

Mono Poly System



RS-144HC Series

Framed 144 Layout Mono Module
PERC Half-Cell: 540-580W

144 HALF CELL
MONOCRYSTALLINE MODULE

540-580W
POWER OUTPUT RANGE

22.4%
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 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



PRODUCTS

RS-144HC(cells)

POWER RANGE

540-580W



Ideal choice for large scale ground installation



Selected encapsulating material and stringent production process control ensure the product is highly PID resistant and snail trails free



Special cutting and soldering technology leads to low hotspot risk



Sand blowing test, salt mist test and ammonia test passed to endure harsh environments



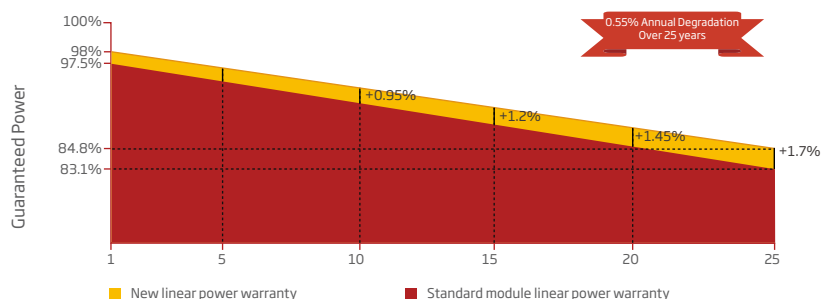
Optimized system performance due to module level current sorting



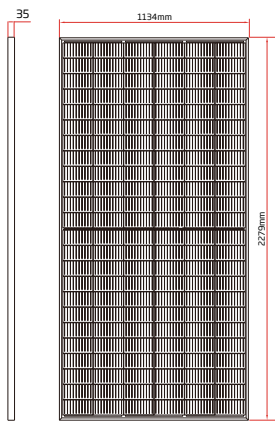
Highly transparent self-cleaning glass brings additional yield and easy maintenance

PERFORMANCE WARRANTY

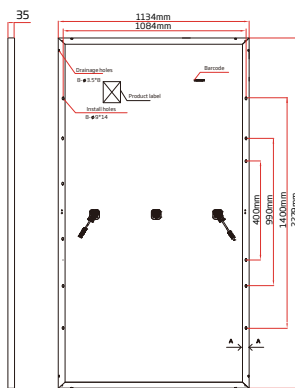
12 Year Product Warranty · 25 Year Power Warranty



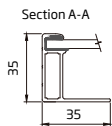
DIMENSIONS OF PV MODULE(mm)



Front View

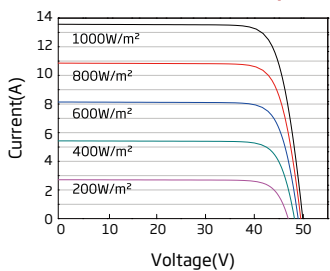


Back View (Portrait)

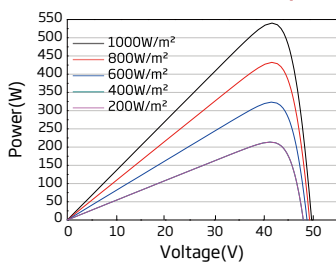


Section A-A

I-V CURVES OF PV MODULE(540W)



P-V CURVES OF PV MODULE(540W)



ELECTRICAL DATA(STC)

Peak Power Watts- $P_{MAX}(Wp)^*$	540	545	550	555	560	565	570	580
Power Output Tolerance- $P_{MAX}(W)$	0~+5							
Maximum Power Voltage- $V_{MPP}(V)$	41.64	41.80	41.96	42.12	42.28	42.44	42.59	42.89
Maximum Power Current- $I_{MPP}(A)$	12.97	13.04	13.11	13.18	13.25	13.32	13.39	13.53
Open Circuit Voltage- $V_{OC}(V)$	49.60	49.75	49.90	50.05	50.20	50.35	50.50	50.80
Short Circuit Current- $I_{SC}(A)$	13.86	13.93	14.00	14.07	14.14	14.21	14.28	14.42
Module Efficiency (%)	20.9	21.1	21.3	21.5	21.7	21.9	22.1	22.4

STC: Irradiance 1000W/m², Cell Temperature 25°C, Air Mass AM1.5
*Measuring tolerance: ±3%.

ELECTRICAL PARAMETERS AT NMOT

Maximum Power- $P_{MAX}(Wp)$	408	412	416	420	424	428	432	440
Maximum Power Voltage- $V_{MPP}(V)$	38.99	39.21	39.44	39.67	39.90	40.13	40.34	40.78
Maximum Power Current- $I_{MPP}(A)$	10.47	10.51	10.55	10.59	10.63	10.67	10.72	10.80
Open Circuit Voltage- $V_{OC}(V)$	46.43	46.55	46.68	46.81	46.93	47.06	47.19	47.45
Short Circuit Current- $I_{SC}(A)$	11.09	11.13	11.17	11.21	11.25	11.29	11.33	11.41

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

MECHANICAL DATA

Solar Cells	Monocrystalline, 182 mm
Cell Orientation	144 cells (6x24)
Module Dimensions	2279±2 mm*1134±2 mm*35±1 mm
Weight	27.5 kg
Glass	High Transparency solar glass 3.2 mm
Backsheet	White
Frame	Silver, Anodized Aluminium Alloy
J-Box	IP68 rated, 3 diodes
Cables	Photovoltaic Technology Cable 4.0 mm ² , Portrait: N 300mm/P 300mm Landscape: N 1400mm/P 1400mm (Opt)
Wind/Snow Load	2400Pa / 5400Pa*
Connector	MC4 Compatible

*Please refer to regional datasheet for specified connector.

TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	45±2 C
Temperature Coefficient of P_{MAX}	-0.350%/ C
Temperature Coefficient of V_{OC}	-0.275%/ C
Temperature Coefficient of I_{SC}	0.045%/ C

MAXIMUM RATINGS

Operational Temperature	-40~+85 C
Maximum System Voltage	1500V DC
Max Series Fuse Rating	25A

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

WARRANTY

12 year Product Warranty
25 year Linear Power Warranty

(Please refer to product warranty for details)

PACKAGING CONFIGURATION

Modules per pallet: 31 pieces
Modules per 40HQ container: 620pieces