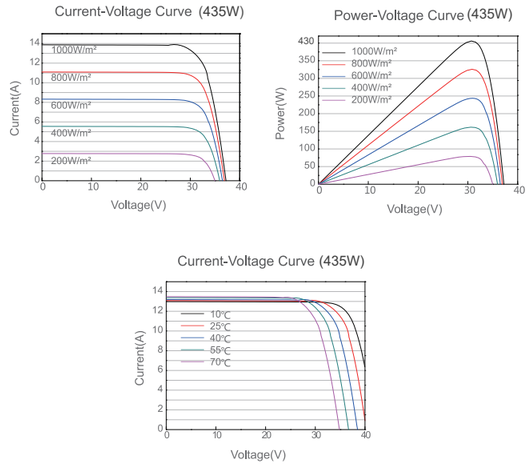
Temperature Characteristics

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

Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	25A

Curve & Temperature Dependence



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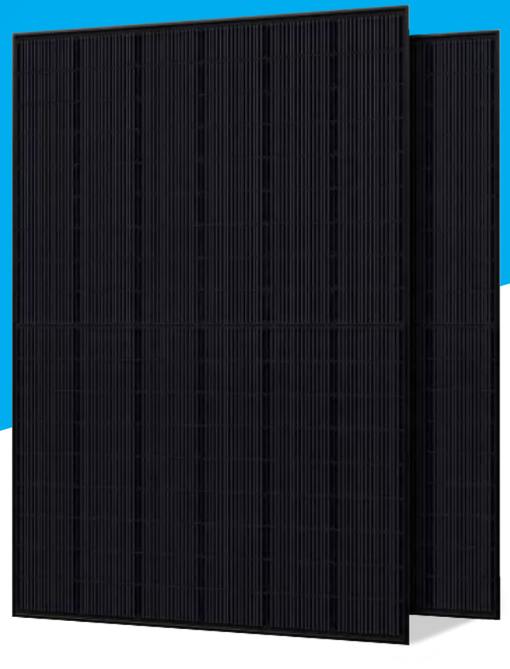
Solar

PNGNH54-DGB8(182)

435-455 Watt (FB)

N-type Mono TOPCon



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Multi Busbar Solar Cell

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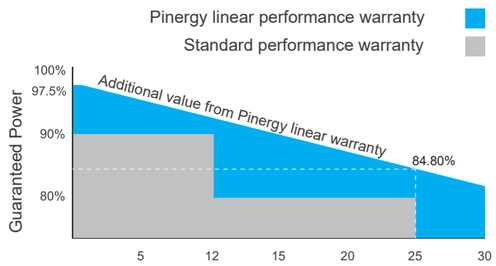


Certifications

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

Solar

Electrical Specifications

Module Type: PNGNH54-DGB8-xxx , (xxx=Pmax)

Module Type	435		440		445		450		455	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	435	330	440	334	445	338	450	342	455	346
Voltage at Max. Power (Vmp/V)	32.15	30.52	32.35	30.72	32.55	30.92	32.75	31.12	32.95	31.32
Current at Max. Power (Imp/A)	13.53	10.81	13.60	10.87	13.67	10.93	13.74	10.99	13.81	11.05
Open circuit voltage (Voc/V)	38.75	36.78	38.95	36.98	39.15	37.18	39.35	37.38	39.55	37.58
Short circuit current (Isc/A)	14.22	11.38	14.29	11.45	14.36	11.52	14.43	11.59	14.50	11.65
Module efficiency (%)	22.28%		22.53%		22.79%		23.04%		23.30%	
Power Tolerance (W)	0~+5									

Standard Test Condition (STC)：Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)：Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Bifacial Output-rearside Power Gain

5%	Maximum power (Pmax)	456.75	462.00	467.25	472.50	477.75
	Module Efficiency STC (%)	23.39%	23.66%	23.93%	24.20%	24.47%
15%	Maximum power (Pmax)	500.25	506.00	511.75	517.50	523.25
	Module Efficiency STC (%)	25.62%	25.91%	26.21%	26.50%	26.80%
25%	Maximum power (Pmax)	543.75	550.00	556.25	562.50	568.75
	Module Efficiency STC (%)	27.85%	28.17%	28.49%	28.81%	29.13%

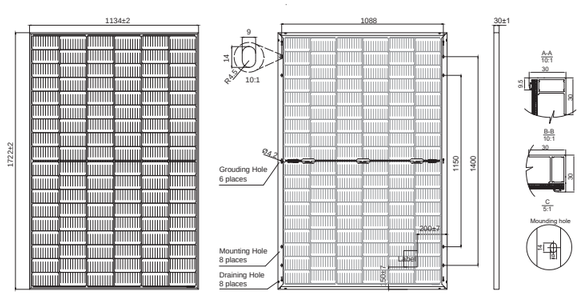
Mechanical Specifications

Cell Type	N-type BIFACIAL MONO 182×91mm
No. of Cells	108 (6×18)
Dimension	1722x1134x30mm
Weight	25kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	936 pcs

