JW-HD144N Series (9BB Full Frame)

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

- JW-HD144N-390
- JW-HD144N-395
- JW-HD144N-400
- JW-HD144N-405
- JW-HD144N-410
- JW-HD144N-415

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

Excellent PID Free (Potential Induced Degradation)
With double glass design and POE material, of which the WVTR is only 1/10 of conventional EVA, there is no need to worry about the module power degradation caused by PID.

Lower Micro-crack Risk
No internal stress from the symmetrical N-Bifacial cell design

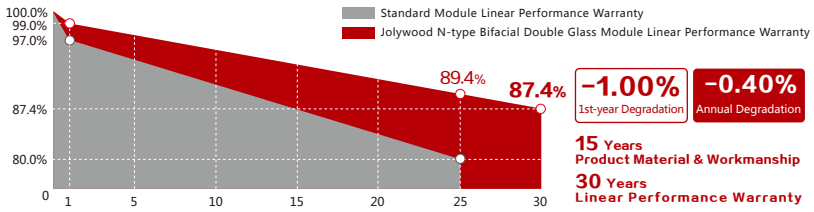
Higher Reliability
Successfully passed various strict tests (IEC61215, IEC61730 etc.)

Better Weak Illumination Response
Wide spectral response, higher power output even under 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

Linear map



-1.00% 1st-year Degradation

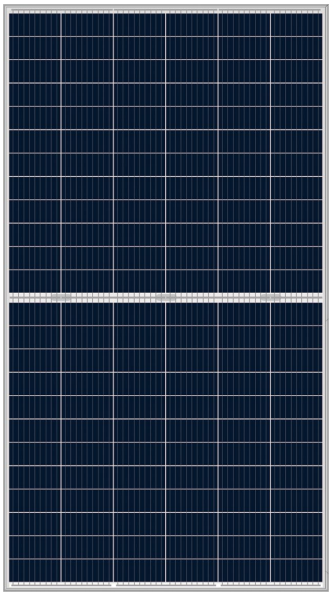
-0.40% Annual Degradation

15 Years Product Material & Workmanship

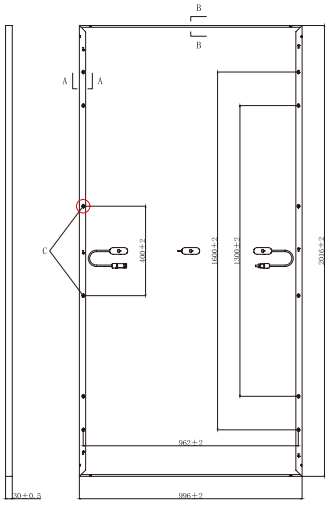
30 Years Linear Performance Warranty

Remark: 15 years warranty for Europe use only

Module diagram



Engineering drawing (unit : mm)




A Long Frame


B Short Frame


C Mounting Hole

"optional" Munich RE

Jolywood (Taizhou) Solar Technology Co., Ltd. is the world's leading manufacturer of N-type bifacial solar cells and modules. At present, we have more than 3GW production capacity of N-type monocrystalline bifacial solar cells and modules, and our technology covers the world-leading N-PERT, Passivating Contact, IBC, TBC and other cell and module technology. The parent company, Jolywood (Suzhou) Sunwatt Co.,Ltd. (stock code: SZ300393), which is established in 2008 and successfully listed in the GEM in 2014, is the world's largest professional PV backsheet manufacturer, committing to becoming the world's top manufacturer of advanced integrated PV products.

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

ELECTRICAL PROPERTIES | STC*

Module Type	JW-HD144N-390	JW-HD144N-395	JW-HD144N-400	JW-HD144N-405	JW-HD144N-410	JW-HD144N-415
Testing Condition	Front Side	Front Side	Front Side	Front Side	Front Side	Front Side
Peak Power (Pmax) (W)	390	395	400	405	410	415
MPP Voltage (Vmp) (V)	40.8	41.2	41.5	41.8	42.1	42.4
MPP Current (Imp) (A)	9.56	9.60	9.64	9.69	9.74	9.79
Open Circuit Voltage (Voc) (V)	49.2	49.5	49.8	50.1	50.4	50.7
Short Circuit Current (Isc) (A)	10.02	10.08	10.14	10.19	10.24	10.29
Module Efficiency (%)	19.42	19.67	19.92	20.17	20.42	20.67

*STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass 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)	295	299	303	306	310	314
MPP Voltage (Vmp) (V)	38.3	38.6	38.9	39.2	39.5	39.8
MPP Current (Imp) (A)	7.71	7.74	7.77	7.81	7.85	7.89
Open Circuit Voltage (Voc) (V)	47.0	47.3	47.6	47.9	48.2	48.5
Short Circuit Current (Isc) (A)	8.08	8.13	8.18	8.22	8.26	8.30

*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)	20
Power Tolerance	0~+5W
Bifaciality*	80%

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

TEMPERATURE COEFFICIENT >

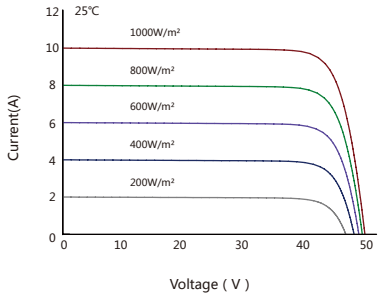
Temperature Coefficient of Pmax*	-0.32%/℃
Temperature Coefficient of Voc	-0.26%/℃
Temperature Coefficient of Isc	+0.046%/℃
Nominal Operating Cell Temperature (NOCT)	42±2℃

*Temperature Coefficient of Pmax±0.03%/℃

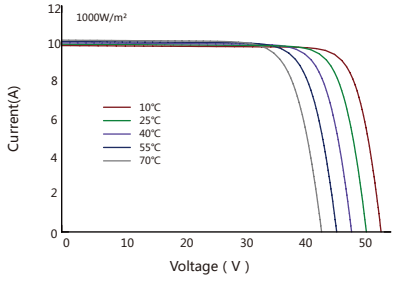
MECHANICAL PROPERTIES >

Cell Type	158.75mm*79.375mm
Number of Cells	144pcs(12*12)
Dimension	2016mm*996mm*30mm
Weight	29.5Kg
Front/Rear Glass	2.5mm/2.5mm
Frame	Anodized Aluminium
Junction Box	IP67 (3 diodes)
Length of Cable	4.0mm² , 300mm
Connector	MC4 Compatible

Irradiance Dependence of Isc, Voc and Pmax >



Temperature Dependence of Isc, Voc and Pmax >



With Different Power Generation Gain (regarding 405W 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	437	41.8	10.46	50.1	10.98
15	454	41.9	10.84	50.2	11.38
20	470	41.9	11.22	50.2	11.78
25	486	41.9	11.60	50.2	12.18
30	502	41.9	11.99	50.2	12.57

Packaging Configuration >

Packing Type	20'GP	40'GP	40'HQ
Piece/Pallet		35	
Pallet/Container	5	11	22
Piece/Container	175	385	770

*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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