



HIGH EFFICIENCY N-TOPCON SOLAR MODULE




M10 Cell | SMBB | Half-cut | Optional Bifacial

Optional: JNMN108-435~455 | JNMN144-585~605

JNBN108-425~445 | JNBN144-580~600 | JNBN156-625~645



HIGHER EFFICIENCY N-TYPE CELLS & IMPROVED RELIABILITY

-  Lower LID and LeTID ensure long-term returns.
-  Non-destructive cutting with ultra-high-precision welding
Improve module efficiency and reliability.
-  SMBB metallization technology reduces series resistance
losses and improves module reliability.

 12 year product warranty  30 year power generation warranty



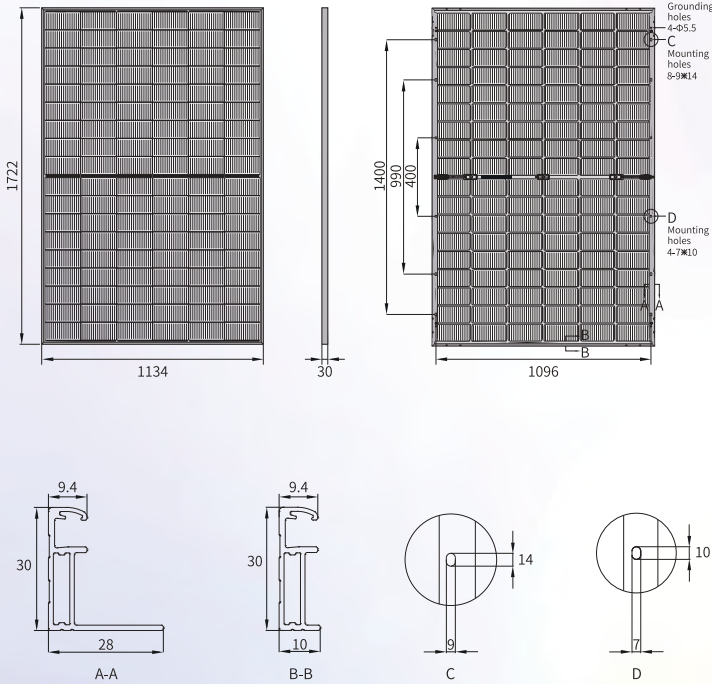
 a JINNENG HOLDING GROUP company

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

Bifacial Dual Glass TOPCon Module

JNBN108-425~445

ENGINEERING DRAWING



MECHANICAL PARAMETERS

Cell (mm)	182.2*91.875 TOPCon
Dimensions (L*W*H) (mm)	1722*1134*30
Weight (kg)	24.8
Cable Cross Section Size (mm ²)	4
No. of Cells & Connections	108(6*18)
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)	30
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

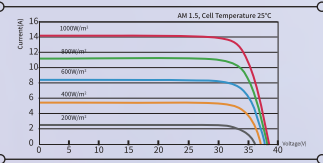
Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

ELECTRICAL PARAMETERS

Module Type (1500V DC)	JNBN108-425	JNBN108-430	JNBN108-435	JNBN108-440	JNBN108-445	
STC AM1.5 1000W/m ² Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	425	430	435	440	445
	Output Tolerance (W)	0-+5	0-+5	0-+5	0-+5	0-+5
	Max. Power Voltage (Vmp/V)	31.86	32.07	32.28	32.48	32.69
	Max. Power Current (Imp/A)	13.34	13.41	13.48	13.55	13.62
	Open Circuit Voltage (Voc/V)	38.18	38.35	38.52	38.69	38.86
	Short Circuit Current (Isc/A)	14.00	14.06	14.12	14.18	14.24
	Module Efficiency (%)	21.76	22.02	22.28	22.53	22.79
With Different Power Generation Gain (Regarding 435W as an example)	Backside Power Gain	10%		20%		30%
	Max. Power (Pmpp/W)	478.5		522.0		565.5
	Max. Power Voltage (Vmp/V)	32.28		32.28		32.28
	Max. Power Current (Imp/A)	14.83		16.18		17.52
	Open Circuit Voltage (Voc/V)	38.52		38.52		38.52
	Short Circuit Current (Isc/A)	15.53		16.94		18.36
	Module Efficiency (%)	24.50		26.73		28.96

