

# RSP590DCT-144

## Bifacial 590W Monocrystalline Solar Panel

### Key Features

Renogy's Bifacial 590-Watt Monocrystalline Solar Panel features substantial conversion efficiency and immense power output. This solar panel is equipped with exceptionally efficient (N-Type) monocrystalline silicon solar cells, providing both cost savings and better power output performance. This product promotes renewable energy deployment.

- High module conversion efficiency
- Top ranked PTC rating
- Quick and inexpensive mounting
- 100% EL testing on all Renogy modules
- No hot spots guaranteed

### Potential Uses

Renogy solar panels power solar power arrays, water pumping systems, signal systems, and plenty of other applications. The Renogy Bifacial 590 W Mono-crystalline Solar Panel is ideal for large-sized solar PV arrays and heavy power consumption loads.



Power Output Warranty



Material and Workmanship Warranty

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## Bifacial590W Monocrystalline Solar Panel

### Electrical Data

Maximum Power at STC*	590 W
Optimum Operating Voltage ( $V_{mp}$ )	43.71 V
Optimum Operating Current ( $I_{mp}$ )	13.50 A
Open Circuit Voltage ( $V_{oc}$ )	52.63 V
Short Circuit Current ( $I_{sc}$ )	14.13 A
Module Efficiency	22.8%
Maximum System Voltage	1500 VDC
Maximum Series Fuse Rating	30 A

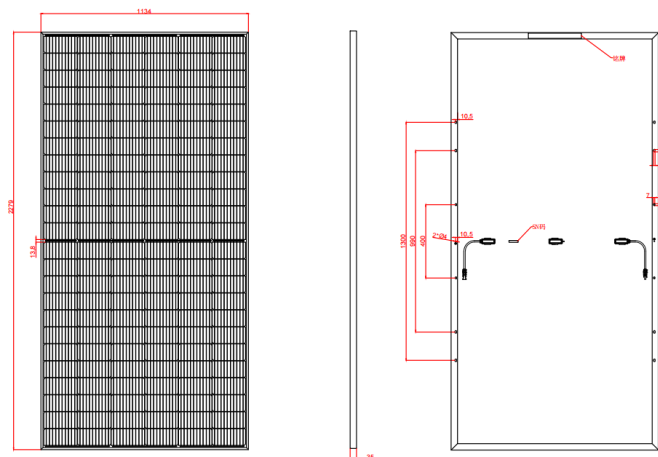
### Thermal Characteristics

Operating Temp. Range	-40°C - 85°C (-40°F - 185°F)
Nominal Operating Cell Temperature (NOCT)	45±2 °C
Temperature Coefficient of $P_{max}$	-0.32 %/°C
Temperature Coefficient of $V_{oc}$	-0.26 %/°C
Temperature Coefficient of $I_{sc}$	0.046 %/°C

### Junction Box

Protection Degree	IP68
Diode	30SQ045
Number of Diodes	3 Diode(s)
Output Cables	12AWG 1700mm(66.9in)

### Module Diagram



### Mechanical Data

Solar Cell Type	N-Type Monocrystalline(7.2 x 3.6 in)
Number of Cells	144 (6 x 24), 72 cells in series
Dimensions	2278 x 1134 x 35mm (89.7 x 44.6 x 1.4 in)
Weight	26.5 kg (58.4 lbs)
Front Glass	Tempered Glass 0.13 in (3.2 mm)
Frame	Anodized Aluminium Alloy
Connectors	Solar Connectors
Fire Performance	Type 1

### MC4001 - Solar Connectors

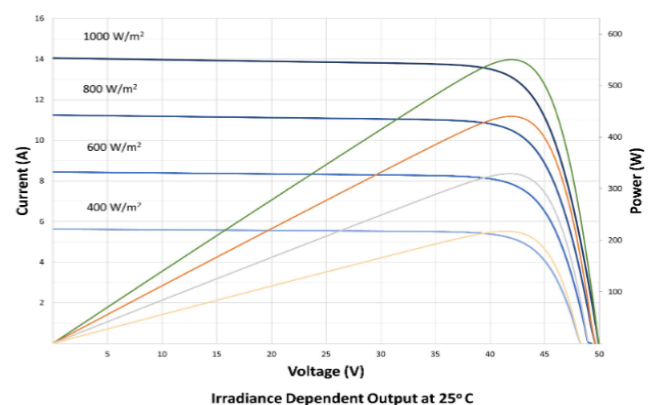
Rated Current	40 A
Maximum Voltage	1500 VDC
Maximum AWG Size	10 AWG
Operating Temperature	-40°C - 85°C (-40°F - 185°F)
IP Rating	IP68

### Certifications



ISO 9001:  
Quality Management System

### Electrical Performance



\*All specifications and data described in this data sheet are tested under Standard Test Conditions (STC - Irradiance: 1000W/m<sup>2</sup>, Temperature: 25°C, Air Mass: 1.5) and may deviate marginally from actual values. Renogy and any of its affiliates has reserved the right to make any modifications to the information on this data sheet without notice. It is our goal to supply our customers with the most recent information regarding our products. These data sheets can be found in the downloads section of our website, [www.renogy.com](http://www.renogy.com)