



HIGH EFFICIENCY N-TOPCON SOLAR MODULE





G12R cell | SMBB | Half-cut | Optional Bifacial

Optional: **JNMN96-445~465** | **JNMN132-610~630**

JNBN96-440~460 | **JNBN132-605~625**



PERFORMANCE MORE ADVANCED & RELIABILITY IMPROVED

-  630W+ modules is much higher than that of conventional modules, and the horizontal space utilization of modules in overseas shipping containers is maximized
-  Lower LID and anti-PID ensure long-term returns
-  Double layers of anti-reflection glasses increase light transmittance and effectively improve nominal power
-  Up to 80% bifacial factor gains 10%-30% extra generation in different scenarios.

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



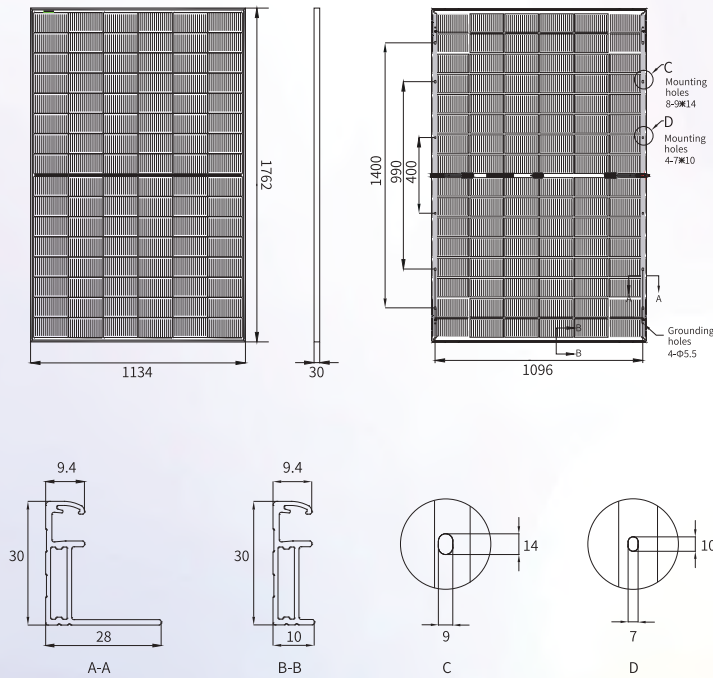
 a **JINNENG HOLDING GROUP** company

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JINNENG CLEAN ENERGY TECHNOLOGY LTD / JINNENG PHOTOVOLTAIC TECHNOLOGY CO. LTD

Bifacial Dual Glass TOPCon Module

JNBN96-440~460

ENGINEERING DRAWING



MECHANICAL PARAMETERS

Cell (mm)	182*105 TOPCon
Dimensions (L*W*H) (mm)	1762*1134*30
Weight (kg)	25.6
Cable Cross Section Size (mm ²)	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

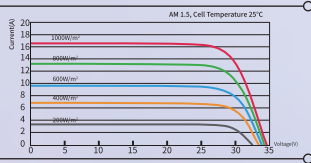
Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

ELECTRICAL PARAMETERS

Module Type (1500V DC)	JNBN96-440	JNBN96-445	JNBN96-450	JNBN96-455	JNBN96-460	
STC AM1.5 1000W/m ² Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	440	445	450	455	460
	Output Tolerance (W)	0~+5	0~+5	0~+5	0~+5	0~+5
	Max. Power Voltage (Vmp/V)	28.48	28.65	28.82	28.99	29.16
	Max. Power Current (Imp/A)	15.46	15.54	15.62	15.70	15.78
	Open Circuit Voltage (Voc/V)	34.00	34.17	34.34	34.51	34.68
	Short Circuit Current (Isc/A)	16.16	16.24	16.32	16.40	16.48
	Module Efficiency (%)	22.02	22.27	22.52	22.77	23.02
With Different Power Generation Gain (Regarding 450W as an example)	Backside Power Gain	10%		20%		30%
	Max. Power (Pmpp/W)	495.0		540.0		585.0
	Max. Power Voltage (Vmp/V)	28.82		28.82		28.82
	Max. Power Current (Imp/A)	17.18		18.74		20.31
	Open Circuit Voltage (Voc/V)	34.34		34.34		34.34
	Short Circuit Current (Isc/A)	17.95		19.58		21.22
	Module Efficiency (%)	24.77		27.03		29.28

