

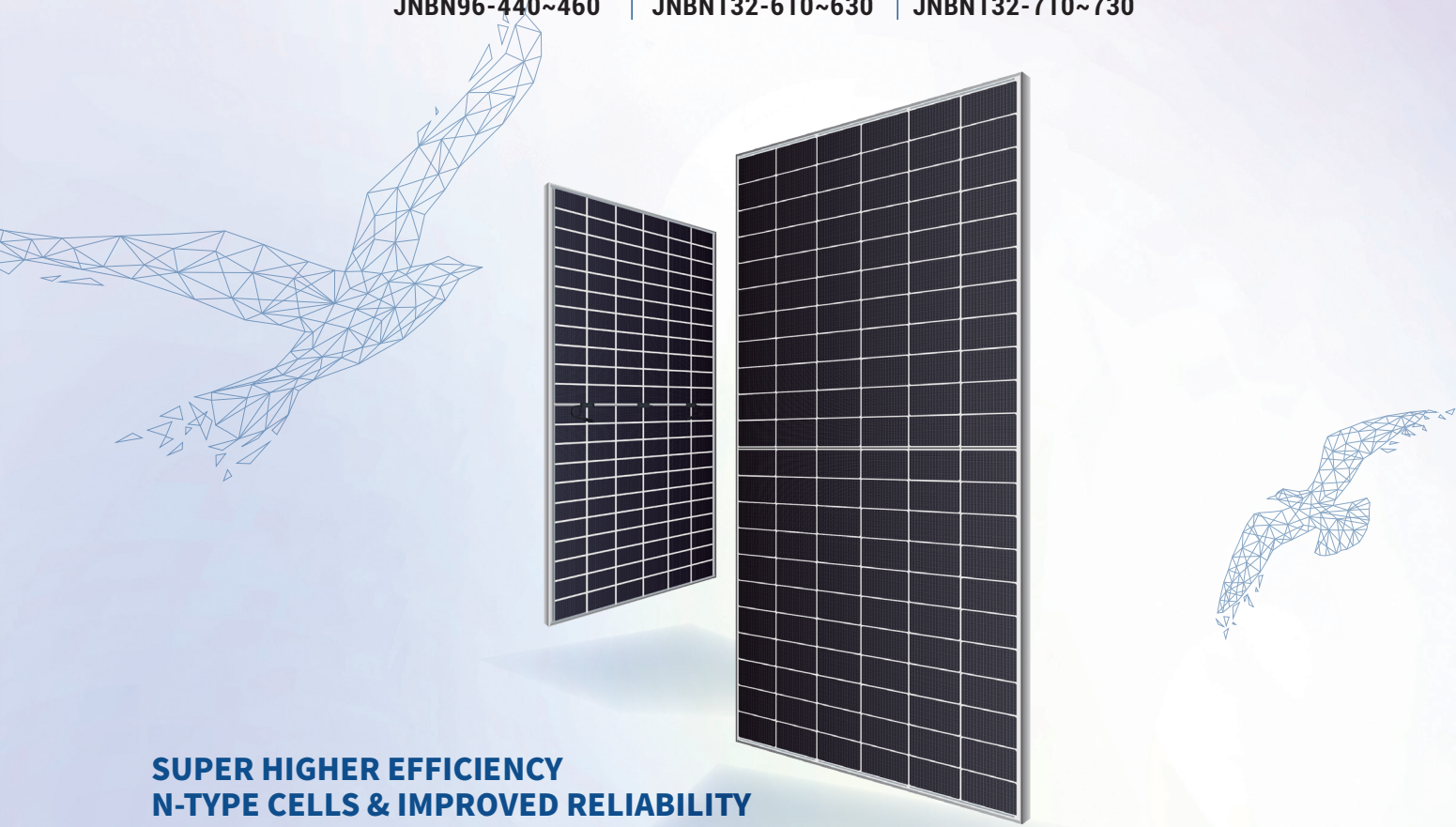


# HIGH EFFICIENCY N-TOPCON SOLAR MODULE

G12/G12R Cell | SMBB | Half-cut | Optional Bifacial

Optional: JNMN96-440~460 | JNMN132-615~635

JNBN96-440~460 | JNBN132-610~630 | JNBN132-710~730



## SUPER HIGHER EFFICIENCY N-TYPE CELLS & IMPROVED RELIABILITY

- 715W+ power output, bringing lower LCOE and BOS.
- Lower LID and anti PID ensure long-term returns.
- Optional G12R modules, Maximize the use of horizontal space for modules in container High Cube.
- Up to 80% bifacial factor gains 10%-30% extra generation in different scenarios.

**12** year product warranty    **30** year power generation warranty



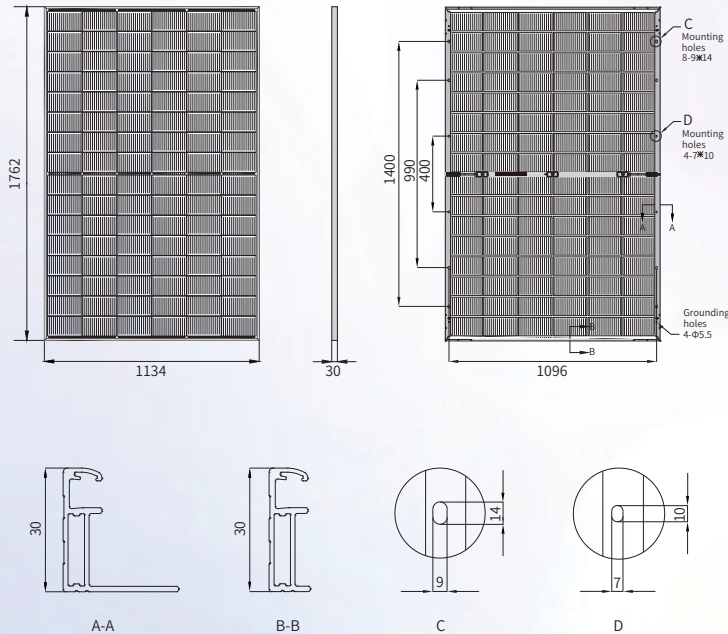
a **JINNENG HOLDING GROUP** company

[www.jinergy.com](http://www.jinergy.com)  
JINNENG CLEAN ENERGY TECHNOLOGY LTD / JINNENG PHOTOVOLTAIC TECHNOLOGY CO. LTD

# Bifacial Dual Glass TOPCon Module

## JNBN96-445~465

### ENGINEERING DRAWING



### MECHANICAL PARAMETERS

Cell (mm)	182*105 TOPCon
Dimensions (L*W*H) (mm)	1762*1134*30
Weight (kg)	24.1
Cable Cross Section Size (mm <sup>2</sup> )	4
No. of Cells & Connections	96(6*16)
No. of Diodes	3
Frame	Anodized Aluminium Alloy
Glass Thickness (mm)	2.0

### QUALIFICATION

Temperature Cycling Range (°C)	-40~+85
Max. Series Fuse Rating (A)	35
Max.Wind Load/Max.Snow Load (Pa)	2400/5400
Fire Rating	Class C
Junction Box & Connector Protection Grade	IP68
Bifacial Factor(%)	80±5

### TEMPERATURE COEFFICIENTS

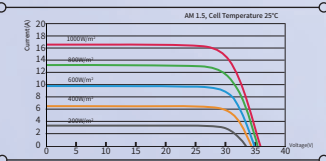
Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