Engineering Drawings



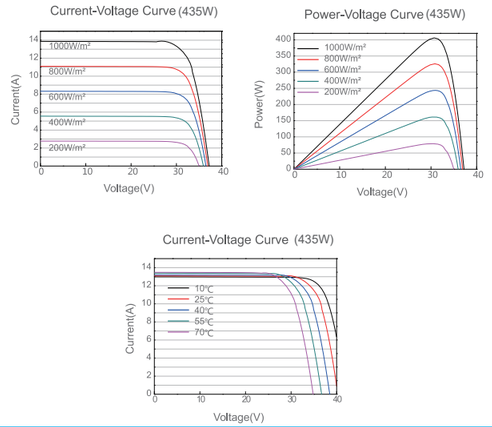
Temperature Characteristics

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

Maximum Ratings

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

Curve & Temperature Dependence



Solar

PNGNH66-DGBR

600-630 Watt

N-type TOPCon Mono Bifacial

Key Features

IP68 waterproof junction box and connector

IP68 waterproof junction box and connector have excellent waterproof performance and can effectively resist harsh environments;

Anti-PID

Excellent anti-PID performance in 96 hours (85℃/85%) test, and It can also be improved to meet higher standards and is suitable for particularly harsh environments;

Unspecified MBB half cell technology

New circuit design, lower internal current, lower power loss;

Significantly reduce the risk of hot spots

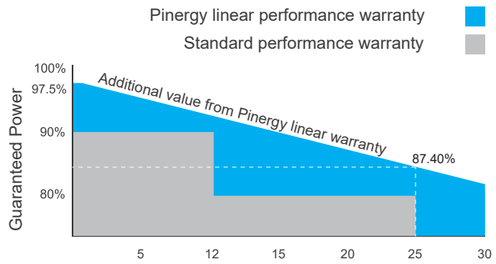
Special circuit design brings lower hot spot temperature;

Lower power generation cost

Reduce the levelized power generation cost, and effectively increase power generation by more than 2%;

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

Solar

Electrical Specifications

Module Type: PNGNH66-DGBR-xxx , (xxx=Pmax)

Module Type	600	605	610	615	620	625	630
Testing Condition	STC	STC	STC	STC	STC	STC	STC
Max. Power (Pmax/W)	600	605	610	615	620	625	630
Voltage at Max. Power (Vmp/V)	40.17	40.31	40.46	40.60	40.74	40.88	41.02
Current at Max. Power (Imp/A)	14.94	15.01	15.08	15.15	15.22	15.29	15.36
Open circuit voltage (Voc/V)	48.28	48.48	48.68	48.88	49.08	49.28	49.48
Short circuit current (Isc/A)	15.84	15.90	15.96	16.02	16.08	16.14	16.20
Module efficiency (%)	22.2%	22.4%	22.6%	22.8%	23.0%	23.1%	23.3%
Power Tolerance (W)	0~+5						

Standard Test Condition (STC)：Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)：Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Bifacial Output-rearside Power Gain

5%	Maximum power (Pmax)	630	635.25	640.50	645.75	651.00	656.25	661.50
	Module Efficiency STC (%)	23.32%	23.52%	23.71%	23.91%	24.10%	24.29%	24.49%
15%	Maximum power (Pmax)	690	695.75	701.50	707.25	713.00	718.75	724.50
	Module Efficiency STC (%)	25.54%	25.76%	25.97%	26.18%	26.40%	26.61%	26.82%
25%	Maximum power (Pmax)	750	756.25	762.50	768.75	775.00	781.25	787.50
	Module Efficiency STC (%)	27.77%	28.00%	28.23%	28.46%	28.69%	28.92%	29.15%

Mechanical Specifications

Cell Type	N-type Mono Solar Cell
No. of Cells	132 (6×22)
Dimension	2382x1134x30mm
Weight	32.4kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Temperature Characteristics

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

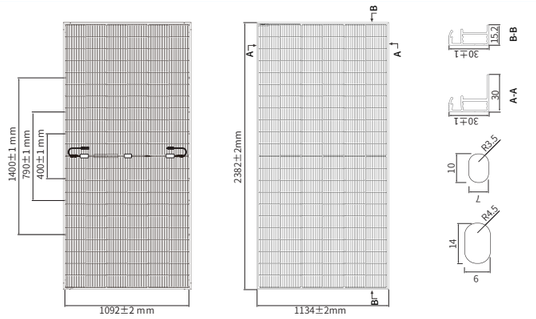
Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	30A

