

NTOPCon Technology

JW-HD120N

N-type Bifacial Double Glass Mono Module

370-390W

Cell Type



9BB



390W

Maximum Power Output

21.03%

Maximum Module Efficiency

 $0 \sim +5W$

Power Output Tolerance



10-30% Additional Power Generation Gain

30 years lifespan brings 10-30% additional power generation comparing with conventional product



ZERO LID (Light Induced Degradation)

N-type solar cell has no LID naturally, can increase power generation



Lower LCOE

High bifaciality, high power output, saving **BOS** cost



Better Weak Illumination Response

Wide spectral response, higher power output even under low-light settings like smog or cloudy days



Better Temperature Coefficient

Higher power generation under working conditions, thanks to passivating contact cell technology



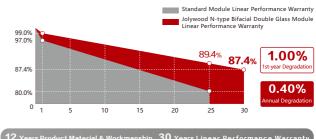
Wider Applicability

BIPV, vertical installation, snowfield, high-humid area, windy and dusty area

Jolywood Delivers Reliable Performance Over Time

- Leader of N-type bifacial technology
- Fully automatic facility and world-class technology
- · Long term reliability tests passed
- BNEF Tier One

Linear Performance Warranty



 $m{12}$ Years Product Material & Workmanship $\,\, 30\,$ Years Linear Performance Warranty











JW-HD120N Series N-type Bifacial Double Glass Mono Module

| Electrical Properties STC* | | | | | | |
|---------------------------------|------------|------------|------------|------------|------------|--|
| Testing Condition | Front Side | |
| Peak Power (Pmax) (W) | 370 | 375 | 380 | 385 | 390 | |
| MPP Voltage (Vmp) (V) | 34.5 | 34.7 | 34.9 | 35.1 | 35.3 | |
| MPP Current (Imp) (A) | 10.73 | 10.81 | 10.89 | 10.97 | 11.05 | |
| Open Circuit Voltage (Voc) (V) | 41.4 | 41.6 | 41.8 | 42.0 | 42.2 | |
| Short Circuit Current (Isc) (A) | 11.36 | 11.45 | 11.54 | 11.62 | 11.69 | |
| Module Efficiency (%) | 19.95 | 20.22 | 20.49 | 20.76 | 21.03 | |

| Electrical Properties | NOCT* | | | | |
|---------------------------------|------------|------------|------------|------------|------------|
| Testing Condition | Front Side |
| Peak Power (Pmax) (W) | 280 | 284 | 287 | 291 | 295 |
| MPP Voltage (Vmp) (V) | 32.4 | 32.5 | 32.7 | 32.9 | 33.1 |
| MPP Current (Imp) (A) | 8.65 | 8.72 | 8.78 | 8.84 | 8.91 |
| Open Circuit Voltage (Voc) (V) | 39.6 | 39.8 | 40.0 | 40.1 | 40.3 |
| Short Circuit Current (Isc) (A) | 9.16 | 9.23 | 9.30 | 9.37 | 9.43 |

^{*}NOCT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s

Operating Properties

| Operating Temperature (°C) | -40°C∼+85°C | |
|--------------------------------|-------------|--|
| Maximum System Voltage (V) | 1500V (IEC) | |
| Maximum Series Fuse Rating (A) | 25 | |
| Power Tolerance | 0~+5W | |
| Bifaciality* | 75% | |

*Bifaciality=Pmaxrear (STC) /Pmaxfront (STC) , Bifaciality tolerance:±5%

Temperature Coefficient

| Temperature Coefficient of Pmax* | -0.320%/°C | |
|---|------------|--|
| Temperature Coefficient of Voc | -0.260%/°C | |
| Temperature Coefficient of Isc | +0.046%/°C | |
| Nominal Operating Cell Temperature (NOCT) | 42±2°C | |

^{*}Temperature Coefficient of Pmax±0.03%/°C

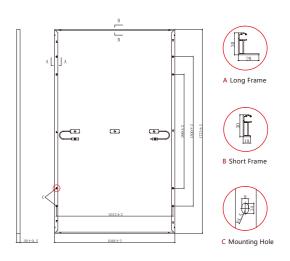
Mechanical Properties

| Cell Type | 166.00mm*83.00mm | | | |
|---------------------|-----------------------|--|--|--|
| Number of Cells | 120pcs(12*10) | | | |
| Dimension | 1773mm*1046mm*30mm | | | |
| Weight | 23.5kg | | | |
| Front / Rear Glass* | 2.0mm/2.0mm | | | |
| Frame | Anodized Aluminium | | | |
| Junction Box | IP68 (3 diodes) | | | |
| Length of Cable* | 4.0mm², +300mm/-180mm | | | |
| Connector | MC4 Compatible | | | |

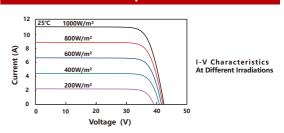
With Different Power Generation Gain (regarding 380W as an example)

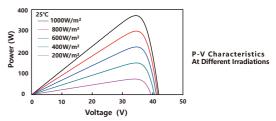
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|-------------------|--------------------------|--------------------------|--------------------------|-----------------------------------|------------------------------------|
| Power Gain (%) | Peak Power (Pmax) (W) | MPP Voltage (Vmp) (V) | MPP Current (Imp) (A) | Open Circuit Voltage (Voc) (V) | Short Circuit Current (Isc) (A) |
| 10 | 409 | 34.9 | 11.70 | 41.8 | 12.38 |
| 15 | 423 | 34.9 | 12.10 | 41.8 | 12.80 |
| 20 | 437 | 35.0 | 12.50 | 41.9 | 13.22 |
| 25 | 451 | 35.0 | 12.90 | 41.9 | 13.65 |
| 30 | 466 | 35.0 | 13.31 | 41.9 | 14.07 |

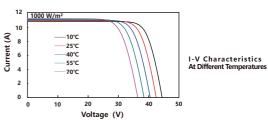
Engineering Drawing (unit: mm)



Characteristic Curves | HD120N-380







| Packaging Configuration | | | | | |
|-------------------------|-------|-------|-------|--|--|
| Packing Type | 20'GP | 40'GP | 40'HQ | | |
| Piece/Pallet | | 36 | | | |
| Pallet/Container | 6 | 13 | 26 | | |
| Piece/Container | 216 | 468 | 936 | | |

^{*}The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to ongoing innovation, R&D enhancement, Jolywood (Taizhou) Solar Technology Co., Ltd. reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.





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^{*}STC: Irradiance 1000 W/m², Cell Temperature 25°C, AM1.5
The data above is for reference only and the actual data is in accordance with the pratical testing Power Measurement Tolerance ±3%