### ELECTRICAL PARAMETERS

Module Type	(1500V DC)	JNBN96-445	JNBN96-450	JNBN96-455	JNBN96-460	JNBN96-465
STC AM1.5 1000W/m <sup>2</sup> Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	445	450	455	460	465
	Output Tolerance (W)	0-+5	0-+5	0-+5	0-+5	0-+5
	Max. Power Voltage (Vmp/V)	28.65	28.82	28.99	29.16	29.33
	Max. Power Current (Imp/A)	15.54	15.62	15.70	15.78	15.86
	Open Circuit Voltage (Voc/V)	35.40	35.57	35.74	35.91	36.08
	Short Circuit Current (Isc/A)	16.24	16.32	16.40	16.48	16.56
	Module Efficiency (%)	22.27	22.52	22.77	23.02	23.27
BNPI AM1.5 front 1000W/m <sup>2</sup> rear 135W/m <sup>2</sup> Cell Temperature 25°C	Max. Power (Pmpp/W)	493	499	504	510	515
	Max. Power Voltage (Vmp/V)	28.65	28.82	28.99	29.16	29.33
	Max. Power Current (Imp/A)	17.22	17.31	17.40	17.48	17.57
	Open Circuit Voltage (Voc/V)	35.40	35.57	35.74	35.91	36.08
	Short Circuit Current (Isc/A)	17.99	18.08	18.17	18.26	18.35
Module Efficiency (%)	24.68	24.95	25.23	25.51	25.79	

\*Measurement tolerance: Pmax: ±3%, Voc: ±3%, Isc: ±5%.

### I-V CURVE (455W)



### PACKING CONFIGURATION

Pieces Per Pallet	36
Pallets Per Container	26
Pieces Per Container	936

### DEFAULT

### OPTIONAL

Connector Type	<input type="checkbox"/> MC4 Compatible	<input type="checkbox"/> MC4
Cable Length	<input type="checkbox"/> 350mm/280mm	<input type="checkbox"/> Customized
Frame Color	<input type="checkbox"/> Silver	<input type="checkbox"/> Black



TUV: IEC/EN 61215, IEC/EN 61730  
 GB/T 19001-2016/ ISO 9001:2015  
 GB/T 24001-2016/ ISO 14001:2015  
 GB/T 45001-2020/ ISO 45001:2018  
 CNAS-CL01: ISO/IEC 17025:2017

CAUTION: The electrical parameters in this product datasheet do not refer to only one module. 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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### 12-year Product materials and workmanship quality warranty

Output power			
The 1st year	The 12th year	The 30th year	
≥ 99.00%	≥ 94.60%	≥ 87.40%	

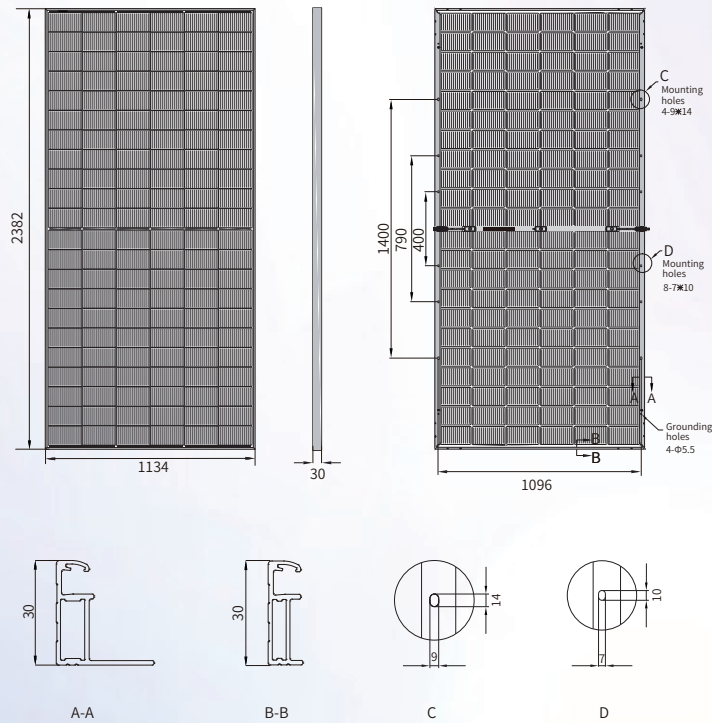


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# Bifacial Dual Glass TOPCon Module