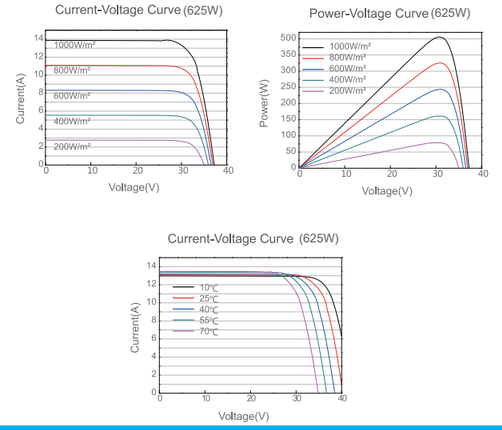
Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	720 pcs

Engineering Drawings



Curve & Temperature Dependence



Solar

PNGNH66-DGBR

625-650 Watt

N-type Mono Topcon Bifacial

Key Features

IP68 waterproof junction box and connector

IP68 waterproof junction box and connector have excellent waterproof performance and can effectively resist harsh environments;

Anti-PID

Excellent anti-PID performance in 96 hours (85℃/85%) test, and It can also be improved to meet higher standards and is suitable for particularly harsh environments;

Unspecified MBB half cell technology

New circuit design, lower internal current, lower power loss;

Significantly reduce the risk of hot spots

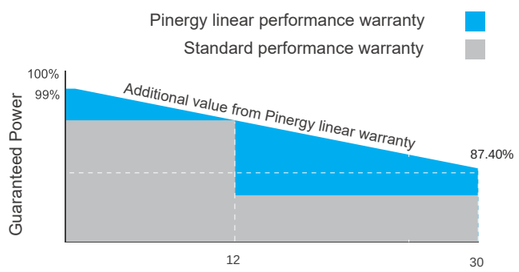
Special circuit design brings lower hot spot temperature;

Lower power generation cost

Reduce the levelized power generation cost, and effectively increase power generation by more than 2%;

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

Solar

Electrical Specifications

Module Type: PNGNH66-DGBR-xxx , (xxx=Pmax)

Module Type	625	630	635	640	645	650
Testing Condition	STC	STC	STC	STC	STC	STC
Max. Power (Pmax/W)	625	630	635	640	645	650
Voltage at Max. Power (Vmp/V)	40.88	41.02	41.16	41.29	41.42	41.56
Current at Max. Power (Imp/A)	15.29	15.36	15.43	15.50	15.57	15.64
Open circuit voltage (Voc/V)	49.28	49.48	49.68	49.88	50.08	50.28
Short circuit current (Isc/A)	16.14	16.20	16.26	16.32	16.38	16.44
Module efficiency (%)	23.10%	23.30%	23.51%	23.69%	23.88%	24.06%
Power Tolerance (W)	0~+5					

Standard Test Condition (STC)： Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)： Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Electrical Specifications

Max. Power (Pmax/W)	690	696	701	706	711	716
Voltage at Max. Power (Vmp/V)	40.88	41.04	41.18	41.35	41.48	41.64
Current at Max. Power (Imp/A)	16.88	16.98	17.02	17.08	17.14	17.20
Open circuit voltage (Voc/V)	49.26	49346	49.66	49.86	50.06	50.26
Short circuit current (Isc/A)	17.83	17.92	17.96	18.03	18.09	18.16

Standard Test Condition (STC)： I rradiance 1000W/m², Cell Temperature 25℃， AM1.5

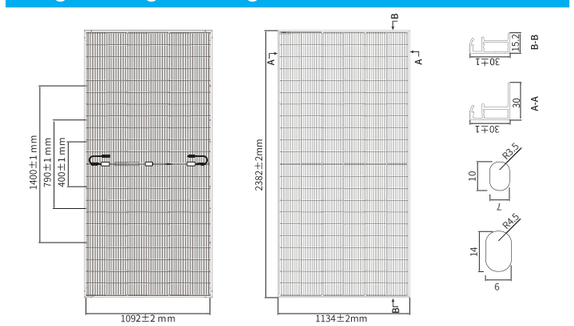
Mechanical Specifications

Cell Type	N-type Mono Solar Cell
No. of Cells	132 (6×22)
Dimension	2382x1134x30mm
Weight	32.4kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	720 pcs

