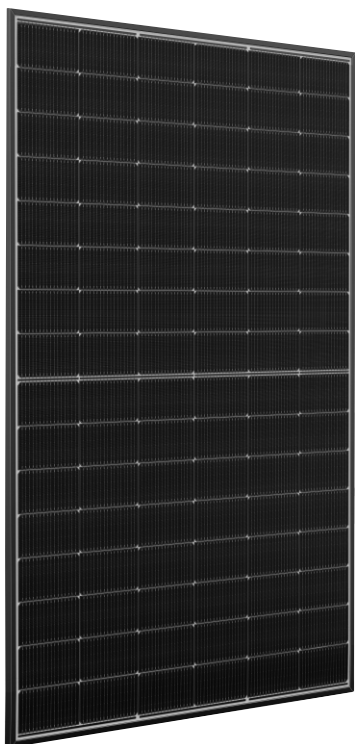


risen

n-type TOPCon

HIGH PERFORMANCE BIFACIAL MODULE

RSM96-11-450-475BNDG



The module picture is for reference only

450-475 _{W_p}

Power Output Range

23.8 %

Maximum Efficiency

0~+3 %

Positive power tolerance

1500 _{V_{DC}}

Maximum System Voltage

KEY FEATURES



Perfect for residential scenario application



Excellent power generation



Excellent anti-LID & anti-PID performance



Excellent temperature coefficient (P_{max}): -0.29%/°C



Excellent weak-light performance



Excellent warranty assurance

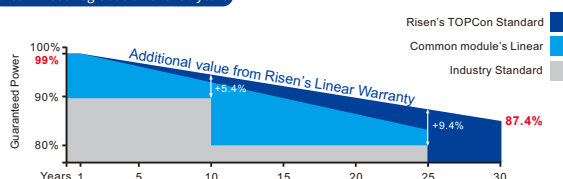


* As there are different certification requirements in different markets, please contact your local Risen Energy sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

LINEAR PERFORMANCE WARRANTY

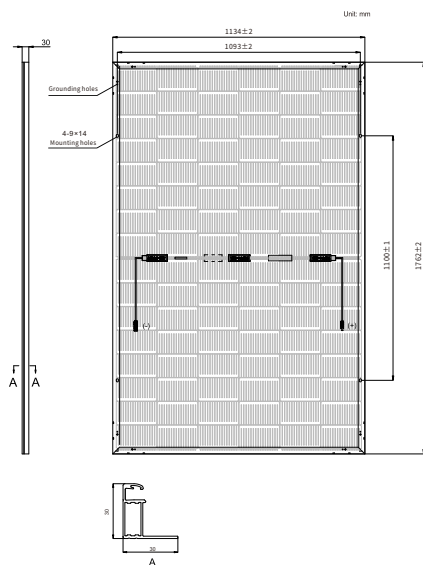
15 years Product Warranty / 30 years Linear Power Warranty

0.4% Annual Degradation over 30 years



* Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd

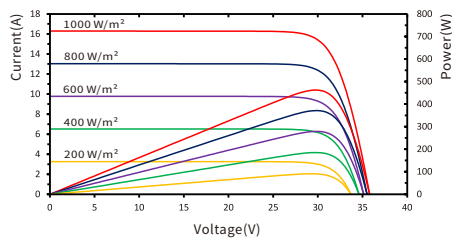
Dimensions of PV Module



*Note: For specific dimensions and tolerance ranges, please refer to the corresponding detailed module drawings.