## JNBN132-610~630

### ENGINEERING DRAWING



### MECHANICAL PARAMETERS

Cell (mm)	182*105 TOPCon
Dimensions (L*W*H) (mm)	2382*1134*30
Weight (kg)	32.6
Cable Cross Section Size (mm <sup>2</sup> )	4
No. of Cells & Connections	132(6*22)
No. of Diodes	3
Frame	Anodized Aluminium Alloy
Glass Thickness (mm)	2.0

### QUALIFICATION

Temperature Cycling Range (°C)	-40~+85
Max. Series Fuse Rating (A)	35
Max.Wind Load/Max.Snow Load (Pa)	2400/5400
Fire Rating	Class C
Junction Box & Connector Protection Grade	IP68
Bifacial Factor(%)	80±5

### TEMPERATURE COEFFICIENTS

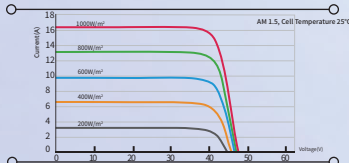
Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

### ELECTRICAL PARAMETERS

Module Type	(1500V DC)	JNBN132-610	JNBN132-615	JNBN132-620	JNBN132-625	JNBN132-630
STC AM1.5 1000W/m <sup>2</sup> Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	610	615	620	625	630
	Output Tolerance (W)	0-+5	0-+5	0-+5	0-+5	0-+5
	Max. Power Voltage (Vmp/V)	39.06	39.23	39.40	39.57	39.74
	Max. Power Current (Imp/A)	15.62	15.68	15.74	15.80	15.86
	Open Circuit Voltage (Voc/V)	48.00	48.17	48.34	48.51	48.68
	Short Circuit Current (Isc/A)	16.33	16.39	16.45	16.51	16.57
	Module Efficiency (%)	22.58	22.77	22.95	23.14	23.32
BNPI AM1.5 front 1000W/m <sup>2</sup> rear 135W/m <sup>2</sup> Cell Temperature 25°C	Max. Power (Pmpp/W)	676	680	685	691	696
	Max. Power Voltage (Vmp/V)	39.06	39.23	39.40	39.57	39.74
	Max. Power Current (Imp/A)	17.31	17.33	17.40	17.46	17.53
	Open Circuit Voltage (Voc/V)	48.00	48.17	48.34	48.51	48.68
	Short Circuit Current (Isc/A)	18.09	18.12	18.18	18.25	18.31
	Module Efficiency (%)	25.02	25.17	25.37	25.57	25.78

\*Measurement tolerance: Pmax:±3%, Voc:±3%, Isc: ±5%.

### I-V CURVE (620W)



### PACKING CONFIGURATION

Pieces Per Pallet	36
Pallets Per Container	20
Pieces Per Container	720

### DEFAULT

### OPTIONAL

Connector Type	<input type="checkbox"/> MC4 Compatible	<input type="checkbox"/> MC4
Cable Length	<input type="checkbox"/> 350mm/280mm	<input type="checkbox"/> Customized
Frame Color	<input type="checkbox"/> Silver	<input type="checkbox"/> Black



TUV: IEC/EN 61215, IEC/EN 61730  
GB/T 19001-2016/ ISO 9001:2015  
GB/T 24001-2016/ ISO 14001:2015  
GB/T 45001-2020/ ISO 45001:2018  
CNAS-CL01: ISO/IEC 17025:2017

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### 12-year Product materials and workmanship quality warranty

Output power		
The 1st year	The 12th year	The 30th year
≥99.00%	≥94.60%	≥87.40%

