

NTOPCon Cell Technology

JW-HD144N

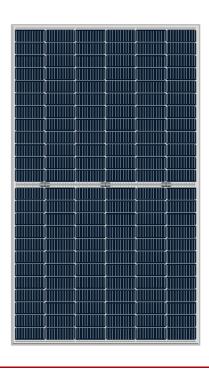
N-type Bifacial High Efficiency Mono Silicon Half-Cell Double Glass Module

535-560W

Cell Type



11BB



560W

Maximum Power Output

21.66%

Maximum Module **Efficiency**

 $0 \sim +5W$

Power Output Guarantee



Additional Power Generation Gain

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



ZERO LID (Light Induced Degradation)

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



Lower LCOE

High power and 1500V system voltage, saving **BOS** cost



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



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
- 100% EL inspection ensuring defect-free modules

Linear Performance Warranty



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 manufacture. The technology of company 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-HD144N Series

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

Electrical Properties	STC*					
Testing Condition	Front Side					
Peak Power (Pmax) (W)	535	540	545	550	555	560
MPP Voltage (Vmp) (V)	41.4	41.6	41.8	42.0	42.2	42.4
MPP Current (Imp) (A)	12.93	12.99	13.04	13.10	13.16	13.21
Open Circuit Voltage (Voc) (V)	49.6	49.8	50.0	50.2	50.4	50.6
Short Circuit Current (Isc) (A)	13.69	13.75	13.81	13.87	13.93	13.99
Module Efficiency (%)	20.69	20.89	21.08	21.27	21.47	21.66

*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

Electrical Properties	ност	*				
Testing Condition	Front Side					
Peak Power (Pmax) (W)	405	408	412	416	420	424
MPP Voltage (Vmp) (V)	38.8	39.0	39.2	39.4	39.6	39.8
MPP Current (Imp) (A)	10.42	10.47	10.51	10.56	10.61	10.65
Open Circuit Voltage (Voc) (V)	47.4	47.6	47.8	48.0	48.2	48.4
Short Circuit Current (Isc) (A)	11.04	11.09	11.13	11.18	11.23	11.28

*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* 80% *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 $\pm 0.03\%$ /°C

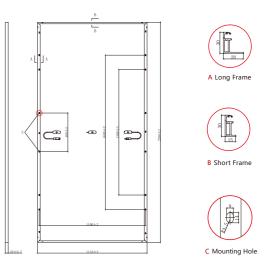
Mechanical Properties	
Cell Type	182.00mm*91.00mm
Number of Cells	144pcs(12*12)
Dimension	2280mm*1134mm*30mm
Weight	31.5kg
Front /Rear Glass*	2.0mm/2.0mm
Frame	Anodized Aluminium
Junction Box	IP67 (3 diodes)
Length of Cable*	4.0mm², 300mm
Connector	MC4 Compatible

With Different Power Generation Gain (regarding 545W as an example) Power Gain Peak Power MPP Voltage MPP Current Open Circuit Voltage | Short Circuit Current (%) (Pmax) (W) (Voc) (V) (Isc) (A) (Vmp) (V) (Imp) (A) 10 589 41.8 14.07 50.0 14.90 15 610 41.9 14.59 50.1 15.45 41.9 50.1 20 632 15.10 15.99 25 654 41.9 15.62 50.1 16.54

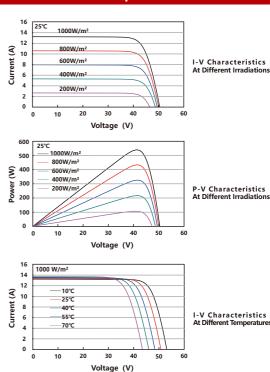
16.13

41.9

Engineering Drawing (unit: mm)



Characteristic Curves HD144N-545



Packaging Configuration					
Packing Type	20'GP	40'GP	40'HQ		
Piece/Pallet		35			
Pallet/Container	5	10	20		
Piece/Container	175	350	700		
*The specification and key features described in this datasheet may deviate slightly and					

^{*}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 descri-bad bargin.



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