Engineering Drawings



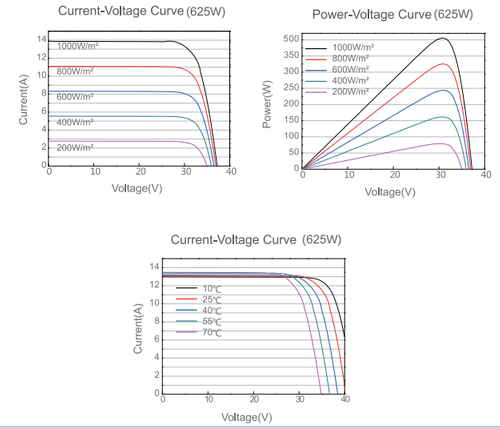
Temperature Characteristics

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

Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	30A

Curve & Temperature Dependence

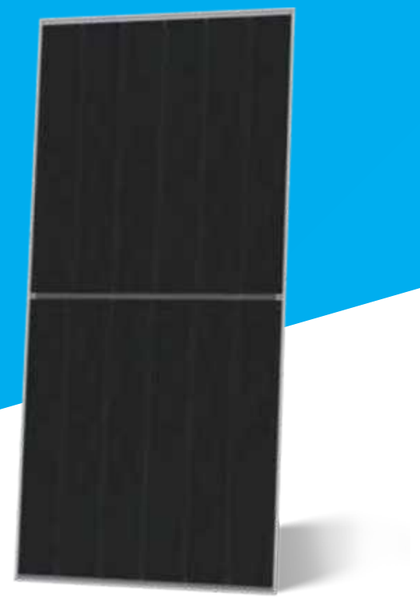


PNG Solar

PNGNH66-DGBR

650-670 Watt

N-type Mono Topcon Bifacial



Key Features

IP68 waterproof junction box and connector

IP68 waterproof junction box and connector have excellent waterproof performance and can effectively resist harsh environments;

Anti-PID

Excellent anti-PID performance in 96 hours (85℃/85%) test, and It can also be improved to meet higher standards and is suitable for particularly harsh environments;

Unspecified MBB half cell technology

New circuit design, lower internal current, lower power loss;

Significantly reduce the risk of hot spots

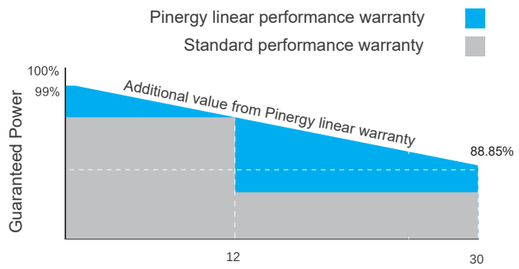
Special circuit design brings lower hot spot temperature;

Lower power generation cost

Reduce the levelized power generation cost, and effectively increase power generation by more than 2%;

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

PNG Solar

Electrical Specifications

Module Type: PNGNH66-DGBR-xxx , (xxx=Pmax)

Module Type	650	655	660	665	670
Testing Condition	STC	STC	STC	STC	STC
Max. Power (Pmax/W)	650	655	660	665	670
Voltage at Max. Power (Vmp/V)	42.57	42.70	42.83	42.96	43.09
Current at Max. Power (Imp/A)	15.27	15.34	15.41	15.48	15.55
Open circuit voltage (Voc/V)	50.26	50.44	50.62	50.80	50.98
Short circuit current (Isc/A)	15.98	16.04	16.10	16.16	16.22
Module efficiency (%)	24.06%	24.25%	24.43%	24.62%	24.80%
Power Tolerance (W)	0~+5				

Standard Test Condition (STC)： Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)： Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Electrical Specifications

Max. Power (Pmax/W)	724	729	735	741	746
Voltage at Max. Power (Vmp/V)	42.52	42.69	42.86	43.03	43.20
Current at Max. Power (Imp/A)	17.04	17.10	17.17	17.23	17.30
Open circuit voltage (Voc/V)	50.38	50.56	50.74	50.92	51.10
Short circuit current (Isc/A)	17.80	17.87	17.94	18.00	18.07

Standard Test Condition (STC)： I rradiance 1000W/m², Cell Temperature 25℃， AM1.5

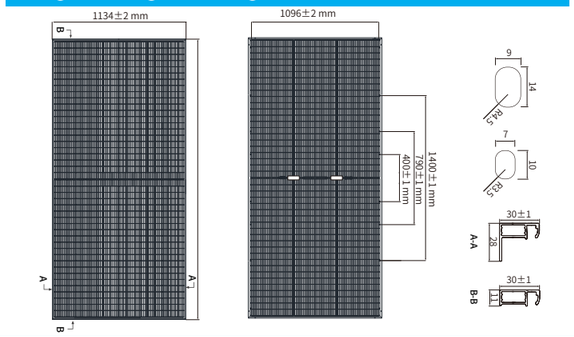
Mechanical Specifications

Cell Type	N-type Mono Solar Cell
No. of Cells	264 (66×4)
Dimension	2382x1134x30mm
Weight	32.5kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	720 pcs

