

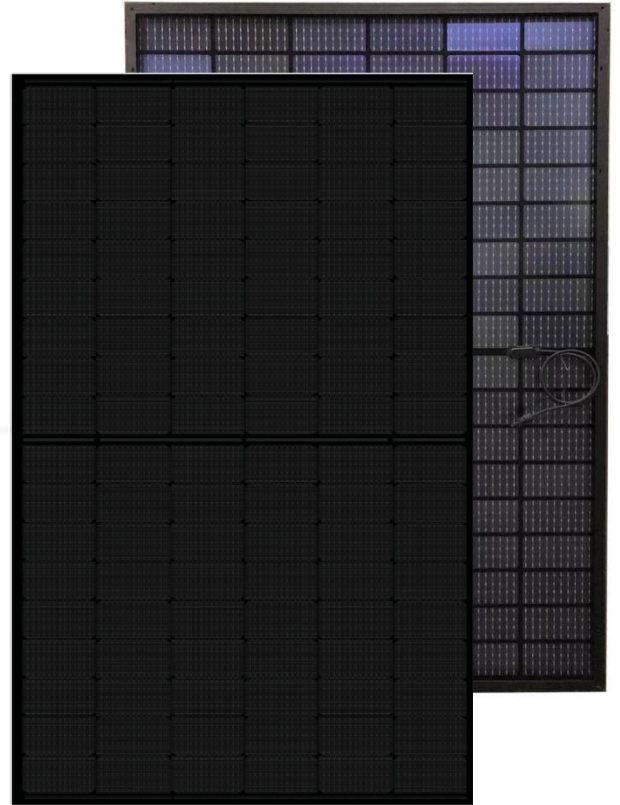
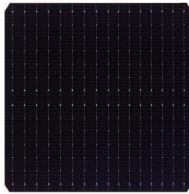
# N type Mono-crystalline 400-420 Watt

0~+3% POWER TOLERANCE

High efficiency N - type Double glass black grid solar module

## Cell Busbar

16BB



## Module characteristics



### Stronger properties

Passes the wind load test of 2400Mpa and the snow load test of 5400Mpa



### Better attenuation

N-type, Components have better reliability and lower LID/LETID attenuation



### PID resistance

The attenuation probability of PID phenomenon is minimized through battery production technology optimization and material control



### Harsh environmental adaptation

Third party certification passed high salt spray and high ammonia corrosion test



### Multiple grid and Half cell technique

More light utilization and current collection capabilities, effectively improving product power output and reliability



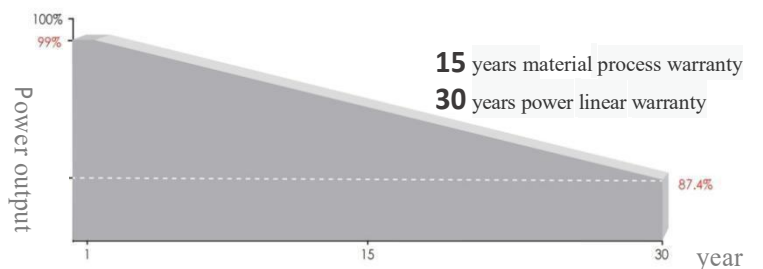
## Long and reliable quality assurance

IEC61215 (2016), IEC61730 (2016)

ISO9001:2015: Quality management system

ISO14001:2015: Environmental management system

ISO45001:2018: Occupational health and safety management system



Linear decay of 0.4% per year over 30 years

## Electrical Parameters

Model Type	QN-DG400HN		QN-DG405HN		QN-DG410HN		QN-DG415HN		QN-DG420HN	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	400	302.3	405	306.0	410	309.6	415	315	420	318
Open Circuit Voltage (Voc)	37.1	34.8	37.3	35.0	37.5	35.2	37.7	36.0	37.9	36.2
Short Circuit Current (Isc)	13.73	11.04	13.81	11.10	13.88	11.16	13.96	11.22	14.04	11.27
Maximum Power Voltage (Vmp)	31.2	28.8	31.4	29.0	31.6	29.2	31.8	29.8	32.0	30.0
Maximum Power Current (Imp)	12.83	10.50	12.90	10.56	12.98	10.62	13.06	10.56	13.13	10.62
Module Efficiency - $\eta_m$ (%)	20.5		20.7		21.0		21.3		21.5	
Operational Temperature	-40°C ~ +85°C									
Maximum System Voltage	1500VDC									
Maximum Series Fuse Rating	25A									
Power Tolerance	0 ~ +3%									
Temperature Coefficient of Pmax	-0.310%/°C									
Temperature Coefficient of Voc	-0.260%/°C									
Temperature Coefficient of Isc	+0.046%/°C									
Nominal Operating Cell Temperature	45 ± 2°C									
Safety Class	Class II									
Max Load (Front/back)	5400Mpa/2400Mpa									