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

I-V CURVE (435W)



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

TÜV: 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%	

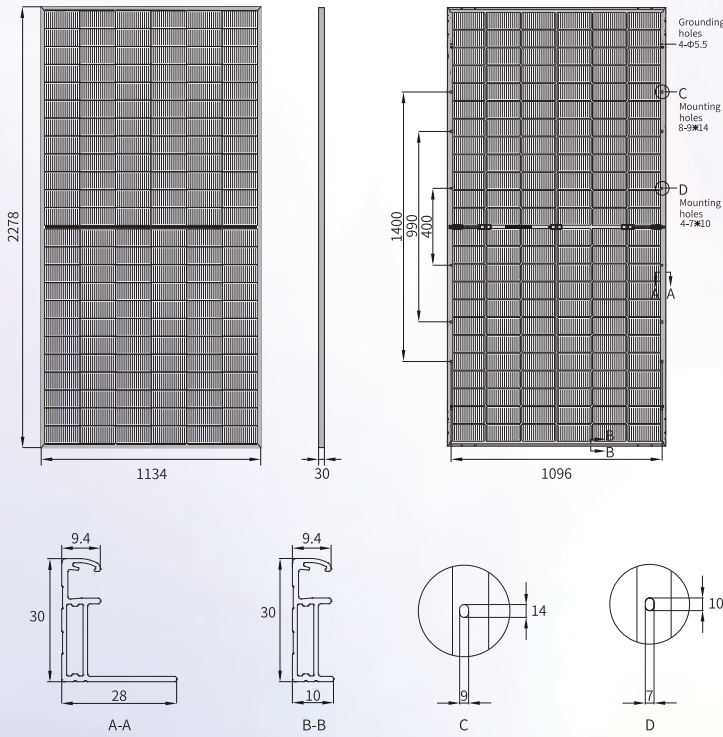
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Bifacial Dual Glass TOPCon Module

JNBN144-580~600

ENGINEERING DRAWING



MECHANICAL PARAMETERS

Cell (mm)	182.2*91.875 TOPCon
Dimensions (L*W*H) (mm)	2278*1134*30
Weight (kg)	31.1
Cable Cross Section Size (mm ²)	4
No. of Cells & Connections	144(6*24)
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)	30
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

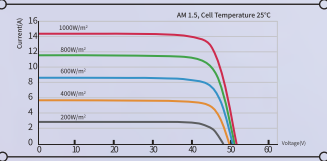
Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

ELECTRICAL PARAMETERS

Module Type (1500V DC)	JNBN144-580	JNBN144-585	JNBN144-590	JNBN144-595	JNBN144-600	
STC AM1.5 1000W/m ² Cell Temperature 25°C	Max. Power at STC (Pmpp/W)	580	585	590	595	600
	Output Tolerance (W)	0+5	0+5	0+5	0+5	0+5
	Max. Power Voltage (Vmp/V)	43.03	43.18	43.32	43.47	43.62
	Max. Power Current (Imp/A)	13.48	13.55	13.62	13.69	13.76
	Open Circuit Voltage (Voc/V)	51.24	51.41	51.58	51.75	51.92
	Short Circuit Current (Isc/A)	14.12	14.18	14.24	14.30	14.36
	Module Efficiency (%)	22.45	22.65	22.84	23.03	23.23
With Different Power Generation Gain (Regarding 590W as an example)	Backside Power Gain	10%		20%		30%
	Max. Power (Pmpp/W)		649.0	708.0		767.0
	Max. Power Voltage (Vmp/V)		43.32	43.32		43.32
	Max. Power Current (Imp/A)		14.98	16.34		17.71
	Open Circuit Voltage (Voc/V)		51.58	51.58		51.58
	Short Circuit Current (Isc/A)		15.66	17.09		18.51
	Module Efficiency (%)		25.12	27.41		29.69

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

I-V CURVE (590W)