Engineering Drawings



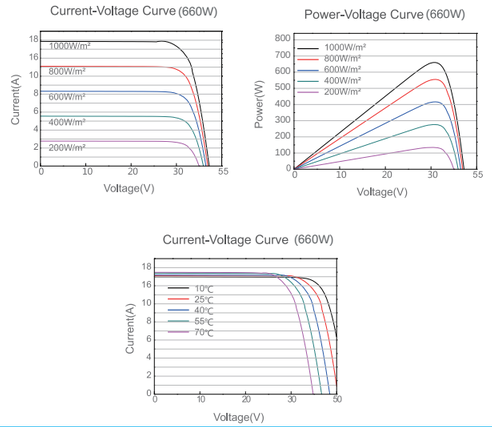
Temperature Characteristics

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

Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	35A

Curve & Temperature Dependence



Solar

PNGNH72-B8(182)

585-605 Watt

N-type Mono TOPCon

Key Features

Multi Busbar Solar Cell

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

PID Resistant

Anti PID

Excellent PID resistance at 96 hours (85℃/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 23.42%

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

Low-Light Performance

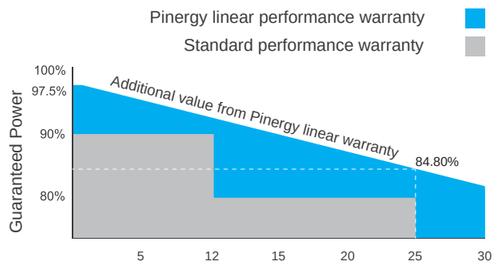
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH72-B8-xxx , (xxx=Pmax)

Module Type	585		590		595		600		605	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	585	444	590	448	595	452	600	456	605	460
Voltage at Max. Power (Vmp/V)	42.58	40.53	42.73	40.67	42.87	40.81	43.02	40.95	43.18	41.09
Current at Max. Power (Imp/A)	13.74	10.96	13.81	11.02	13.88	11.08	13.95	11.14	14.01	11.20
Open circuit voltage (Voc/V)	51.12	49.01	51.27	49.16	51.42	49.31	51.57	49.46	51.72	49.61
Short circuit current (Isc/A)	14.48	11.68	14.55	11.74	14.62	11.80	14.69	11.87	14.76	11.93
Module efficiency (%)	22.64%		22.83%		23.02%		23.22%		23.42%	
Power Tolerance (W)	0~+5									

Standard Test Condition（STC）: Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature（NMOT）: Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Mechanical Specifications

Cell Type	N-Type MONO 182×91mm
No. of Cells	144 (6×24)
Dimension	2279x1134x30mm
Weight	29kg
Glass	3.2mm, Low Iron Tempered Glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Temperature Characteristics

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

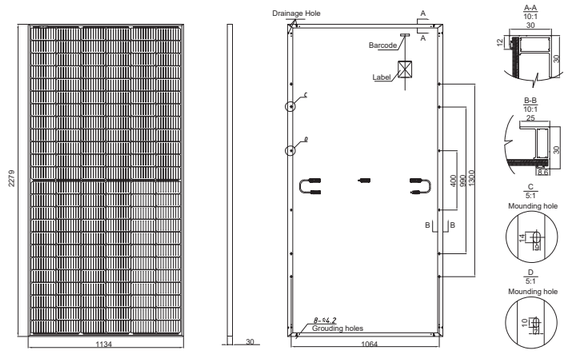
Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	25A

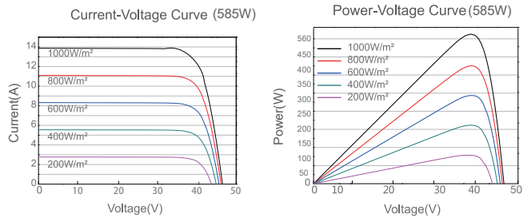
Packaging Configurations

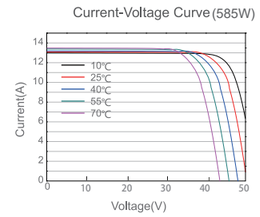
Per Pallet	36 pcs
Per 40' HQ Container	720 pcs

Engineering Drawings



Curve & Temperature Dependence





Solar

PNGNH72-DGB8(182)

580-600 Watt

N-type Mono TOPCon Bifacial

Key Features

Multi Busbar Solar Cell

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

PID Resistant

Excellent PID resistance at 96 hours (85℃/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 23.22%

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

Low-Light Performance

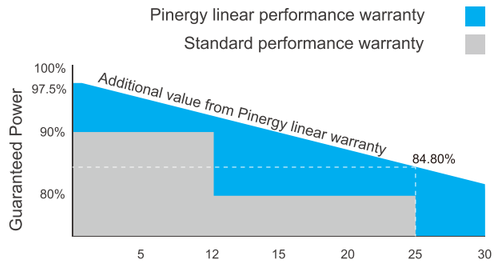
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH72-DGB8-xxx,(xxx=Pmax)