STC: Irradiance 1000W/m<sup>2</sup>

Battery temperature 25°C

Atmospheric quality =1.5

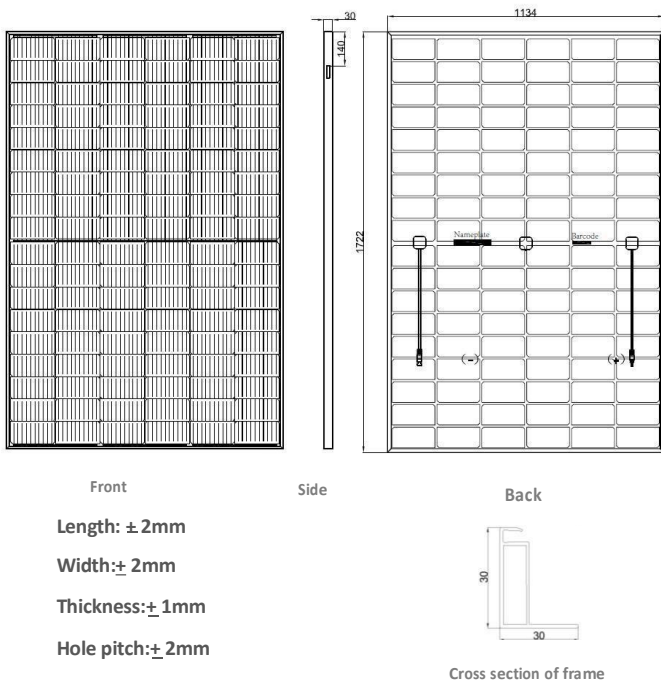
NOCT: Irradiance 800W/m<sup>2</sup>

Ambient temperature 25°C

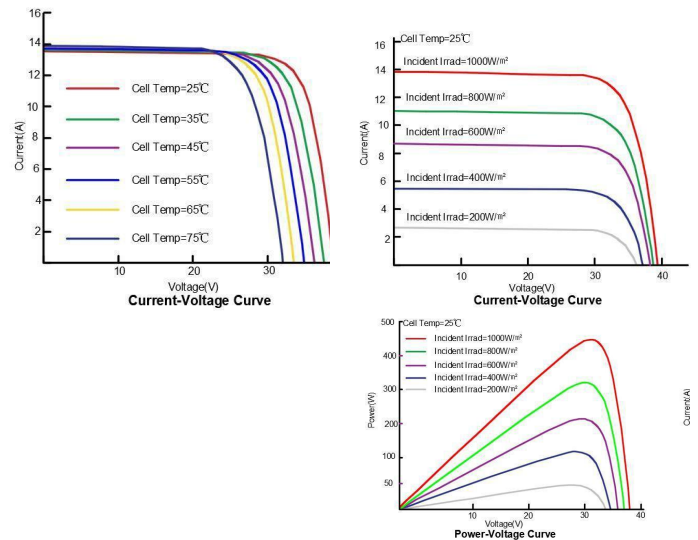
Atmospheric quality =1.5

Wind speed 1m/s

## Mechanical Diagrams



## Curve figure



## Specification

Cell type	N type mono crystalline 16BB
Half-cell quantity	108 (6×18)
Dimension	1762×1134×30
Weight	25.3kg ± 3%
Glass	Front 2.0/Back 2.0mm Coated toughened
Frame	Black Anodized Aluminum Alloy
Junction Box	IP68
Cable	1200mm (Customized)

## Packing standard

36pcs/pallet, Each pallet size: 1760×1130×1245mm

40HQ: 26pallets/container, 936pcs/container

The company reserves the right of final