

JW-HD120N-R3

n-type Bifacial Dual-Glass **Black Frame** Module

490-515W



515 W
Maximum Power Output

23.3%
Maximum Module Efficiency

0~+3%
Power Output Tolerance



10-30% Additional Power Generation

30 years lifespan brings 10-30% additional power generation comparing with conventional P-type module



ZERO LID (Light Induced Degradation)

n-type solar cell has no LID naturally which can increase power generation



Higher Reliability

New generation TOPCon technology for the battery, featuring no web coating, no current leakage, and reater resistance to hot spots.



Better Weak Illumination Response

Higher power output even under low-light environments like on cloudy or foggy days



Better Temperature Coefficient

Lower temperature coefficient (-0.28%) and lower working temperature, resulting in more power.



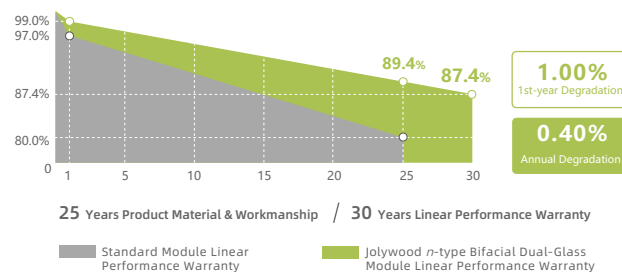
Wider Applicability

More application scenes like BIPV, vertical installation, snowfield, high-humid, windy and dusty area



IEC61215(2021), IEC61730(2023), IEC61701, IEC62716
 ISO9001:2015: Quality Management System
 ISO14001:2015: Environment Management System
 ISO45001:2018: Occupational health and safety management systems
 IEC62941: 2019: Quality system for PV module manufacturing

Linear Performance Warranty



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Electrical Properties | STC*

Testing Condition	Front Side	Front Side	Front Side	Front Side	Front Side	Front Side
Peak Power (Pmax) (W)	490	495	500	505	510	515
MPP Voltage (Vmp) (V)	37.11	37.29	37.47	37.65	37.83	38.01
MPP Current (Imp) (A)	13.20	13.27	13.34	13.41	13.48	13.55
Open Circuit Voltage (Voc) (V)	43.18	43.38	43.58	43.78	43.98	44.18
Short Circuit Current (Isc) (A)	14.00	14.06	14.12	14.18	14.24	14.30
Module Efficiency (%)	22.2	22.4	22.6	22.8	23.1	23.3

*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 practical testing Power Measurement Tolerance ±3%

Electrical Properties | NMOT*

Testing Condition	Front Side	Front Side	Front Side	Front Side	Front Side	Front Side
Peak Power (Pmax) (W)	367	371	375	378	382	386
MPP Voltage (Vmp) (V)	35.54	35.71	35.88	36.05	36.23	36.41
MPP Current (Imp) (A)	10.33	10.38	10.44	10.49	10.54	10.59
Open Circuit Voltage (Voc) (V)	41.34	41.53	41.73	41.92	42.11	42.30
Short Circuit Current (Isc) (A)	11.30	11.35	11.40	11.45	11.50	11.55

*NMOT: Irradiance 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s

Electrical Properties Under Different Rear Gain | HD120N-500

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	550.0	37.47	14.68	43.58	15.54
15	575.0	37.47	15.35	43.58	16.24
20	600.0	37.57	15.97	43.68	16.91
25	625.0	37.57	16.64	43.68	17.61
30	650.0	37.57	17.30	43.68	18.32

Operating Properties

Operating Temperature (°C)	-40°C~+85°C
Maximum System Voltage (V)	1500V DC (IEC)
Maximum Series Fuse Rating (A)	30
Bifaciality*	80%
Static Load	Front side 5400Pa, Rear side 2400Pa

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

Temperature Coefficient

Temperature Coefficient of Pmax*	-0.280%/°C
Temperature Coefficient of Voc	-0.250%/°C
Temperature Coefficient of Isc	+0.045%/°C
Nominal Operating Cell Temperature (NOCT)	42±2°C

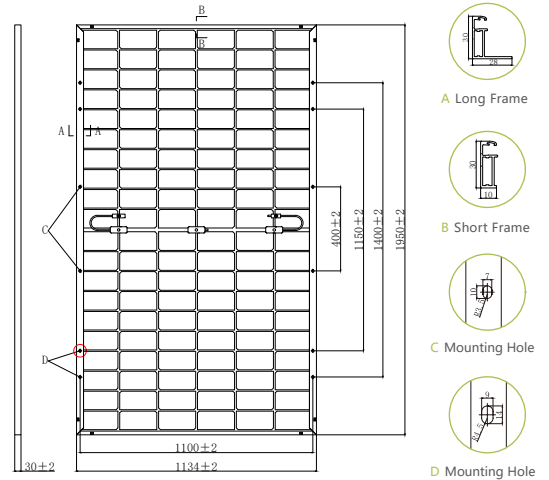
*Temperature Coefficient of Pmax: ±0.03%/°C

Mechanical Properties

Number of Cells	120pcs
Module Dimension	1950mm*1134mm*30mm
Weight	27.3kg
Front / Rear Glass*	2.0mm/2.0mm Heat strengthened glass
Frame	Anodized Aluminium Alloy
Junction Box	IP68 (3 diodes)
Length of Cable	4.0mm ² , +1300mm/-1300mm (Cable length can be customized)
Packaging Configuration	36pcs/Pallet, 864pcs/40'HQ

*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.

Engineering Drawing (unit: mm)



Characteristic Curves | HD120N-500