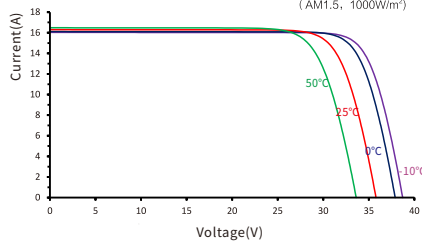
RSM96-11-460BNDG

I-V characteristics at different irradiances



I-V characteristics at different temperatures

(AM1.5, 1000W/m²)



PACKAGING CONFIGURATION

	40ft(HQ)	20ft
Number of modules per container	936	216
Number of modules per pallet	36	36
Number of pallets per container	26	6
Packaging box dimensions (LxWxH) in mm	1785×1110×1260	
Box gross weight[kg]	818	

ELECTRICAL DATA (STC)

Model Type	RSM96-11-450-475BNDG					
Rated Power in Watts-Pmax(Wp)	450	455	460	465	470	475
Open Circuit Voltage-Voc(V)	35.40	35.59	35.79	36.00	36.21	36.42
Short Circuit Current-Isc(A)	16.14	16.22	16.30	16.38	16.46	16.52
Maximum Power Voltage-Vmpp(V)	29.90	30.10	30.28	30.44	30.62	30.78
Maximum Power Current-Impp(A)	15.06	15.12	15.22	15.30	15.38	15.46
Module Efficiency (%) *	22.5	22.8	23.0	23.3	23.5	23.8

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

Bifacial factor: 80±5(%) * Module Efficiency (%): Rounding to the nearest number

ELECTRICAL DATA (BNPI)

Model Type	RSM96-11-450-475BNDG					
Maximum Power-Pmax (Wp)	499	504	510	515	521	526
Open Circuit Voltage-Voc (V)	35.40	35.59	35.79	36.00	36.21	36.42
Short Circuit Current-Isc (A)	17.88	17.97	18.06	18.15	18.24	18.30
Maximum Power Voltage-Vmpp (V)	29.90	30.10	30.28	30.44	30.62	30.78
Maximum Power Current-Impp (A)	16.68	16.75	16.83	16.93	17.01	17.10

BNPI: Front side irradiance 1000 W/m², Rear side irradiance 135 W/m², Cell Temperature 25°C, Air Mass AM1.5.

Power measurement tolerance: ±3%

Electrical characteristics with 10% rear side power gain

Total Equivalent power -Pmax (Wp)	495	501	507	512	517	523
Open Circuit Voltage-Voc(V)	35.40	35.59	35.79	36.00	36.21	36.42
Short Circuit Current-Isc(A)	17.75	17.84	17.93	18.02	18.11	18.17
Maximum Power Voltage-Vmpp(V)	29.90	30.10	30.28	30.44	30.62	30.78
Maximum Power Current-Impp(A)	16.57	16.63	16.74	16.83	16.92	17.01

Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

MECHANICAL DATA

Solar cells	n-type TOPCon
Cell configuration	96 cells (6×8+6×8)
Module dimensions	1762×1134×30mm (69.37×44.65×1.18 in)
Weight	21.5kg (47.40 lb)
Superstrate	1.6mm(0.06 in), High Transmission, AR Coated Heat Strengthened Glass
Substrate	1.6mm(0.06 in), Heat Strengthened Glass
Frame	Anodized Aluminium Alloy, Black
J-Box	Potted, IP68, 1500VDC, 3 Schottky by pass diodes
Cables	4.0mm², 1200mm(47.24 in) (+), 1200mm(47.24 in) (-), connector included, or customized length
Connector	MC4 EVO2/PV-SY02/Others
Maximum mechanical test load	5400 Pa (front) / 2400 Pa (back), under certain installation method

TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	44°C±2°C
Temperature Coefficient of Voc	-0.25%/°C
Temperature Coefficient of Isc	0.046%/°C
Temperature Coefficient of Pmax	-0.29%/°C
Level T ₉₅ ≤ 70°C	-40°C~+70°C *
Maximum System Voltage	1500VDC
Max Series Fuse Rating	35A
Limiting Reverse Current	35A

* Short-term up to 85°C; higher operation requires IEC TS 63126 testing

risen

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CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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No special undertaking or warranty for the suitability of special purpose or being installed in extraordinary surroundings is granted unless as otherwise specifically committed by manufacturer in contract document.