Module Type	580		585		590		595		600	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	580	440	585	444	590	448	595	452	600	456
Voltage at Max. Power (Vmp/V)	42.43	40.38	42.58	40.53	42.73	40.67	42.87	40.81	43.02	40.95
Current at Max. Power (Imp/A)	13.67	10.9	13.74	10.96	13.81	11.02	13.88	11.08	13.95	11.14
Open circuit voltage (Voc/V)	50.97	48.86	51.12	49.01	51.27	49.16	51.42	49.31	51.57	49.46
Short circuit current (Isc/A)	14.41	11.62	14.48	11.68	14.55	11.74	14.62	11.80	14.69	11.87
Module efficiency (%)	22.44%		22.64%		22.83%		23.02%		23.22%	
Power Tolerance (W)	0~+5									

Standard Test Condition (STC)： Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)： Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Bifacial Output-rearside Power Gain

5%	Maximum power (Pmax)	609.00	614.25	619.50	624.75	630.00
	Module Efficiency STC (%)	23.56%	23.77%	23.97%	24.17%	24.38%
15%	Maximum power (Pmax)	667.00	672.75	678.50	684.25	690.00
	Module Efficiency STC (%)	25.81%	26.03%	26.25%	26.48%	26.70%
25%	Maximum power (Pmax)	725.00	731.25	737.50	743.75	750.00
	Module Efficiency STC (%)	28.05%	28.29%	28.54%	28.78%	29.03%

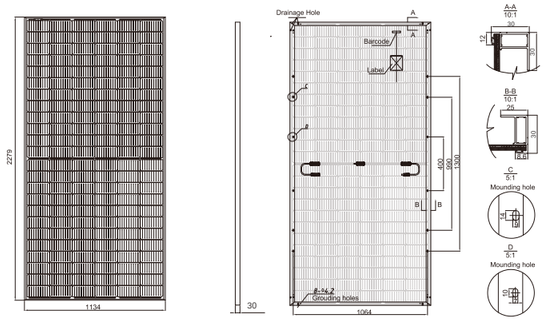
Mechanical Specifications

Cell Type	N-type BIFACIAL MONO 182×91mm
No. of Cells	144（6×24）
Dimension	2279×1134×30mm
Weight	32.5kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	720 pcs

Engineering Drawings



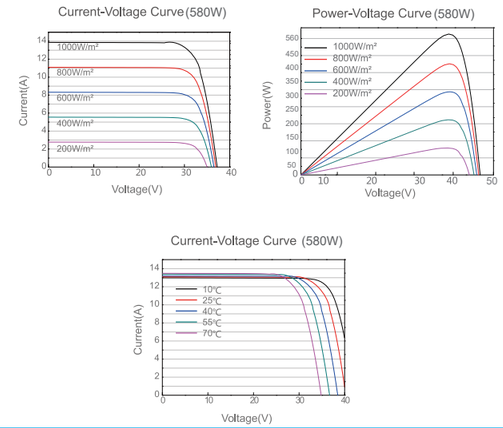
Temperature Characteristics

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

Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	25A

Curve & Temperature Dependence



Solar

PNGNH78-DGB8(182)

610-635 Watt

N-type Mono TOPCon Bifacial

Key Features

Multi Busbar Solar Cell

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

PID Resistant

Excellent PID resistance at 96 hours (85℃/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 22.72%

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

Low-Light Performance

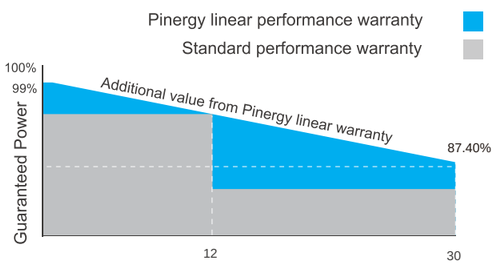
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH78-DGB8-xxx,(xxx=Pmax)

Module Type	610		615		620		625		630		635	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	610	460	615	464	620	467	625	471	630	475	635	479
Voltage at Max. Power (Vmp/V)	45.56	42.22	45.66	42.33	45.76	42.44	45.86	42.55	45.96	42.66	46.06	42.77
Current at Max. Power (Imp/A)	13.39	10.89	13.47	10.95	13.55	11.01	13.63	11.07	13.71	11.13	13.79	11.19
Open circuit voltage (Voc/V)	55.27	52.45	55.42	52.6	55.57	52.74	55.72	52.88	55.87	53.02	56.02	53.16
Short circuit current (Isc/A)	14.04	11.38	14.11	11.44	14.18	11.50	14.25	11.56	14.32	11.62	14.39	11.68
Module efficiency (%)	21.82%		22.00%		22.18%		22.36%		22.54%		22.72%	
Power Tolerance (W)	0~+5											

