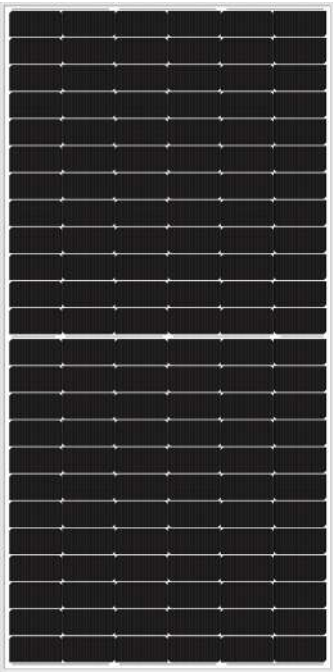
Mono Poly System

RS-144HC Series

Framed 144 Layout Mono Module
N-TOPCON Half-Cell: 575-600W

16BB



144 HALF CELL
MONOCRYSTALLINE MODULE

575-600W
POWER OUTPUT RANGE

22.65%
MAXIMUM EFFICIENCY

0~+5W
POSITIVE POWER TOLERANCE

PRODUCTS	POWER RANGE
RS-144HC(cells)	575-600W

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).

Durability Against Extreme Environmental Conditions
High salt mist and ammonia resistance.

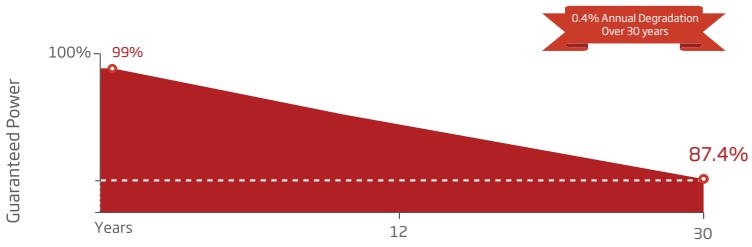
Rosen Solar, is one of the world's top ranking manufacturer and installer of solar modules for more than 10years. Facing the increasingly serious situation of world Global warming, we are undertaking more duty and responsibility to provide more reliable and sustainable energy to protect not only human 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

PERFORMANCE WARRANTY

12 Year Product Warranty · 30 Year Power Warranty



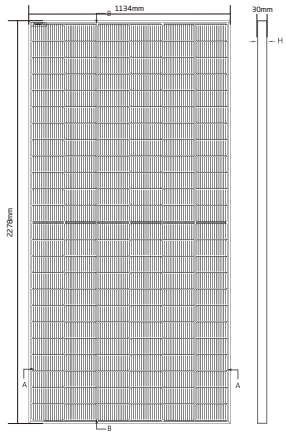
Standard module linear power warranty

Rosen Solar
To light up the world

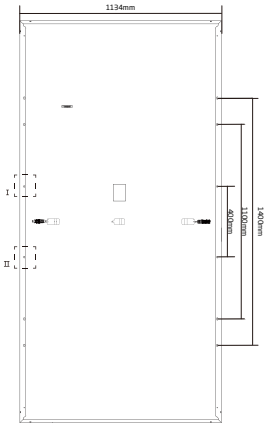
RS-144 Series

144 CELLS MODULE

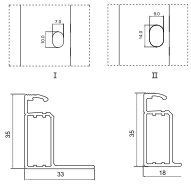
DIMENSIONS OF PV MODULE(mm)



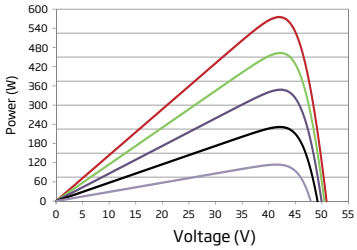
Front View



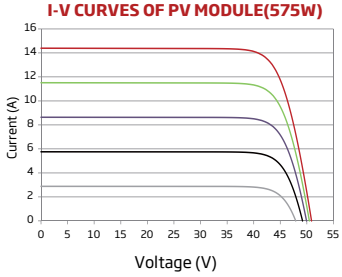
Back View



P-V CURVES OF PV MODULE(575W)



I-V CURVES OF PV MODULE(575W)



ELECTRICAL DATA(STC)

Peak Power Watts-P_{MAX}(Wp)*	575	580	585	590	595	600
Power Output Tolerance-P_{MAX}(W)	0~+5					
Maximum Power Voltage-V_{MPP}(V)	42.22	42.37	42.52	42.67	42.82	42.97
Maximum Power Current-I_{MPP}(A)	13.62	13.69	13.76	13.83	13.90	13.97
Open Circuit Voltage-V_{oc}(V)	50.88	51.02	51.16	51.30	51.44	51.58
Short Circuit Current-I_{sc}(A)	14.39	14.47	14.55	14.63	14.71	14.79
Module Efficiency (%)	22.26	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}(Wp)	432	436	440	444	448	452
Maximum Power Voltage-V_{MPP}(V)	39.60	39.69	39.81	39.93	40.05	40.17
Maximum Power Current-I_{MPP}(A)	10.92	10.99	11.05	11.12	11.19	11.26
Open Circuit Voltage-V_{oc}(V)	48.33	48.46	48.60	48.74	48.87	49.0
Short Circuit Current-I_{sc}(A)	11.62	11.68	11.75	11.81	11.88	11.94

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	28 kgs
Glass	3.2mm,Anti-Reflection Coating,High Transmission, Low Iron, Tempered Glass
Backsheet	White
Frame	Anodized aluminium alloy
Junction Box	Ip68 rated
Output Cables	Photovoltaic Technology Cable 4.0 mm², Portrait: N 300mm/P 300mm Landscape: N 1400mm/P 1400mm (Opt)

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

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

MAXIMUM RATINGS

Operational Temperature	-40~+85℃
Maximum System Voltage	1500VDC (IEC)
Max Series Fuse Rating	25A

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

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

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To light up the world

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

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