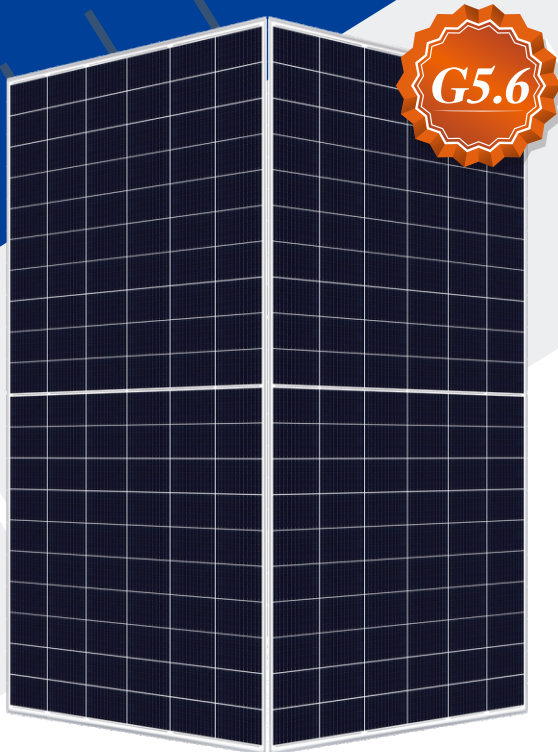




HIGH PERFORMANCE BIFACIAL PERC MONOCRYSTALLINE MODULE



ISO9001
ISO14001
OHSAS18001
IEC TS 62941



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

Draft

888

RSM120-8-580BMDG-600BMDG

120 CELL

Mono PERC Module

580-600Wp

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



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



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



Warranted reliability and stringent quality assurances well beyond certified requirements

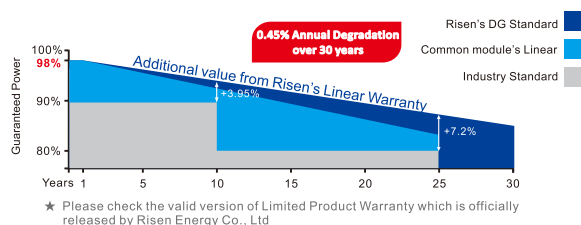


Certified to withstand severe environmental conditions

- 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

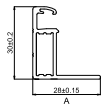
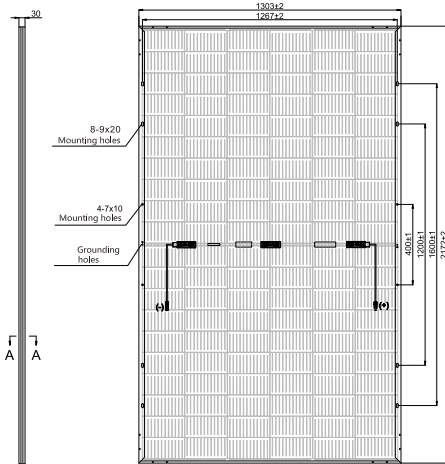
12 year Product Warranty / 30 year Linear Power Warranty



THE POWER OF RISING VALUE

Dimensions of PV Module

Unit: mm



ELECTRICAL DATA (STC)

Model Number	RSM120-8-580BMDG	RSM120-8-585BMDG	RSM120-8-590BMDG	RSM120-8-595BMDG	RSM120-8-600BMDG
Rated Power in Watts-Pmax(Wp)	580	585	590	595	600
Open Circuit Voltage-Voc(V)	40.80	40.95	41.10	41.25	41.40
Short Circuit Current-Isc(A)	18.22	18.29	18.36	18.43	18.50
Maximum Power Voltage-Vmpp(V)	34.25	34.40	34.55	34.70	34.85
Maximum Power Current-Impp(A)	16.94	17.01	17.08	17.15	17.22
Module Efficiency (%) ★	20.5	20.7	20.8	21.0	21.2

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

Electrical characteristics with 10% rear side power gain

Total Equivalent power -Pmax (Wp)	638	644	649	655	660
Open Circuit Voltage-Voc(V)	40.80	40.95	41.10	41.25	41.40
Short Circuit Current-Isc(A)	20.04	20.12	20.20	20.27	20.35
Maximum Power Voltage-Vmpp(V)	34.25	34.40	34.55	34.70	34.85
Maximum Power Current-Impp(A)	18.63	18.71	18.79	18.87	18.94

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	RSM120-8-580BMDG	RSM120-8-585BMDG	RSM120-8-590BMDG	RSM120-8-595BMDG	RSM120-8-600BMDG
Maximum Power-Pmax (Wp)	439.4	443.1	446.9	450.6	454.4
Open Circuit Voltage-Voc (V)	37.94	38.08	38.22	38.36	38.50
Short Circuit Current-Isc (A)	14.94	15.00	15.06	15.11	15.17
Maximum Power Voltage-Vmpp (V)	31.78	31.92	32.06	32.20	32.34
Maximum Power Current-Impp (A)	13.82	13.88	13.94	13.99	14.05

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

MECHANICAL DATA

Solar cells	Monocrystalline
Cell configuration	120 cells (6×10×6×10)
Module dimensions	2172×1303×30mm
Weight	34.5kg
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	4.0mm ² (12AWG), Positive(+) 285mm, Negative(-) 285mm
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	0.04%/°C
Temperature Coefficient of Pmax	-0.35%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	40A
Limiting Reverse Current	40A

PACKAGING CONFIGURATION

	40ft(HQ)
Number of modules per container	584
Number of modules per pallet	73
Number of pallets per container	8
Box gross weight[kg]	2630

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

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