

# SATURN 4

# ReneSola

## BIFACIAL MODULE WITH DUAL GLASS

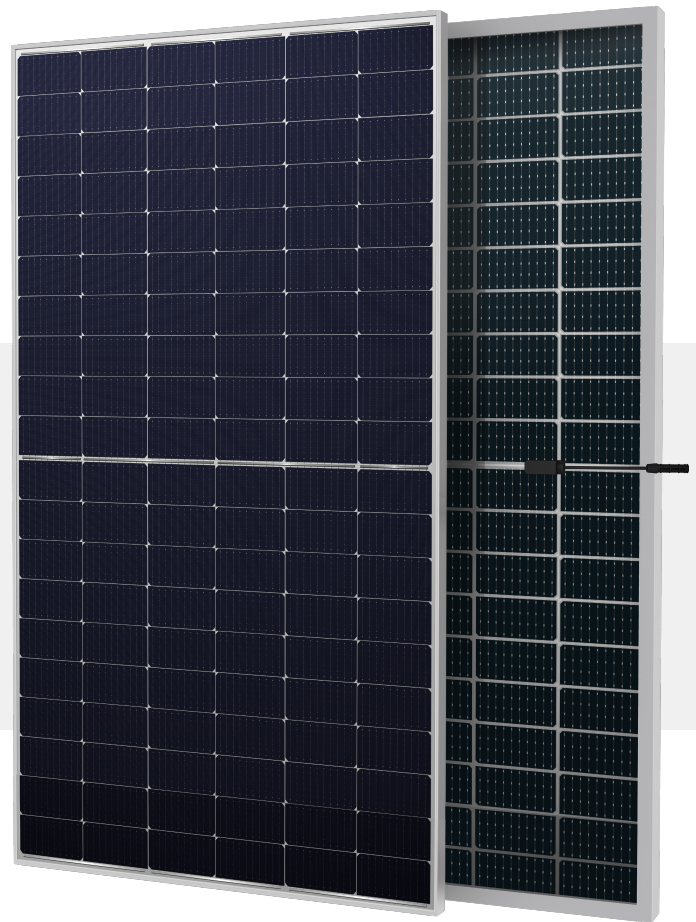
# RS4-460~480NBG-E1

N-Type /Positive power tolerance of 0~+3%/Max module efficiency 22.24%

- Suitable for ground power plants and distributed projects
- Advanced module technology delivers superior module efficiency
  - Gallium-doped Wafer · Non destructive cutting · MBB half-cut
- Excellent power generation performance
  - Excellent IAM and Weak light response · Low temperature ratings
  - 0.40% linear Power decline
- High module quality ensures long-term reliability
  - Strict selected material · Advanced technology · Leading standard
- Ultra-hydrophilic self-cleaning coating techniques

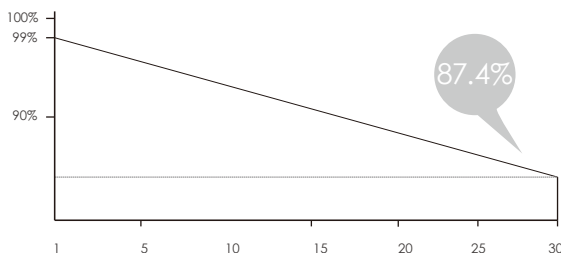
Complete System  
and IEC Product Certification

IEC 61215(2016), IEC 61730(2016) ISO9001:  
2015:Quality Management System ISO14001:  
2015:Environment Management System  
ISO45001:2018:Occupational Health  
and Safety Management System



**12-year**   
Material  
& Workmanship

**30-year**   
Linear Power  
Output



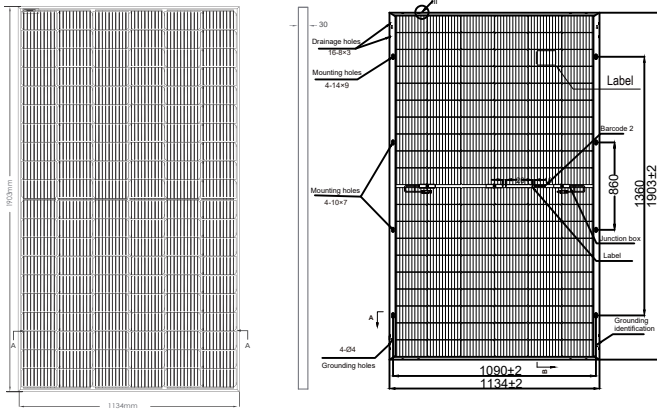
30-Year excess linear power output warranty



