

NTOPCon Technology

JW-HD132N

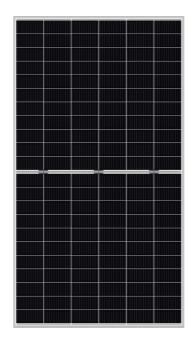
N-type Bifacial Double Glass Mono Module

665-690W

IEC61215(2016), IEC61730(2016)

ISO9001:2015: Quality Management System ISO14001:2015: Environment Management System ISO45001:2018: Occupational health and safety

management systems



690W

Maximum Power Output

22.21%

Maximum Module Efficiency

 $0 \sim +5W$

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



Lower LCOE

Higher bifaciality, higher power output and lower BOS cost



Better Weak Illumination Response

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



Better Temperature Coefficient

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



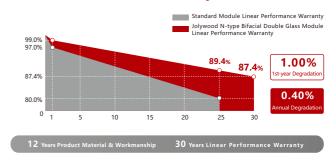
Wider Applicability

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

Jolywood Delivers Reliable Performance Over Time

- Leader of N-type bifacial manufacturer
- · Full-automatic facility and industry-leading technology
- · Best-in-class durability and reliability
- BNEF Tier One

Linear Performance Warranty













JW-HD132N Series N-type Bifacial Double Glass Mono Module

Electrical Properties	STC*					
Testing Condition	Front Side					
Peak Power (Pmax) (W)	665	670	675	680	685	690
MPP Voltage (Vmp) (V)	38.2	38.4	38.6	38.8	39.0	39.2
MPP Current (Imp) (A)	17.42	17.46	17.50	17.54	17.58	17.62
Open Circuit Voltage (Voc) (V)	45.8	46.0	46.2	46.4	46.6	46.8
Short Circuit Current (Isc) (A)	18.47	18.52	18.57	18.62	18.67	18.72
Module Efficiency (%)	21.41	21.57	21.73	21.89	22.05	22.21

Electrical Properties	NOCT*					
Testing Condition	Front Side					
Peak Power (Pmax) (W)	502	506	510	514	518	522
MPP Voltage (Vmp) (V)	35.8	36.0	36.2	36.4	36.6	36.7
MPP Current (Imp) (A)	14.02	14.06	14.09	14.14	14.17	14.21
Open Circuit Voltage (Voc) (V)	43.7	43.9	44.1	44.3	44.5	44.7
Short Circuit Current (Isc) (A)	14.89	14.93	14.97	15.01	15.05	15.09

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

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

Operating Properties -40°C~+85°C Operating Temperature (°C) Maximum System Voltage (V) 1500V DC (IEC) Maximum Series Fuse Rating (A) 35 Power Tolerance 0~+5W Bifaciality* 80%

Temperature Coefficient		
Temperature Coefficient of Pmax*	-0.300%/°C	
Temperature Coefficient of Voc	-0.250%/°C	
Temperature Coefficient of Isc	+0.045%/°C	
Nominal Operating Cell Temperature (NOCT)	42±2℃	

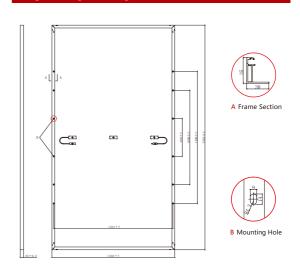
^{*}Temperature Coefficient of Pmay+0.03%/°C

.00mm*105.00mm
132pcs(12*11)
nm*1303mm*35mm
38.0kg
2.0mm/2.0mm
zed Aluminium Alloy
P68 (3 diodes)
nm (Cable length can be customized)

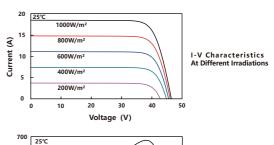
*Heat	strengthened	glass

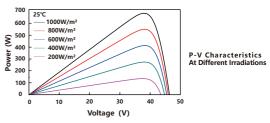
With Differe	With Different Power Generation Gain (regarding 680W as an example)				
Power Gain (%)	Peak Power (Pmax) (W)	MPP Voltage (Vmp) (V)	MPP Current (Imp) (A)	Open Circuit Voltage (Voc) (V)	Short Circuit Current (Isc) (A)
10	734	38.8	18.91	46.4	20.10
15	762	38.9	19.59	46.5	20.79
20	789	38.9	20.28	46.5	21.48
25	816	38.9	20.97	46.5	22.19
30	843	38.9	21.67	46.5	22.92

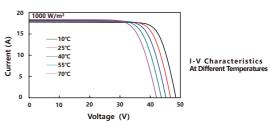
Engineering Drawing (unit: mm)



Characteristic Curves | HD132N-680







Packaging Configuration			
Packing Type	40'HQ		
Piece/Pallet	31		
Pallet/Container	18		
Piece/Container	558		

^{*}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%