Standard Test Condition (STC)： Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)： Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Bifacial Output-rearside Power Gain

5%	Maximum power (Pmax)	640.50	645.75	651.00	656.25	661.50	666.75
	Module Efficiency STC (%)	22.91%	23.10%	23.29%	23.48%	23.66%	23.85%
15%	Maximum power (Pmax)	701.50	707.25	713.00	718.75	724.50	730.25
	Module Efficiency STC (%)	25.10%	25.30%	25.51%	25.71%	25.92%	26.12%
25%	Maximum power (Pmax)	762.50	768.75	775.00	781.25	787.50	793.75
	Module Efficiency STC (%)	27.28%	27.50%	27.73%	27.95%	28.17%	28.40%

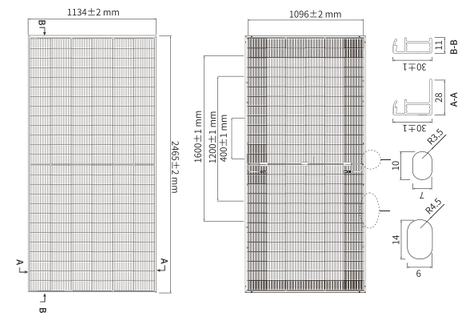
Mechanical Specifications

Cell Type	N-Type MONO
No. of Cells	156（78x2）
Dimension	2465x1134x30 mm
Weight	34.0kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	36 pcs
Per 40' HQ Container	576 pcs

Engineering Drawings



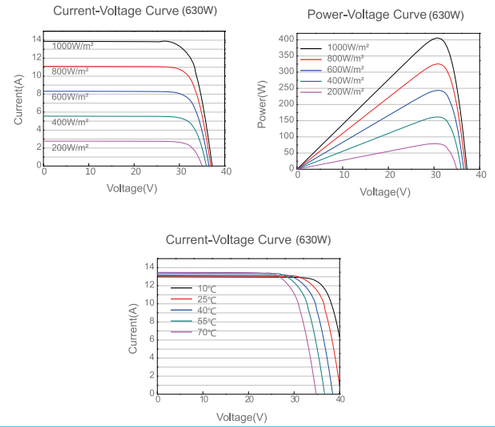
Temperature Characteristics

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

Maximum Ratings

Maximum system voltage (IEC)	1500V DC
Snow / Wind	5400Pa / 2400Pa
Operating Temperature	-40℃ ~ +85℃
Maximum series fuse rating	30A

Curve & Temperature Dependence

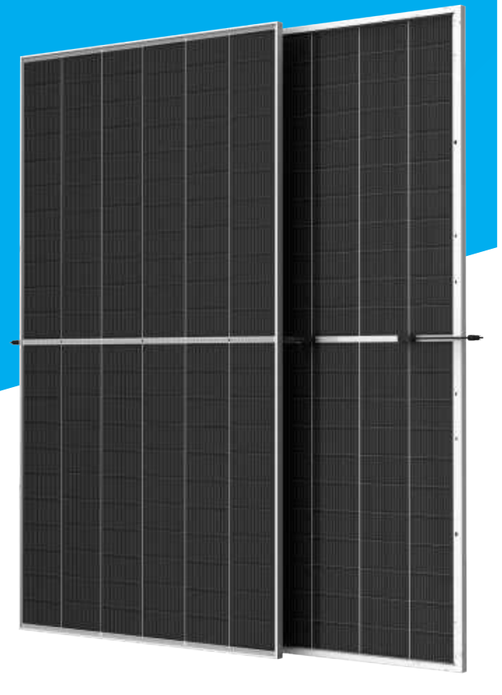


Solar

PNGNH66-DGBX(210)

715-740 Watt

N-type BIFACIAL MODULE



Key Features

Multi Busbar Solar Cell

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PID Resistant

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Anti-Crack

Excellent anti-microcracking performance with more balanced interior stress;

Module efficiency up to 23.8%

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Low-Light Performance

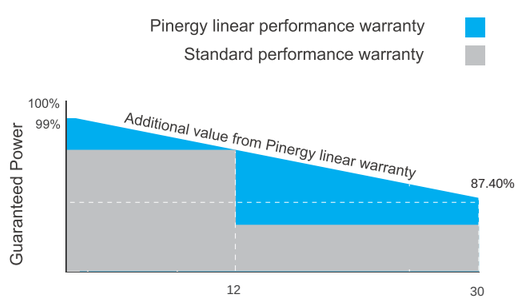
Excellent power generation performance under Low-Light condition due to multi busbar; better shading response benefit from half cell module;

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

Solar

Electrical Specifications

Module Type: PNGNH66-DGBX-xxx , (xxx=Pmax)

