



# RS-120HC Series

**Framed 120 Layout Mono Module**  
**PERC Half-Cell: 385-415W**

**120 HALF CELL**  
**MONOCRYSTALLINE MODULE**

**385-415W**  
**POWER OUTPUT RANGE**

**22.8%**  
**MAXIMUM EFFICIENCY**

**0~+5W**  
**POSITIVE POWER TOLERANCE**

**PRODUCTS**  
 RS-120HC(cells)

**POWER RANGE**  
 385-415W



### Higher power for large scale installations

- High performance mono PERC cells
- Reduced BOS costs with higher power bins and 1,500V system voltage
- Consistently high bankability ratings by BNEF, banks and investors



### Half-cut cell design brings higher efficiency

- Optimized power output under inter-row shading conditions
- Integrated LRF for increased performance
- Low thermal coefficients for higher energy yield at elevated operating temperatures
- Reduced interconnection losses



### Highly reliable due to stringent quality control

- Over 30 in-house tests (UV, TC, HF, and many more)
- In-house testing goes well beyond certification requirements
- PID resistant
- 2x 100% inline EL inspection



### Certified to withstand challenging environmental conditions

- Salt Mist Corrosion
- Ammonia Corrosion
- Blowing Sand

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.

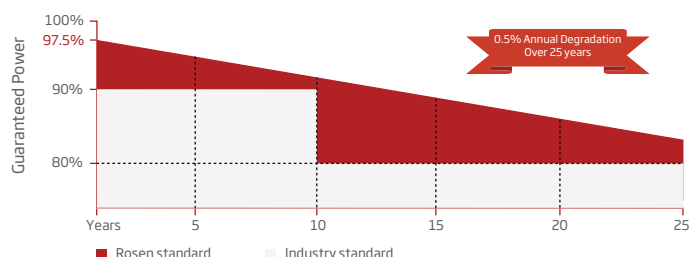
### Comprehensive Products and System Certificates

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

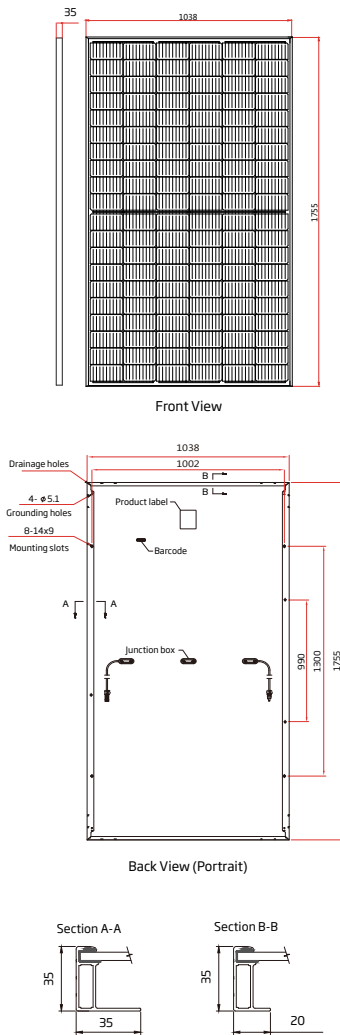


### PERFORMANCE WARRANTY

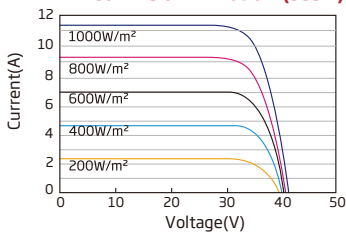
10 Year Product Warranty · 25 Year Power Warranty



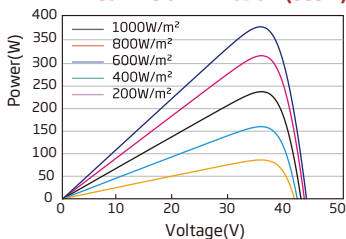
### DIMENSIONS OF PV MODULE(mm)



### I-V CURVES OF PV MODULE(385W)



### P-V CURVES OF PV MODULE(385W)



### ELECTRICAL DATA(STC)

Peak Power Watts- $P_{MAX}(Wp)^*$	385	390	395	400	405	410	415
Power Output Tolerance- $P_{MAX}(W)$	0~+5						
Maximum Power Voltage- $V_{MPP}(V)$	34.9	35.1	35.3	35.5	35.7	35.9	36.1
Maximum Power Current- $I_{MPP}(A)$	11.04	11.12	11.20	11.28	11.35	11.43	11.50
Open Circuit Voltage- $V_{OC}(V)$	41.5	41.7	41.9	42.1	42.3	42.5	42.7
Short Circuit Current- $I_{SC}(A)$	11.70	11.77	11.84	11.91	11.98	12.05	12.12
Module Efficiency (%)	21.1	21.4	21.7	22.0	22.2	22.5	22.8

STC: Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5  
 \*Measuring tolerance:  $\pm$ 3%.

### ELECTRICAL PARAMETERS AT NMOT

Maximum Power- $P_{MAX}(Wp)$	289.5	293.2	296.9	300.6	304.3	308.0	311.7
Maximum Power Voltage- $V_{MPP}(V)$	32.6	32.8	33.0	33.2	33.4	33.6	33.8
Maximum Power Current- $I_{MPP}(A)$	8.89	8.95	9.01	9.07	9.13	9.19	9.25
Open Circuit Voltage- $V_{OC}(V)$	39.3	39.5	39.7	39.9	40.1	40.3	40.5
Short Circuit Current- $I_{SC}(A)$	9.38	9.45	9.52	9.59	9.66	9.73	9.80

NMOT: Irradiance 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s.

### MECHANICAL DATA

Solar Cells	Monocrystalline, 166mm(9BB)
Cell Orientation	120cells (6*20)
Module Dimensions	1755*1038*35mm
Weight	20kg (Approx)
Glass	3.2mm, High Transmission, AR Coated Heat Strengthened Glass
Encapsulant Material	EVA/POE
Backsheet	White
Frame	35mm Anodized Aluminium Alloy
J-Box	IP 68 rated (3 bypass diodes)
Cables	Photovoltaic Technology Cable 4.0mm <sup>2</sup> Portrait: N 300mm/P 300mm Landscape: N 1400mm/P 1400mm (Opt)
Wind/Snow Load	2400Pa / 5400Pa*
Connector	MC4 Compatible /MC4 EVO2/TS4*

\*Please refer to regional datasheet for specified connector.

### TEMPERATURE RATINGS

NMOT (Nominal Module Operating Temperature)	42°C $\pm$ 2
Temperature Coefficient of $P_{MAX}$	-0.37%/°C
Temperature Coefficient of $V_{OC}$	-0.30%/°C
Temperature Coefficient of $I_{SC}$	0.05%/°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	1500V DC (IEC)
Max Series Fuse Rating	20A

### WARRANTY

10 year Product Workmanship Warranty
25 year Power Warranty

(Please refer to product warranty for details)

### PACKAGING CONFIGURATION

Modules per pallet: 30(+2) pieces
Modules per 40HQ container: 832 pieces