# **HIGH PERFORMANCE BIFACIAL PERC MONOCRYSTALLINE MODULE**







ISO14001





















#### 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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Preliminary For Global Market

## RSM144-9-520BMDG-540BMDG

520-540Wp **144 CELL Power Output Range** Mono PERC Module

1500VDC 20.8%

Maximum System Voltage Maximum Efficiency

# **KEY SALIENT FEATURES**

TIER 1

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

Bifacial technology enables additional energy harvesting Bifacial from rear side (up to 30%)

Industry leading lowest thermal co-efficient of power

Industry leading 12 years product warranty

Excellent low irradiance performance

Positive tight power tolerance

**Excellent PID resistance** 

PID

Dual stage 100% EL Inspection warranting defect-free product

Module Imp binning radically reduces string mismatch losses

> Warranted reliability and stringent quality assurances well beyond certified requirements

Certified to withstand severe environmental conditions

Anti-reflective & anti-soiling surface minimise

- power loss from dirt and dust Severe salt mist, ammonia & blown sand resistance, for seaside, farm and desert environments
- Excellent mechanical load 2400Pa & snow load 5400Pa resistance

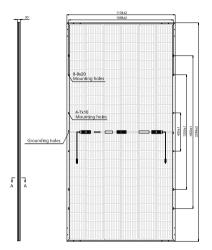
#### LINEAR PERFORMANCE WARRANTY

12 year Product Warranty / 30 year Linear Power Warranty

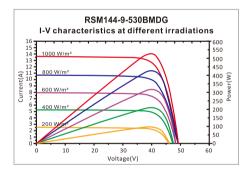


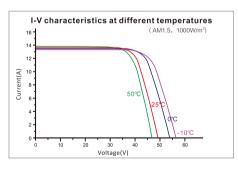


#### Dimensions of PV Module Unit: mm









# Our Partners:

REM144-BMDG-10BB-EN-H2-2-2020

#### **ELECTRICAL DATA (STC)**

Model Number	RSM144-9-520BMDG	RSM144-9-525BMDG	RSM144-9-530BMDG	RSM144-9-535BMDG	RSM144-9-540BMDG
Rated Power in Watts-Pmax(Wp)	520	525	530	535	540
Open Circuit Voltage-Voc(V)	49.20	49.30	49.40	49.50	49.60
Short Circuit Current-Isc(A)	13.35	13.45	13.55	13.64	13.73
Maximum Power Voltage-Vmpp(V)	41.55	41.65	41.75	41.87	41.99
Maximum Power Current-Impp(A)	12.52	12.61	12.70	12.79	12.88
Module Efficiency (%) ★	20.0	20.2	20.4	20.6	20.8

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3. Bifacial factor:  $70\%\pm5$  \*Module Efficiency (%): Round-off to the nearest number

#### Electrical characteristics with 10% rear side power gain

Total Equivalent power -Pmax (Wp)	572	578	583	589	594
Open Circuit Voltage-Voc(V)	49.20	49.30	49.40	49.50	49.60
Short Circuit Current-Isc(A)	14.69	14.80	14.91	15.00	15.10
Maximum Power Voltage-Vmpp(V)	41.55	41.65	41.75	41.87	41.99
Maximum Power Current-Impp(A)	13.77	13.87	13.97	14.06	14.17

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.

### **ELECTRICAL DATA (NMOT)**

Model Number	RSM144-9-520BMDG	RSM144-9-525BMDG	RSM144-9-530BMDG	RSM114-9-535BMDG	RSM114-9-540BMDG
Maximum Power-Pmax (Wp)	389.4	393.2	397.1	400.9	404.8
Open Circuit Voltage-Voc (V)	46.25	46.34	46.44	46.53	46.62
Short Circuit Current-Isc (A)	10.95	11.03	11.11	11.18	11.26
Maximum Power Voltage-Vmpp (V)	38.40	38.50	38.60	38.70	38.80
Maximum Power Current-Impp (A)	10.14	10.21	10.29	10.35	10.43

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

#### MECHANICAL DATA

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	Solar cells	Monocrystalline
	Cell configuration	144 cells (6×12+6×12)
	Module dimensions	2288×1134×30mm
	Weight	32.5kg
	Superstrate	High Transmission, Low Iron, Tempered ARC Glass
	Substrate	Tempered Glass
	Frame	Anodized Aluminium Alloy type 6005-2T6, Silver Color
	J-Box	Potted, IP68, 1500VDC, 3 Schottky bypass diodes
	Cables	4.0mm² (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	-0.27%/°C
Temperature Coefficient of Isc	0.045%/°C
Temperature Coefficient of Pmax	-0.35%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	25A
Limiting Reverse Current	25A

## PACKAGING CONFIGURATION

	40ft(HQ)
Number of modules per container	700
Number of modules per pallet	35
Number of pallets per container	20
Packaging box dimensions (LxWxH) in mm	2355×1130×1275
Box gross weight[kg]	1170

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

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