

## JNMM144-435~455(L)

"L" after the module type indicates that the type is suitable for 1000V DC.

### High efficiency mono solar module

#### JNMM144

Ga-doped silicon wafer, effectively reduce LID and LeTID. SE technology effectively improves cell conversion efficiency.

Optimized anti-reflective film and high-impedance encapsulating material to obtain excellent anti-PID performance.

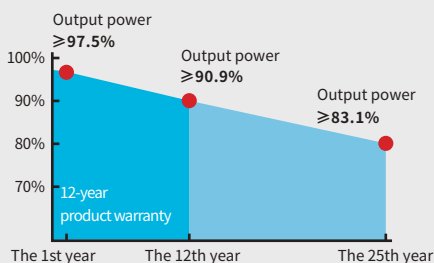
MBB and half-cell design to reduce shadow effects, improve module reliability and reduces loss.

#### 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 >22.8%



#### 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



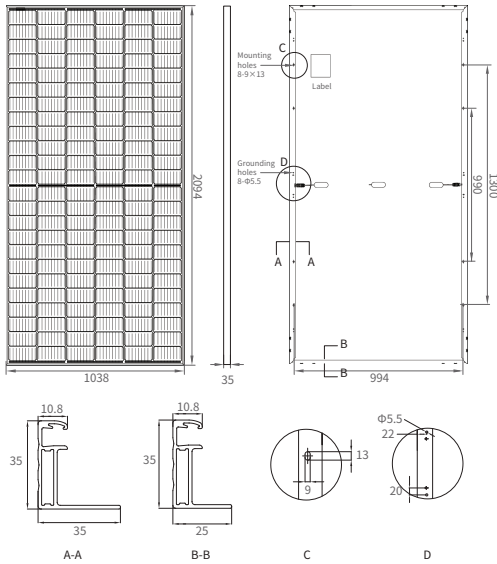
#### Long weather resistance

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)	2094*1038*35
Weight (kg)	23.3
Cable Cross Section Size (mm <sup>2</sup> )	4
No. of Cells & Connections	144(6*24)
No. of Diodes	3

<b>QUALIFICATION</b>	
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
Fire Rating	Class C
Junction Box & Connector Protection Grade	IP68

**ELECTRICAL PARAMETERS**

Module Type	(1000V DC)	JNMM144-435L	JNMM144-440L	JNMM144-445L	JNMM144-450L	JNMM144-455L
	(1500V DC)	JNMM144-435	JNMM144-440	JNMM144-445	JNMM144-450	JNMM144-455
<b>STC</b> AM1.5 1000W/m <sup>2</sup> Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	435	440	445	450	455
	Output Tolerance (W)	0~+5	0~+5	0~+5	0~+5	0~+5
	Max. Power Voltage (Vmp/V)	40.77	40.97	41.16	41.36	41.56
	Max. Power Current (Imp/A)	10.67	10.74	10.82	10.89	10.96
	Open Circuit Voltage (Voc/V)	49.39	49.58	49.78	49.98	50.18
	Short Circuit Current (Isc/A)	11.28	11.35	11.42	11.50	11.58
	Module Efficiency (%)	20.0	20.2	20.5	20.7	20.9
<b>NMOT</b> AM1.5 800W/m <sup>2</sup> Ambient Temperature 20°C Wind Speed 1m/s	Max. Power at NMOT (Pmpp/W)	327.4	331.2	334.9	338.7	342.5
	Max. Power Voltage (Vmp/V)	38.36	38.54	38.69	38.88	39.06
	Max. Power Current (Imp/A)	8.54	8.59	8.66	8.71	8.77
	Open Circuit Voltage (Voc/V)	46.63	46.81	47.00	47.18	47.37
	Short Circuit Current (Isc/A)	9.08	9.14	9.19	9.26	9.32

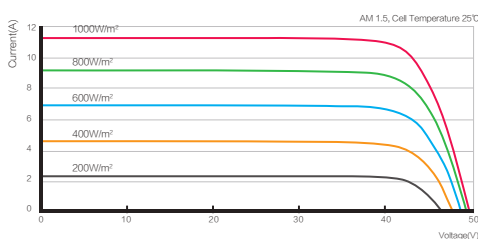
**PACKING CONFIGURATION**

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

**TEMPERATURE COEFFICIENTS**

Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.29 %/°C
Temperature Coefficient Current (Isc)	0.04 %/°C
Temperature Coefficient Power (Pm)	-0.37 %/°C

**I-V CURVE (445W)**



**Optional**

Connector Type	<input type="checkbox"/> MC4 Compatible	<input type="checkbox"/> MC4
Cable Length	<input type="checkbox"/> 295mm / 145mm	<input type="checkbox"/> Customized
Frame Color	<input type="checkbox"/> Silver	<input type="checkbox"/> Black
Max. System Voltage	<input type="checkbox"/> 1000V	<input type="checkbox"/> 1500V

Notes:

CAUTION: The electrical parameters in this product datasheet do not refer to only one module, nor are they promised in the contract. Read safety and installation instructions before using the product. The contents of this specification are for reference only and are subject to change without notice. Jinery reserves the right of final interpretation.  
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