Module Type	715		720		725		730		735		740	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Max. Power (Pmax/W)	715	547	720	551	725	555	730	559	735	563	740	566
Voltage at Max. Power (Vmp/V)	41.1	38.7	41.3	38.8	41.5	39.0	41.7	39.3	41.9	39.5	42.1	39.7
Current at Max. Power (Imp/A)	17.4	14.14	17.44	14.19	17.47	14.23	17.51	14.24	17.55	14.25	17.58	14.27
Open circuit voltage (Voc/V)	49.2	46.7	49.4	46.9	49.6	47.1	49.9	47.2	50.1	47.5	50.3	47.7
Short circuit current (Isc/A)	18.44	14.86	18.49	14.9	18.54	14.94	18.58	14.98	18.62	15.01	18.66	15.04
Module efficiency (%)	23.0%		23.2%		23.3%		23.5%		23.7%		23.8%	
Power Tolerance (W)	0~+5											

Standard Test Condition (STC)： Irradiance 1000W/m², Cell Temperature 25℃, AM1.5

Nominal Module Operating Temperature (NOCT)： Irradiance 800W/m², Ambient Temperature 20℃, AM1.5, Wind Speed 1m/s

Electrical Characteristics With Different Power Bin (Reference To 10% Irradiance Ratio)

Maximum Power-Pmp (W)	787	792	798	803	809	814
Maximum Power Voltage (Vmp/V)	41.1	41.3	41.5	41.7	41.9	42.1
Maximum Power Current (Imp/A)	19.14	19.18	19.22	19.26	19.31	19.34
Open Circuit Voltage (Voc/V)	49.2	49.4	49.6	49.9	50.1	50.3
Short Circuit Current (Isc/A)	20.28	20.34	20.39	20.44	20.48	20.53
Irradiance Ratio (Rear/Front)	10%					

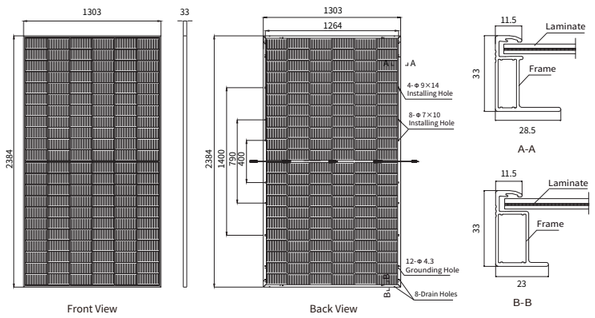
Mechanical Specifications

Cell Type	N-type Mono TOPCon
No. of Cells	132 (6×22)
Dimension	2384x1303x33mm
Weight	38.3kg
Glass	Dual glass,2.0mm coated tempered glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68, 3 diodes
Output Cables	4mm², Length 300mm or customized
Connector type	MC4 compatible

Packaging Configurations

Per Pallet	33 pcs
Per 40' HQ Container	594 pcs

Engineering Drawings



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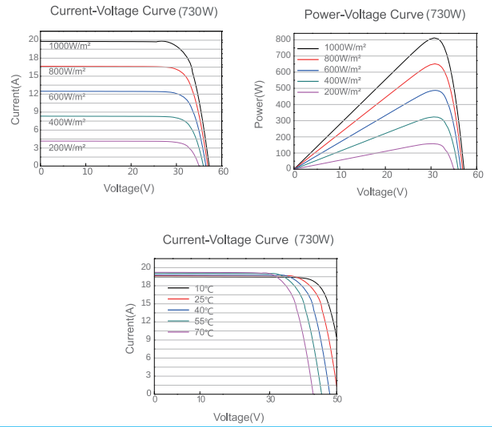

Project case Power station project

◀500kw in Zadar,Croatia,

PNG320-72P

Jun.16th ,2018

▲260KW Hainan China,

PNG265-60P,

Apr.13th ,2019

▲7KW ,Guangxi China,

PNG375-72M ,

May 5th 2019

500KW Xizang,China ▶

PNG370-72M ,

Jun.30th ,2018

Project case Power station project

▲ 2.2MW ,Qinghai,China PNG 310–60M,Aug.25th,2019

▲
40kw in Ver acruz,Mexico,
PNG275–60P,
Jun.7th ,2018

▲
132KW ,Sana–Yemen ,
PNG370–72M,
Jul.7th,2018

Project case Power station project

◀ 15KW , PNG335–72P,

Pärnu,Estonia ,

Jun.15th ,2020

▲ 18KW ,Anhui China ,

PNG 260–60P ,

May 7th,2018

▼5KW ,Bac ninh ,Vietnam,

PNG375–72M,

Apr.6th,2019

品质追求
能源不竭

PNG Solar

合肥品能光伏科技有限公司
Hefei Pinergy Solar Technology Co.,Ltd.