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



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%	

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

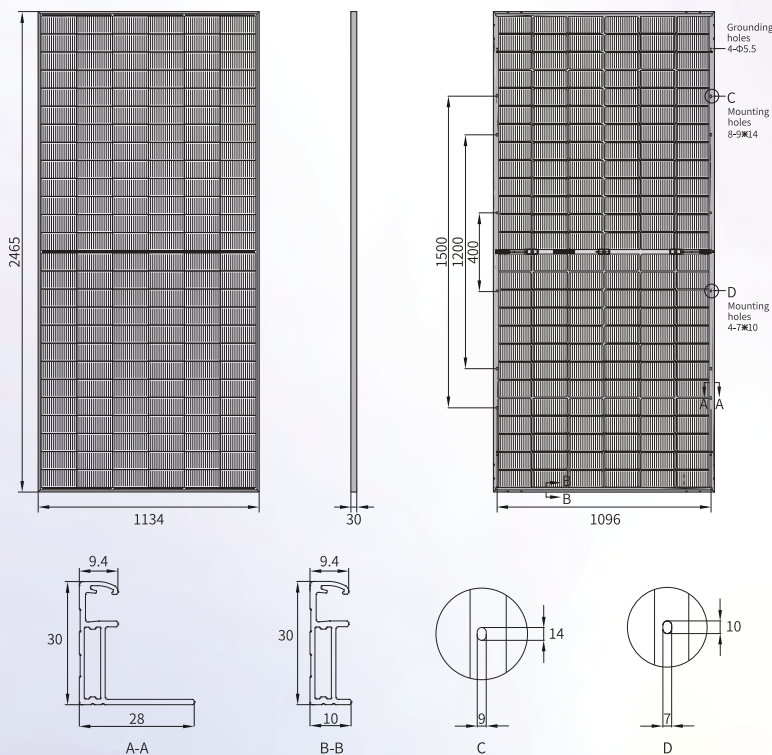
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Bifacial Dual Glass TOPCon Module

JNBN156-625~645

ENGINEERING DRAWING



MECHANICAL PARAMETERS

Cell (mm)	182.2*91.875 TOPCon
Dimensions (L*W*H) (mm)	2465*1134*30
Weight (kg)	32.9
Cable Cross Section Size (mm ²)	4
No. of Cells & Connections	156(6*26)
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)	30
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

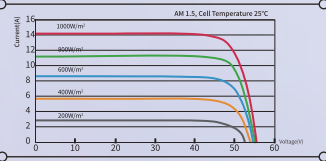
Nominal Module Operating Temperature (NMOT)	43±2°C
Temperature Coefficient Voltage (Voc)	-0.25 %/°C
Temperature Coefficient Current (Isc)	0.045 %/°C
Temperature Coefficient Power (Pm)	-0.29 %/°C

ELECTRICAL PARAMETERS

Module Type (1500V DC)	JNBN156-625	JNBN156-630	JNBN156-635	JNBN156-640	JNBN156-645
Max. Power at STC (Pmpp/W)	625	630	635	640	645
Output Tolerance (W)	0+5	0+5	0+5	0+5	0+5
STC					
Max. Power Voltage (Vmp/V)	46.37	46.50	46.63	46.76	46.89
AM1.5 1000W/m ² Cell Temperature 25°C					
Max. Power Current (Imp/A)	13.48	13.55	13.62	13.69	13.76
Open Circuit Voltage (Voc/V)	55.57	55.70	55.83	55.96	56.09
Short Circuit Current (Isc/A)	14.06	14.12	14.18	14.24	14.30
Module Efficiency (%)	22.36	22.54	22.72	22.90	23.07
Backside Power Gain		10%	20%	30%	
Max. Power (Pmpp/W)		698.5	762.0	825.5	
With Different Power Generation Gain					
(Regarding 635W as an example)					
Max. Power Voltage (Vmp/V)		46.63	46.63	46.63	
Max. Power Current (Imp/A)		14.98	16.34	17.71	
Open Circuit Voltage (Voc/V)		55.83	55.83	55.83	
Short Circuit Current (Isc/A)		15.60	17.02	18.43	
Module Efficiency (%)		24.99	27.26	29.53	

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

I-V CURVE (635W)



PACKING CONFIGURATION

Pieces Per Pallet	36
Pallets Per Container	16
Pieces Per Container	576

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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