

# HIGH PERFORMANCE MONOCRYSTALLINE PERC MODULE







































### RISEN ENERGY CO., LTD.

Risen Energy is a leading, global tier 1 manufacturer of high-performance solar photovoltaic products and provider of total business solutions for residential, commercial and utility-scale power generation. The company, founded in 1986, and publicly listed in 2010, compels value generation for its chosen global customers. Techno-commercial innovation, underpinned by consummate quality and support, encircle Risen Energy's total Solar PV business solutions which are among the most powerful and cost-effective in the industry. With local market presence and strong financial bankability status, we are committed, and able, to building strategic, mutually beneficial collaborations with our partners, as together we capitalise on the rising value of green energy.

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# RSM130-8-430M-450M

430-450Wp **130 CELL Power Output Range** Mono PERC Module

1500VDC 21.7%

Maximum Efficiency Maximum System Voltage

## **KEY SALIENT FEATURES**

Bloomber

Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing



Industry leading lowest thermal co-efficient of power



Industry leading 12 years product warranty



Excellent low irradiance performance



Excellent PID resistance



Positive power tolerance of 0~+3%



Dual stage 100% EL Inspection warranting defect-free product



Module Imp binning radically reduces string mismatch losses



Excellent wind load 2400Pa & snow load 5400Pa under certain installation method

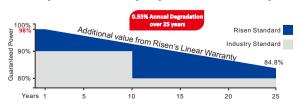


Comprehensive product and system certification

- \* IEC61215:2016; IEC61730-1/-2:2016;
- ISO 9001:2015 Quality Management System
- ISO 14001:2015 Environmental Management System
- ISO 45001:2018 Occupational Health and Safety Management System

# LINEAR PERFORMANCE WARRANTY

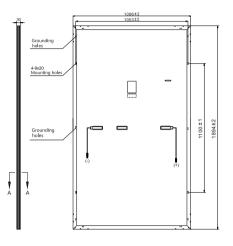
12 year Product Warranty / 25 year Linear Power Warranty



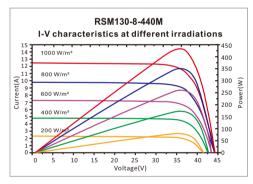
★ Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd

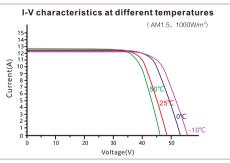


#### Dimensions of PV Module Unit: mm











# **ELECTRICAL DATA (STC)**

Model Number	RSM130-8-430M	RSM130-8-435M	RSM130-8-440M	RSM130-8-445M	RSM130-8-450M
Rated Power in Watts-Pmax(Wp)	430	435	440	445	450
Open Circuit Voltage-Voc(V)	44.36	44.61	44.85	45.09	45.33
Short Circuit Current-Isc(A)	12.35	12.42	12.50	12.57	12.65
Maximum Power Voltage-Vmpp(V)	36.94	37.14	37.34	37.54	37.74
Maximum Power Current-Impp(A)	11.65	11.72	11.79	11.86	11.93
Module Efficiency (%) ★	20.7	21.0	21.2	21.4	21.7

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

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

## **ELECTRICAL DATA (NMOT)**

Model Number	RSM130-8-430M	RSM130-8-435M	RSM130-8-440M	RSM130-8-445M	RSM130-8-450M
Maximum Power-Pmax (Wp)	325.9	329.6	333.4	337.1	340.9
Open Circuit Voltage-Voc (V)	41.26	41.48	41.71	41.93	42.15
Short Circuit Current-Isc (A)	10.13	10.19	10.25	10.31	10.37
Maximum Power Voltage-Vmpp (V)	34.28	34.47	34.65	34.84	35.02
Maximum Power Current-Impp (A)	9.51	9.56	9.62	9.68	9.73

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

# **MECHANICAL DATA**

Solar cells	Monocrystalline
Cell configuration	130 cells (5×13+5×13)
Module dimensions	1894×1096×30mm
Weight	22.5kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy type 6005-2T6, Black
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm² (12AWG), Positive(+)350mm, Negative(-)230mm (Connector Included )
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	0.04%/°C
Temperature Coefficient of Pmax	-0.34%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	20A
Limiting Reverse Current	20A

# PACKAGING CONFIGURATION

	40ft(HQ)	20ft
Number of modules per container	864	216
Number of modules per pallet	36	36
Number of pallets per container	24	6
Packaging box dimensions (LxWxH) in mm	1910×1110×1236	1910×1110×1236
Box gross weight[kg]	850	850

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.