

# n-type TOPCon

## HIGH PERFORMANCE DUAL GLASS MODULE

**RSM108-9-415-440BNDG**



The module picture is for reference only

**415-440** <sub>Wp</sub>

Power Output Range

**22.5** %

Maximum Efficiency

**0~+3** %

Positive power tolerance

**1500** <sub>VDC</sub>

Maximum System Voltage

### KEY FEATURES

- Perfect for residential scenario application
- Excellent power generation
- Excellent anti-LID & anti-PID performance
- Excellent temperature coefficient (Pmax): -0.29%/°C
- Excellent weak-light performance
- Excellent warranty assurance

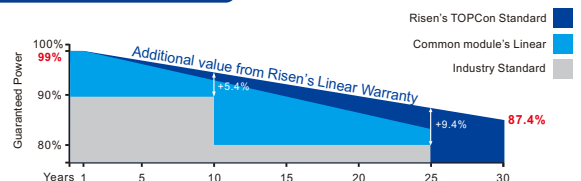


\* As there are different certification requirements in different markets, please contact your local Risen Energy sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

### LINEAR PERFORMANCE WARRANTY

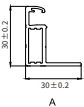
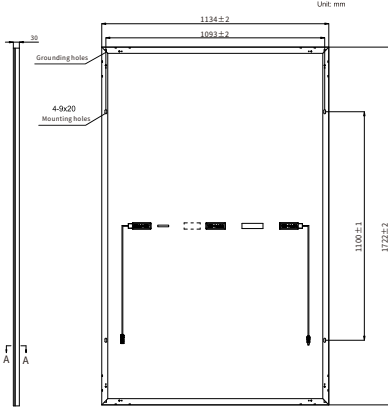
15 years Product Warranty / 30 years Linear Power Warranty

0.4% Annual Degradation over 30 years



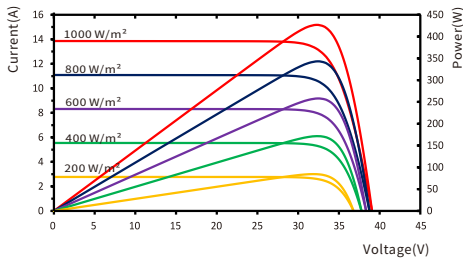
\* Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd

### Dimensions of PV Module

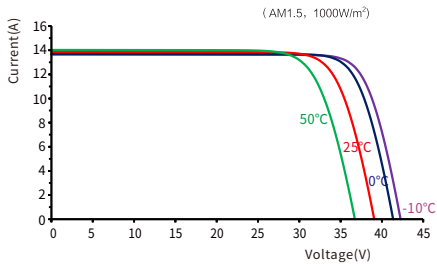


### RSM108-9-425BNDG

#### I-V characteristics at different irradiances



#### I-V characteristics at different temperatures



### 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	1745×1110×1260	
Box gross weight[kg]	780	

### ELECTRICAL DATA (STC)

Model Type	RSM108-9-415-440BNDG					
Rated Power in Watts-Pmax(Wp)	<b>415</b>	<b>420</b>	<b>425</b>	<b>430</b>	<b>435</b>	<b>440</b>
Open Circuit Voltage-Voc(V)	38.67	38.87	39.07	39.26	39.46	39.65
Short Circuit Current-Isc(A)	13.69	13.78	13.86	13.94	14.01	14.09
Maximum Power Voltage-Vmpp(V)	32.39	32.59	32.78	32.98	33.18	33.38
Maximum Power Current-Impp(A)	12.83	12.91	12.99	13.06	13.12	13.19
Module Efficiency (%) *	21.3	21.5	21.8	22.0	22.3	22.5

STC: Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.

\* Module Efficiency (%): Round-off to the nearest number

### ELECTRICAL DATA (NMOT)

Model Type	RSM108-9-415-440BNDG					
Maximum Power-Pmax (Wp)	314.8	318.6	322.4	326.0	329.6	333.4
Open Circuit Voltage-Voc (V)	35.96	36.15	36.34	36.51	36.70	36.84
Short Circuit Current-Isc (A)	11.23	11.30	11.36	11.43	11.49	11.55
Maximum Power Voltage-Vmpp (V)	30.06	30.24	30.42	30.61	30.79	30.98
Maximum Power Current-Impp (A)	10.47	10.54	10.60	10.65	10.71	10.76

NMOT: Irradiance at 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s.

### MECHANICAL DATA

Solar cells	n-type TOPCon
Cell configuration	108 cells (6×9+6×9)
Module dimensions	1722×1134×30mm
Weight	20.5kg
Superstrate	High Transmission, Low Iron, AR Coated Heat Strengthened Glass
Substrate	Heat Strengthened Glass
Frame	Anodized Aluminium Alloy, Black
J-Box	Potted, IP68, 1500VDC, 3 Schottky by pass diodes
Cables	4.0mm <sup>2</sup> , Positive(+)1200mm, Negative(-)1200mm (Connector Included), or customized length
Connector	Risen Twinsel PV-SY02, IP68

### 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
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	30A
Limiting Reverse Current	30A



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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.

THE POWER OF RISING VALUE

Version: REM108-BNDG-16BB-EN-H2-2-2023-Black Frame