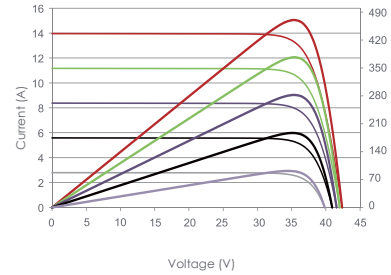
# SATURN 4

## RS4-460~480NBG-E1

BIFACIAL MODULE WITH DUAL GLASS



Drawing Only for Reference



Electrical Characteristics STC	RS4-460NBG-E1	RS4-465NBG-E1	RS4-470NBG-E1	RS4-475NBG-E1	RS4-480NBG-E1
Maximum Power (Pmax)	460W	465W	470W	475W	480W
Power Tolerance	0~+5W	0~+5W	0~+5W	0~+5W	0~+5W
Module Efficiency	21.32%	21.55%	21.78%	22.01%	22.24%
Maximum Power Current (Imp)	12.71A	12.76A	12.81A	12.86A	12.91A
Maximum Power Voltage (Vmp)	36.19V	36.44V	36.69V	36.94V	37.18V
Short Circuit Current (Isc)	13.21A	13.29A	13.37A	13.46A	13.55A
Open Circuit Voltage (Voc)	42.36V	42.57V	42.77V	42.93V	43.10V

Values at Standard Test Conditions STC(AM1.5, Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C)

Electrical Characteristics NOCT	RS4-460NBG-E1	RS4-465NBG-E1	RS4-470NBG-E1	RS4-475NBG-E1	RS4-480NBG-E1
Maximum Power (Pmax)	346W	350W	353W	357W	361W
Maximum Power Current (Imp)	10.27A	10.31A	10.35A	10.39A	10.43A
Maximum Power Voltage (Vmp)	33.66V	33.89V	34.12V	34.35V	34.58V
Short Circuit Current (Isc)	11.21A	11.28A	11.35A	11.42A	11.50A
Open Circuit Voltage (Voc)	39.82V	40.01V	40.20V	40.36V	40.51V

NOCT , Irradiance of 800W/m<sup>2</sup>, AM1.5, Ambient Temperature 20 °C, wind Speed 1m/s.

Electrical Characteristics with 21% rear side power gain	RS4-460NBG-E1	RS4-465NBG-E1	RS4-470NBG-E1	RS4-475NBG-E1	RS4-480NBG-E1
Maximum Power (Pmax)	557W	563W	569W	575W	581W
Maximum Power Current (Imp)	15.38A	15.44A	15.50A	15.56A	15.62A
Maximum Power Voltage (Vmp)	36.19 V	36.44V	36.69V	36.94V	37.18 V
Short Circuit Current (Isc)	15.98A	16.08A	16.18A	16.29A	16.40A
Open Circuit Voltage (Voc)	42.36V	42.57V	42.77V	42.93V	43.10V

### Mechanical Characteristics

Cell Type	N-Type, 182x182(±1)mm, 120(6x20) Half-Cut cells
Glass	2mm+2mm, High Transmission, Low Iron, Tempered Glass
Frame	Anodized Aluminum Alloy
Junction Box	IP68 Rated, With Bypass Diodes
Dimension	1903x1134x30mm
Output Cable	4 mm <sup>2</sup> (EU), 300 mm, length can be customized
Weight	28kg
Installation Hole Location	See Drawing Above

### Packing Information

Container	40' HQ
Pallets per Container	24
Pieces per Container	864

### Characteristics

Temperature Coefficient of Voc	-0.26%/°C
Temperature Coefficient of Isc	+0.046%/°C
Temperature Coefficient of Pmax	-0.31%/°C
Nominal Operating Cell Temperature (NOCT)	45°C±2°C

Remark: Electrical data in this catalog do not refer to a single module and they are not part of the offer. They only serve for comparison among different module types.

### Maximum Ratings

Operating Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Maximum Series Fuse Rating	25A

