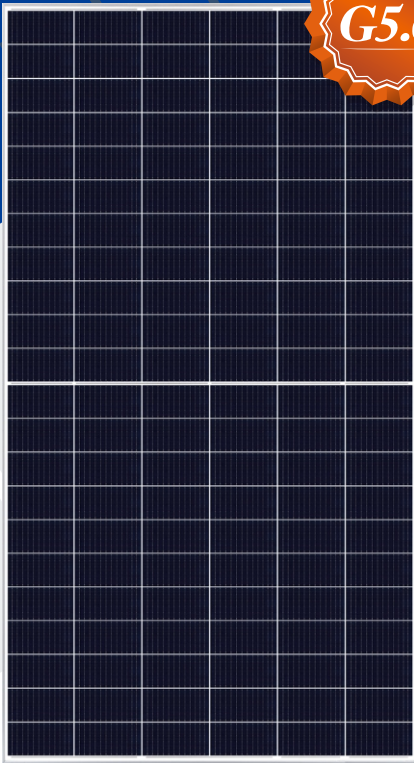




HIGH PERFORMANCE MONOCRYSTALLINE PERC MODULE



* 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.

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E-mail: marketing@risenenergy.com Website: www.risenenergy.com



Preliminary For Global Market

Draft



RSM132-8-640M-660M

132 CELL

Mono PERC Module

640-660Wp

Power Output Range

1500VDC

Maximum System Voltage

21.2%

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 tight power tolerance



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

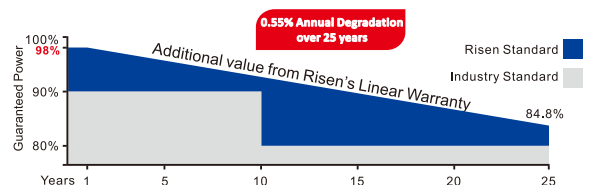


Comprehensive product and system certification

- ◆ 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

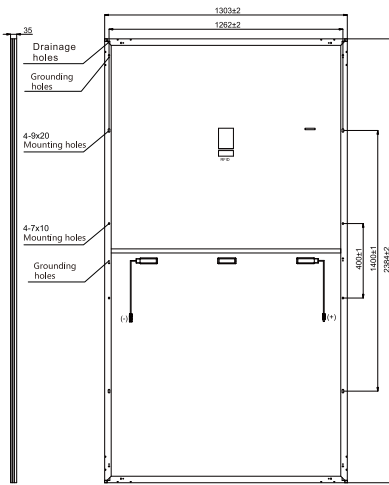
LINEAR PERFORMANCE WARRANTY

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 | RSM132-8-640M | RSM132-8-645M | RSM132-8-650M | RSM132-8-655M | RSM132-8-660M |
|-------------------------------|---------------|---------------|---------------|---------------|---------------|
| Rated Power in Watts-Pmax(Wp) | 640 | 645 | 650 | 655 | 660 |
| Open Circuit Voltage-Voc(V) | 44.95 | 45.15 | 45.35 | 45.55 | 45.75 |
| Short Circuit Current-Isc(A) | 18.13 | 18.18 | 18.23 | 18.28 | 18.33 |
| Maximum Power Voltage-Vmpp(V) | 37.40 | 37.58 | 37.76 | 37.94 | 38.12 |
| Maximum Power Current-Impp(A) | 17.12 | 17.17 | 17.22 | 17.27 | 17.32 |
| Module Efficiency (%) * | 20.6 | 20.8 | 20.9 | 21.1 | 21.2 |

STC: Irradiance 1000 W/m², 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 | RSM132-8-640M | RSM132-8-645M | RSM132-8-650M | RSM132-8-655M | RSM132-8-660M |
|--------------------------------|---------------|---------------|---------------|---------------|---------------|
| Maximum Power-Pmax (Wp) | 484.9 | 488.6 | 492.4 | 496.2 | 500.0 |
| Open Circuit Voltage-Voc (V) | 41.81 | 41.99 | 42.18 | 42.36 | 42.55 |
| Short Circuit Current-Isc (A) | 14.87 | 14.91 | 14.95 | 14.99 | 15.03 |
| Maximum Power Voltage-Vmpp (V) | 34.71 | 34.87 | 35.04 | 35.21 | 35.38 |
| Maximum Power Current-Impp (A) | 13.97 | 14.01 | 14.05 | 14.09 | 14.13 |

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

MECHANICAL DATA

| | |
|--------------------|---|
| Solar cells | Monocrystalline |
| Cell configuration | 132 cells (6×11+6×11) |
| Module dimensions | 2384×1303×35mm |
| Weight | 37kg |
| Superstrate | High Transmission, Low Iron, Tempered ARC Glass |
| Substrate | White Back-sheet |
| Frame | High strength alloy steel |
| J-Box | Potted, IP68, 1500VDC, 3 Schottky bypass diodes |
| Cables | 4.0mm ² (12AWG), Positive(+)350mm, Negative(-)350mm (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 | 30A |
| Limiting Reverse Current | 30A |

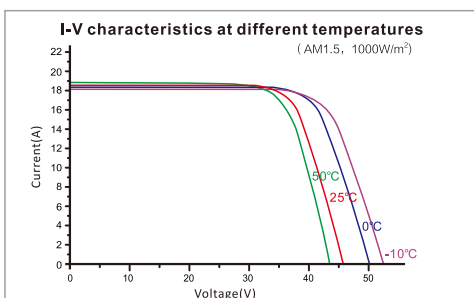
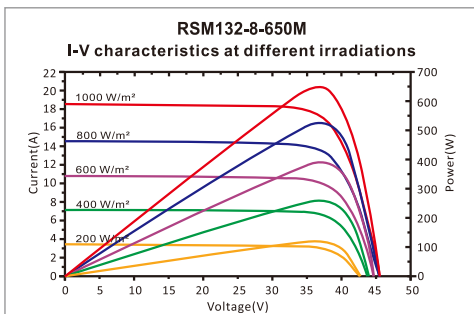
PACKAGING CONFIGURATION

| | |
|---------------------------------|----------|
| | 40ft(HQ) |
| Number of modules per container | 527 |
| Number of modules per pallet | 31 |
| Number of pallets per container | 17 |
| Box gross weight[kg] | 1200 |

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

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THE POWER OF RISING VALUE



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