

NTOPCon Technology

JW-HD108N

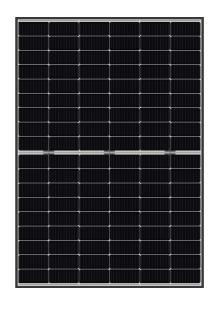
N-type High Efficiency Black Mono Silicon Half-Cell Double Glass Module

410-425W

Cell Type



11BB



425W

Maximum Power Output

21.69%

Maximum Module Efficiency

0~+5W

Power Output Tolerance



Additional Power Generation Gain

At least 30-year product life, more than 10%- 30% additional power gain comparing with conventional module



Lower LCOE

High bifaciality, high power output, saving BOS cost



Wider Applicability

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



Better Weak Illumination Response

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



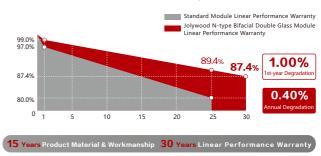
Better Temperature Coefficient

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



- Leader of N-type bifacial technology
- Fully automatic facility and world-class technology
- Long term reliability tests passed
- 100% EL tests





Additional Insurance Backed by Munich Re













Jolywood (Taizhou) Solar Technology Co., Ltd., a subsidiary under Jolywood Group (stock code: SZ300393), is the world leading N-type bifacial solar cells and modules manufacturer. The technology of NTOPCon, NIBC, TBC, etc, and the annual N-type bifacial production capacity reaches 2.1GW cells and 3GW modules. With vision of "Cultivator of Green Energy", Jolywood adheres to the road of advanced and high efficiency solar technology industrialization.

JW-HD108N Series N-type High Efficiency Mono Black Silicon Half-Cell Double Glass Module

Electrical Properties	STC*			
Testing Condition	Front Side	Front Side	Front Side	Front Side
Peak Power (Pmax) (W)	410	415	420	425
MPP Voltage (Vmp) (V)	31.5	31.7	31.9	32.1
MPP Current (Imp) (A)	13.02	13.10	13.17	13.24
Open Circuit Voltage (Voc) (V)	37.5	37.7	37.9	38.1
Short Circuit Current (Isc) (A)	13.82	13.91	13.98	14.05
Module Efficiency (%)	20.92	21.18	21.43	21.69

*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%

Electrical Properties	NOCT*			
Testing Condition	Front Side	Front Side	Front Side	Front Side
Peak Power (Pmax) (W)	310	314	318	322
MPP Voltage (Vmp) (V)	29.5	29.7	29.9	30.1
MPP Current (Imp) (A)	10.50	10.56	10.62	10.67
Open Circuit Voltage (Voc) (V)	35.8	36.0	36.2	36.4
Short Circuit Current (Isc) (A)	11.14	11.22	11.27	11.33

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

Operating Properties -40°C~+85°C Operating Temperature (°C) Maximum System Voltage (V) 1500V (IEC) 30 Maximum Series Fuse Rating(A) Power Tolerance 0~+5W Bifaciality* 75% Fire class

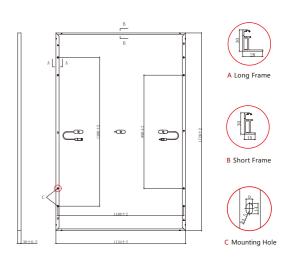
*Bifaciality=Pmaxrear (STC) /Pmaxfront (STC) , Bifaciality tolerance:±	5%	
Temperature Coefficient		
Temperature Coefficient of Pmax*	-0.320%/°C	
Temperature Coefficient of Voc	-0.260%/°C	
Temperature Coefficient of Isc	+0.046%/°C	
Nominal Operating Cell Temperature (NOCT)	42±2°C	
*Temperature Coefficient of Pmax±0.03%/°C		

Mechanical Properties				
Cell Type	182.00mm*91.00mm			
Number of Cells	108pcs(12*9)			
Dimension	1728mm*1134mm*30mm			
Weight	24.5kg			
Front /Rear Glass*	2.0mm/2.0mm			
Frame	Anodized Aluminium			
Junction Box	IP68 (3 diodes)			
Length of Cable*	4.0mm², 300mm			
Connector QC Solar QC4.10-cd / Staubli EVO2				
*Heat strengthened glass *Cable length can be customized				

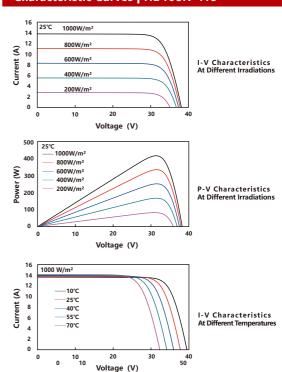
With Different Power Generation Gain (regarding 415W as an example)

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	448	31.7	14.13	37.7	14.99
15	465	31.7	14.65	37.7	15.54
20	481	31.7	15.17	37.7	16.08
25	498	31.7	15.69	37.7	16.62
30	515	31.8	16.20	37.8	17.16

Engineering Drawing (unit: mm)



Characteristic Curves | HD108N-415



Packaging Configuration				
Packing Type	20'GP	40'GP	40'HQ	
Piece/Pallet		35		
Pallet/Container	6	13	26	
Piece/Container	210	455	910	

^{*}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.



