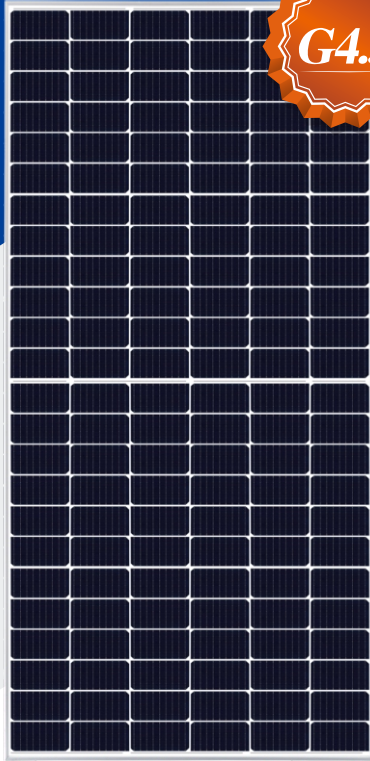


# HIGH PERFORMANCE MONOCRYSTALLINE PERC MODULE



**G4.3**

## RSM144-7-440M-460M

<b>144 CELL</b> Mono PERC Module	<b>440-460Wp</b> Power Output Range
<b>1500VDC</b> Maximum System Voltage	<b>20.8%</b> Maximum Efficiency

### KEY SALIENT FEATURES

- 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



\* 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.

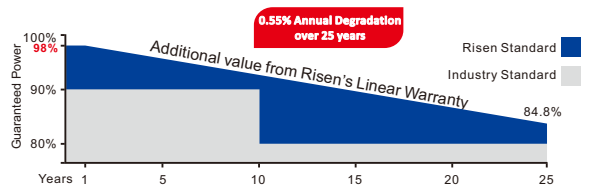
### RISEN ENERGY CO., LTD.

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.

Tashan Industry Zone, Meilin, Ninghai 315609, Ningbo | PRC  
Tel: +86-574-59953239 Fax: +86-574-59953599  
E-mail: marketing@risenenergy.com Website: www.risenenergy.com

### LINEAR PERFORMANCE WARRANTY

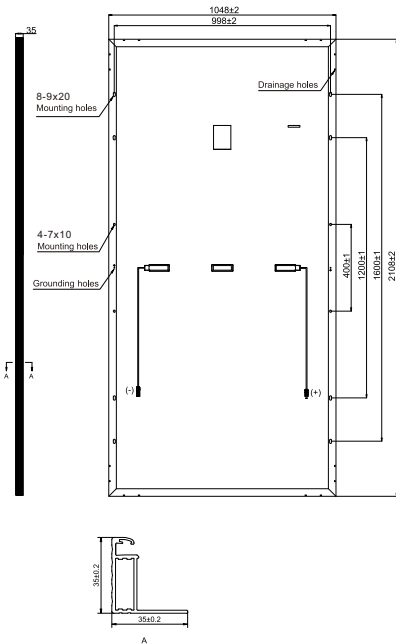
12 year Product Warranty / 25 year Linear Power Warranty



\* 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	RSM144-7-440M	RSM144-7-445M	RSM144-7-450M	RSM144-7-455M	RSM144-7-460M
Rated Power in Watts-Pmax(Wp)	<b>440</b>	<b>445</b>	<b>450</b>	<b>455</b>	<b>460</b>
Open Circuit Voltage-Voc(V)	49.50	49.60	49.70	49.80	49.90
Short Circuit Current-Isc(A)	11.30	11.40	11.50	11.60	11.70
Maximum Power Voltage-Vmpp(V)	41.13	41.25	41.30	41.40	41.50
Maximum Power Current-Imp(A)	10.70	10.80	10.90	11.00	11.10
Module Efficiency (%) ★	19.9	20.1	20.4	20.6	20.8

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 Number	RSM144-7-440M	RSM144-7-445M	RSM144-7-450M	RSM144-7-455M	RSM144-7-460M
Maximum Power-Pmax (Wp)	329.6	333.9	338.2	342.5	346.9
Open Circuit Voltage-Voc (V)	46.18	46.39	46.43	46.61	46.67
Short Circuit Current-Isc (A)	9.27	9.35	9.43	9.51	9.59
Maximum Power Voltage-Vmpp (V)	37.80	37.90	38.00	38.10	38.20
Maximum Power Current-Imp (A)	8.72	8.81	8.90	8.99	9.08

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

### MECHANICAL DATA

Solar cells	Monocrystalline 166×83mm
Cell configuration	144 cells (6×12+6×12)
Module dimensions	2108×1048×35mm
Weight	24.5kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	White Back-sheet
Frame	Anodized Aluminium Alloy type 6063-T5, Silver Color
J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
Cables	4.0mm <sup>2</sup> (12AWG), Positive(+)1200mm, Negative(-)1200mm (Connector Included)
Connector	Risen Twinsel PV-SY02, IP68

### TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	44°C±2°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Isc	0.05%/°C
Temperature Coefficient of Pmax	-0.37%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	20A
Limiting Reverse Current	20A

### PACKAGING CONFIGURATION

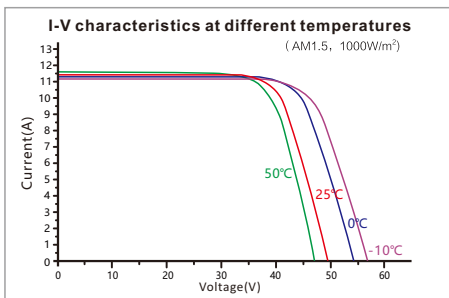
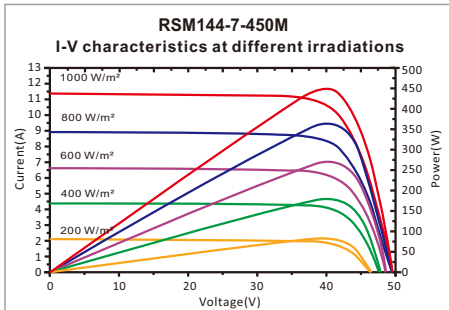
	40ft(HQ)	20ft
Number of modules per container	682	155
Number of modules per pallet	31	31
Number of pallets per container	22	5
Packaging box dimensions (LxWxH) in mm	2140×1130×1180	2140×1130×1180
Box gross weight[kg]	808	808

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



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