中来股份 JOLYWOOD

NTOPCon Cell Technology

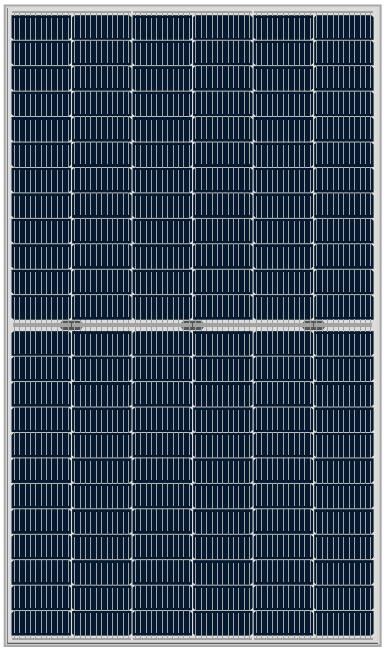
JW-HD144N

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~+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

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

ZERO LID (Light Induced Degradation)
N-type solar cell has no LID naturally, can increase power generation

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

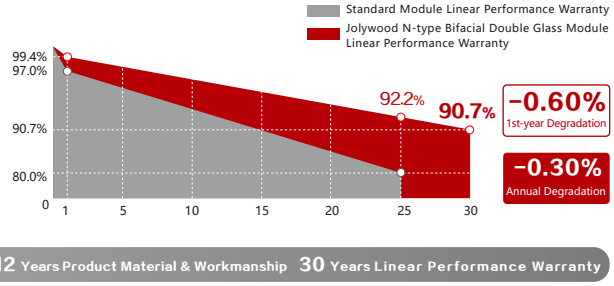
Lower LCOE
High power and 1500V system voltage,saving BOS cost

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



12 Years Product Material & Workmanship 30 Years Linear Performance Warranty

Additional Insurance Backed by Munich Re

"optional" Munich RE

P
E
N

JW-HD144N Series | N-type Bifacial High Efficiency Mono Silicon Half-Cell Double Glass Module

Electrical Properties | STC*

Testing Condition	Front Side	Front Side	Front Side	Front Side	Front Side	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 | NOCT*

Testing Condition	Front Side	Front Side	Front Side	Front Side	Front Side	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 (℃)	-40℃~+85℃
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%/℃
Temperature Coefficient of Voc	-0.260%/℃
Temperature Coefficient of Isc	+0.046%/℃
Nominal Operating Cell Temperature (NOCT)	42±2℃

*Temperature Coefficient of Pmax±0.03%/℃

Mechanical Properties

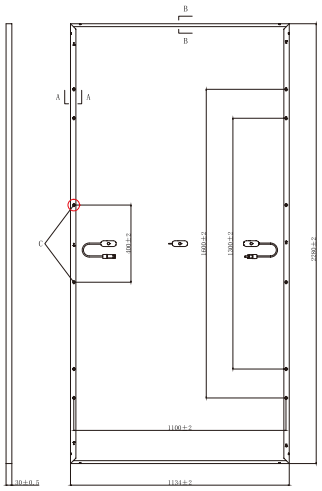
Cell Type	182.00mm*91.00mm
Number of Cells	144pcs(12*12)
Dimension	2280mm*1134mm*30mm
Weight	31.5kg
Front /Rear Glass*	2.0mm/2.0mm
Frame	Anodized Aluminium
Junction Box	IP67 (3 diodes)
Length of Cable*	4.0mm², 300mm
Connector	MC4 Compatible

*Heat strengthened glass
*Cable length can be customized

With Different Power Generation Gain (regarding 545W 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	589	41.8	14.07	50.0	14.90
15	610	41.9	14.59	50.1	15.45
20	632	41.9	15.10	50.1	15.99
25	654	41.9	15.62	50.1	16.54
30	676	41.9	16.13	50.1	17.08

Engineering Drawing (unit: mm)

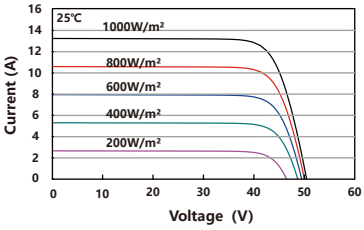


A Long Frame

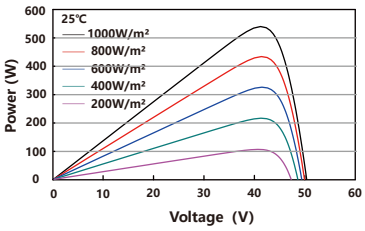
B Short Frame

C Mounting Hole

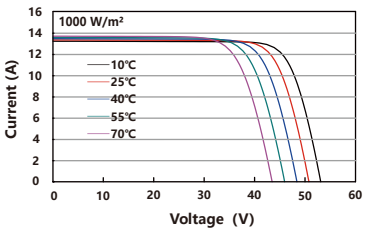
Characteristic Curves | HD144N-545



I-V Characteristics
At Different Irradiations



P-V Characteristics
At Different Irradiations



I-V Characteristics
At Different Temperatures

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 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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