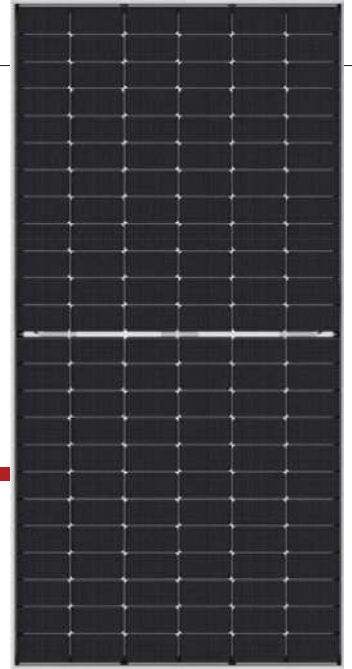


RS-144BDG Series

Bifacial Dual Glass Mono Module
N-TOPCON Half-Cell: 580-600W

16BB



144 HALF CELL
MONOCRYSTALLINE MODULE

580-600W
POWER OUTPUT RANGE

23.23%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

Rosen Solar, is one of the world's top ranking manufacturer and installer of solar modules for more than 10 years. Facing the increasingly serious situation of world Global warming, we are undertaking more duty and responsibility to provide more reliable and sustainable energy to protect not only human beings but also the Mother Earth. And with modules and systems delivered to more than 150 countries, Rosen is committed to building long term strategy and mutual collaboration with all installers, distributors and partners in energy protection.

Comprehensive Products and System Certificates

IEC61215/IEC61730/IEC61701/IEC62716
 ISO 9001: Quality Management System
 ISO 14001: Environmental Management System
 ISO 14064: Greenhouse Gas Emissions Verification
 OHSAS 18001: Occupation Health and Safety Management System



PRODUCTS
 RS-144BDG(cells)

POWER RANGE
 580-600W



SMBB Technology

Better light trapping and current collection to improve module power output and reliability.



Hot 2.0 Technology

The N-type module with Hot 2.0 technology has better reliability and lower LID/LETID.



PID Resistance

Excellent Anti-PID performance guarantee via optimized mass-production process and materials control.



Enhanced Mechanical Load

Certified to withstand: wind load (2400 Pascal) and snow load (5400 Pascal).

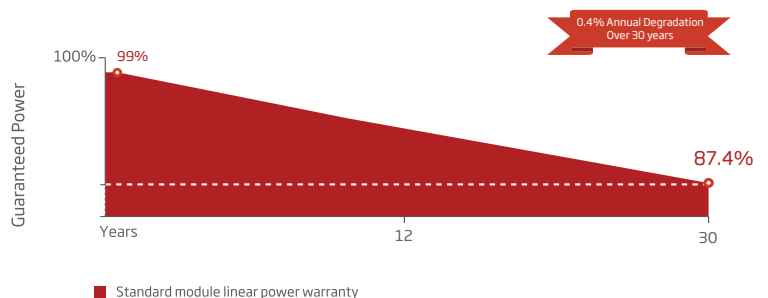


Higher Power Output

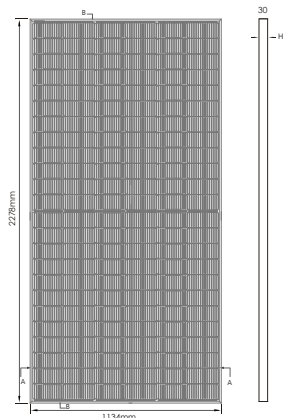
Module power increases 5-25% generally, bringing significantly lower LCOE and higher IRR.

PERFORMANCE WARRANTY

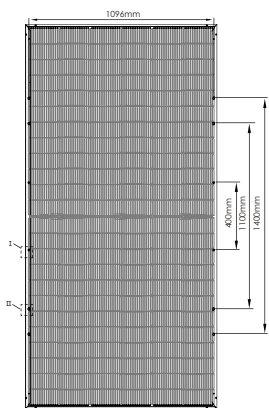
12 Year Product Warranty · 30 Year Power Warranty



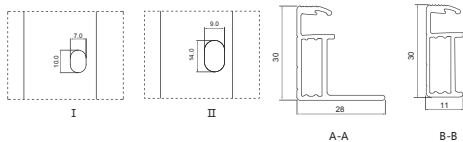
DIMENSIONS OF PV MODULE(mm)



Front View



Back View



ELECTRICAL DATA(STC)

Peak Power Watts - $P_{MAX}(W_p)^*$	580	585	590	595	600
Power Output Tolerance - $P_{MAX}(W)$	0~+5				
Maximum Power Voltage - $V_{MPP}(V)$	42.59	42.74	42.89	43.04	43.19
Maximum Power Current - $I_{MPP}(A)$	13.62	13.69	13.76	13.83	13.90
Open Circuit Voltage - $V_{OC}(V)$	51.47	51.67	51.87	52.07	52.27
Short Circuit Current - $I_{SC}(A)$	14.37	14.43	14.49	14.55	14.61
Module Efficiency (%)	22.45	22.65	22.84	23.03	23.23

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5

ELECTRICAL PARAMETERS AT NOCT

Maximum Power - $P_{MAX}(W_p)$	436	440	444	448	452
Maximum Power Voltage - $V_{MPP}(V)$	39.87	40.0	40.13	40.26	40.39
Maximum Power Current - $I_{MPP}(A)$	10.94	11.01	11.08	11.15	11.22
Open Circuit Voltage - $V_{OC}(V)$	48.89	49.08	49.27	49.46	49.65
Short Circuit Current - $I_{SC}(A)$	11.60	11.65	11.70	11.75	11.80

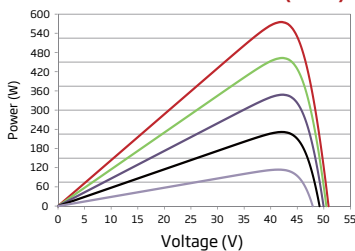
NOCT: Irradiance 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

MECHANICAL DATA

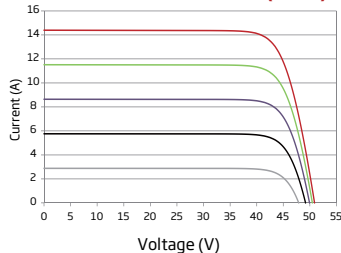
Solar Cells	N-type Mono-crystalline
No. of cells	144(6x24)
Dimensions	2278*1134*30mm
Weight	32 kgs
Front Glass	High transparency solar glass 2.0mm
Back Glass	High transparency solar glass 2.0mm
Frame	Anodized aluminium alloy
Junction Box	Ip68 rated
Output Cables	Photovoltaic Technology Cable 4.0 mm ² , Portrait: N 300mm/P 300mm Landscape: N 1400mm/P 1400mm (Opt)

*Please refer to regional datasheet for specified connector.

P-V CURVES OF PV MODULE(580W)



I-V CURVES OF PV MODULE(580W)



TEMPERATURE RATINGS

NOCT (Nominal Operating Cell Temperature)	45±2 C
Temperature Coefficient of P_{MAX}	-0.29%/C
Temperature Coefficient of V_{OC}	-0.25%/C
Temperature Coefficient of I_{SC}	0.045%/C

(Do not connect Fuse in Combiner Box with two or more strings in parallel connection)

MAXIMUM RATINGS

Operational Temperature	-40~+85 C
Maximum System Voltage	1500VDC (IEC)
Max Series Fuse Rating	30A

WARRANTY

12 years Product Warranty
30 years Linear Power Warranty
(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per pallet: 36 pieces
Modules per 40HQ container: 720pieces