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

I-V CURVE (450W)



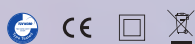
PACKING CONFIGURATION

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

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%	

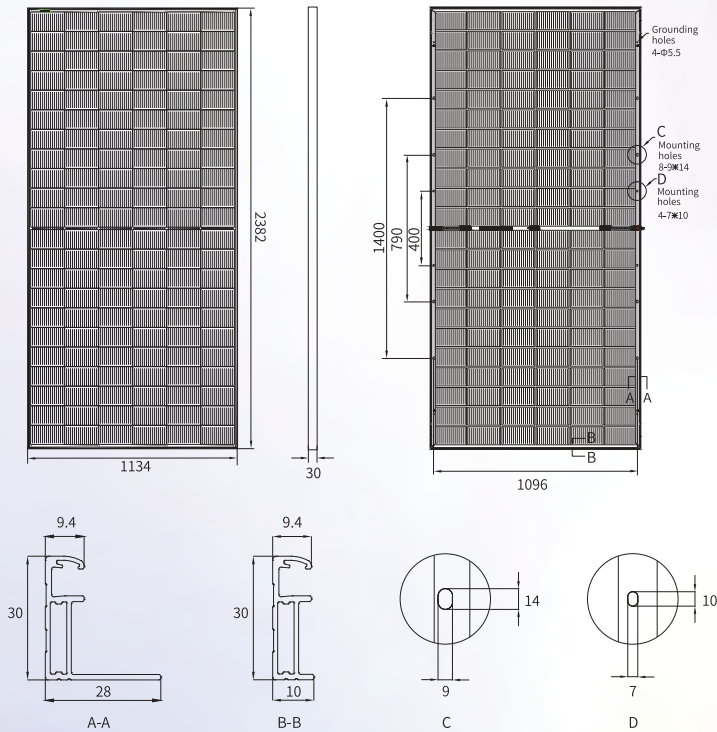
CAUTION: The electrical parameters in this product datasheet do not refer to only one module. Read safety and installation instructions before using the product. The contents of this specification are for reference only and are subject to change without notice. Jinery reserves the right of final interpretation.
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Bifacial Dual Glass TOPCon Module

JNBN132-605~625

ENGINEERING DRAWING



MECHANICAL PARAMETERS

Cell (mm)	182*105 TOPCon
Dimensions (L*W*H) (mm)	2382*1134*30
Weight (kg)	31.8
Cable Cross Section Size (mm ²)	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

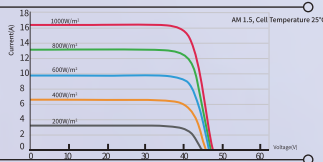
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Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

ELECTRICAL PARAMETERS

Module Type (1500V DC)	JNBN132-605	JNBN132-610	JNBN132-615	JNBN132-620	JNBN132-625		
STC AM1.5 1000W/m ² Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	605	610	615	620	625	
	Output Tolerance (W)	0+5	0+5	0+5	0+5	0+5	
	Max. Power Voltage (Vmp/V)	38.89	39.06	39.23	39.40	39.57	
	Max. Power Current (Imp/A)	15.56	15.62	15.68	15.74	15.80	
	Open Circuit Voltage (Voc/V)	47.83	48.00	48.17	48.34	48.51	
	Short Circuit Current (Isc/A)	16.27	16.33	16.39	16.45	16.51	
	Module Efficiency (%)	22.40	22.58	22.77	22.95	23.14	
With Different Power Generation Gain (Regarding 615W as an example)	Backside Power Gain	10%		20%		30%	
	Max. Power (Pmpp/W)		676.5		738.0		799.5
	Max. Power Voltage (Vmp/V)		39.23		39.23		39.23
	Max. Power Current (Imp/A)		17.25		18.82		20.38
	Open Circuit Voltage (Voc/V)		48.17		48.17		48.17
	Short Circuit Current (Isc/A)		18.03		19.67		21.31
	Module Efficiency (%)		25.04		27.32		29.60

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

I-V CURVE (615W)



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

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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