

## JNMM144-430~450

High efficiency mono solar module

### Adopting PERC technology

#### JNMM144

All cell production line equipped with SE laser instrument.

Advanced process to reduce extra degradation of PERC cell.

MBB and half-cut design to improve module reliability and reduces loss.

Higher power output effectively reduces BOS and LCOE.

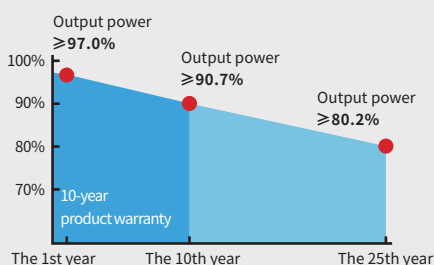
Compatible with 1000V and 1500V system voltage.

#### CERTIFICATION



TUV: IEC/EN 61215, IEC/EN 61730  
 BIS: IS 14286/IEC 61215, IS/IEC 61730  
 GB/T 19001-2016/ISO 9001:2015  
 GB/T 24001-2016/ISO 14001:2015  
 OHSAS 18001:2007  
 CNAS-CL01:ISO/IEC 17025:2017

#### QUALITY ASSURANCE



#### Advanced production process

Optimized MBB design  
 Cell efficiency >22.5%



#### Superior quality control

Full automatic production line  
 MES and ERP digitizing logistics management  
 100% three times EL and appearance inspection



#### Excellent power generation performance

0~+5W positive power tolerance  
 Improved low light irradiance performance and low degradation



#### Stable mechanical performance

Passed rigorous hail test  
 Withstands 5400Pa snow and 2400Pa wind loads



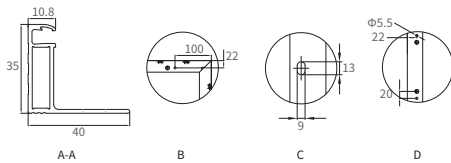
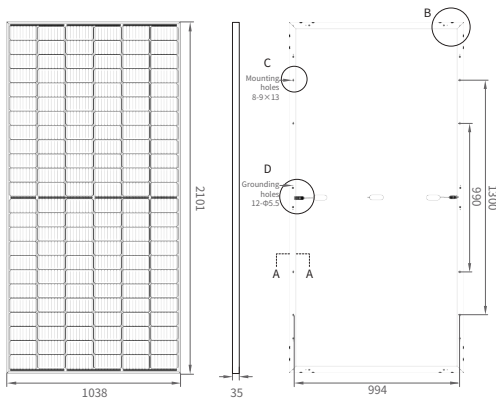
#### Long weather resistance

Excellent anti-PID performance  
 Certified in fireproofing for safety



#### JINNENG CLEAN ENERGY TECHNOLOGY LTD JINNENG PHOTOVOLTAIC TECHNOLOGY LTD

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**MECHANICAL PARAMETERS**

Cell (mm)	166*83 Mono
Dimensions (L*W*H) (mm)	2101*1038*35
Weight (kg)	22.9
Cable Cross Section Size (mm <sup>2</sup> )	4
Cable Length (mm)	Positive 295 / Negative 145
No. of Cells & Connections	144(6*24)
No. of Diodes	3

**QUALIFICATION**

Max. System Voltage (V DC)	1000 / 1500
Temperature Cycling Range (°C)	-40~+85
Max. Series Fuse Rating (A)	20
Max. Wind Load / Max. Snow Load (Pa)	2400 / 5400
Hot Spot Rate	100% Free
Connector Type	MC4 Compatible
Fire Rating	Class C
Junction Box & Connector Protection Grade	IP68

**TEMPERATURE COEFFICIENTS**

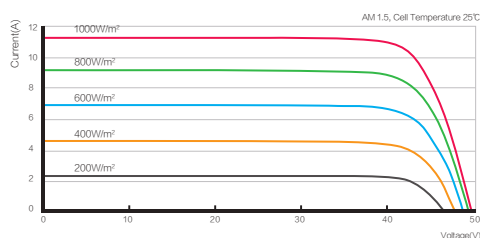
Nominal Module Operating Temperature (NMOT)	45±2°C
Temperature Coefficient Voltage (Voc)	-0.29 %/°C
Temperature Coefficient Current (Isc)	0.04 %/°C
Temperature Coefficient Power (Pm)	-0.38 %/°C

**ELECTRICAL PARAMETERS**

JNMM144-430 JNMM144-435 **JNMM144-440** JNMM144-445 JNMM144-450

	JNMM144-430	JNMM144-435	<b>JNMM144-440</b>	JNMM144-445	JNMM144-450	
<b>STC</b> AM1.5 1000W/m <sup>2</sup> Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	430	435	<b>440</b>	445	450
	Output Tolerance (W)	0-+5	0-+5	<b>0-+5</b>	0-+5	0-+5
	Max. Power Voltage (Vmp/V)	40.57	40.77	<b>40.97</b>	41.16	41.36
	Max. Power Current (Imp/A)	10.60	10.67	<b>10.74</b>	10.82	10.89
	Open Circuit Voltage (Voc/V)	49.20	49.39	<b>49.58</b>	49.78	49.98
	Short Circuit Current (Isc/A)	11.20	11.28	<b>11.35</b>	11.42	11.50
	Module Efficiency (%)	19.7	19.9	<b>20.2</b>	20.4	20.6
<b>NMOT</b> AM1.5 800W/m <sup>2</sup> Ambient Temperature 20°C Wind Speed 1m/s	Max. Power at NMOT (Pmpp/W)	320.0	323.7	<b>327.5</b>	331.2	334.9
	Max. Power Voltage (Vmp/V)	37.74	37.93	<b>38.11</b>	38.26	38.44
	Max. Power Current (Imp/A)	8.48	8.54	<b>8.59</b>	8.66	8.71
	Open Circuit Voltage (Voc/V)	46.14	46.32	<b>46.50</b>	46.69	46.87
Short Circuit Current (Isc/A)	9.04	9.10	<b>9.16</b>	9.21	9.28	

**I-V CURVE(440W)**



**PACKING CONFIGURATION**

**Container (High cube)**

Pieces Per Pallet	31
Pallets Per Stack	2
Stacks Per Container	11
Pieces Per Container	682

CAUTION: The contents of this specification are measured under standard test conditions and are for reference only and are subject to change without notice. Read safety and installation instructions before using the product.  
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