

RNG-50D-SS

50W Monocrystalline Solar Panel

Key Features

Sleek design and a durable frame, the Renogy 50 Watt 12 Volt Monocrystalline Panel provides you with the most efficiency per space and is the perfect item for off-grid applications.

- 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

The Renogy 50 Watt Monocrystalline Panel can be used in various off-grid applications that include 12 and 24 volts arrays, water pumping systems, signaling systems and other off-grid applications.



Power Output Warranty



Material and Workmanship Warranty

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50W Monocrystalline Solar Panel

Electrical Data

Maximum Power at STC*	50 W
Optimum Operating Voltage (V_{mp})	18.6 V
Optimum Operating Current (I_{mp})	2.69 A
Open Circuit Voltage (V_{oc})	22.3 V
Short Circuit Current (I_{sc})	2.94 A
Module Efficiency	16.9%
Maximum System Voltage	600 VDC UL
Maximum Series Fuse Rating	15 A

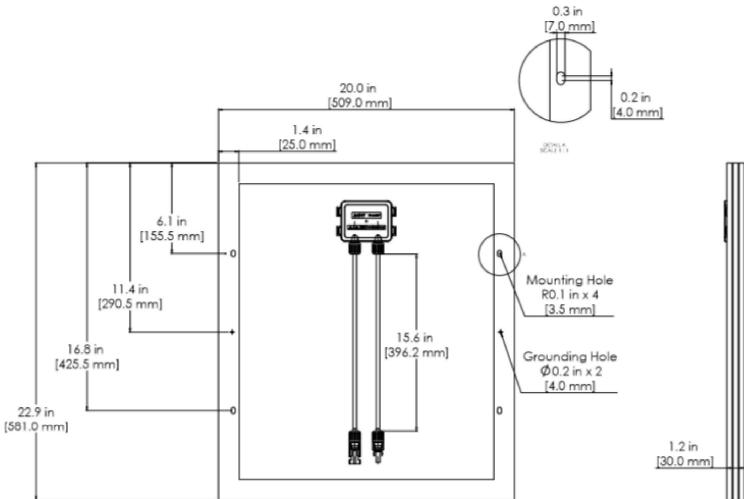
Thermal Characteristics

Operating Module Temperature	-40°C to +85°C
Nominal Operating Cell Temperature (NOCT)	47±2°C
Temperature Coefficient of P_{max}	-0.37%/°C
Temperature Coefficient of V_{oc}	-0.28%/°C
Temperature Coefficient of I_{sc}	0.048%/°C

Junction Box

IP Rating	IP 65
Diode Type	15SQ045
Number of Diodes	1 Diode(s)
Output Cables	14 AWG 400mm (15.7 in)

Module Diagram



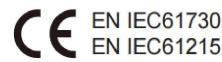
Mechanical Data

Solar Cell Type	Monocrystalline (6.25 x 1.9in)
Number of Cells	33 (3 x 11)
Dimensions	22.9 x 20.0 x 1.2 in (581 x 509 x 30 mm)
Weight	7.72 lb (3.5 kg)
Front Glass	Tempered Glass 0.13 in (3.2 mm)
Frame	Anodized Aluminum Alloy
Connectors	Solar Connectors
Fire Performance	Type 1

Solar Connectors

Rated Current	30A
Maximum Voltage	1000V DC
Maximum AWG Size Range	10 AWG
Temperature Range	-40°F to 194°F
IP Rating	IP 67

Certifications



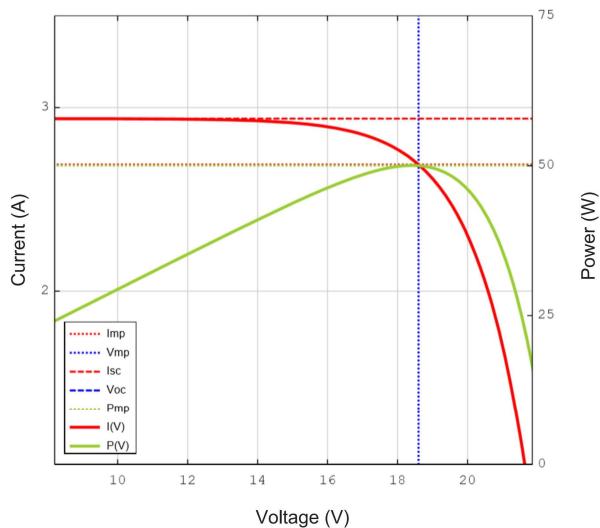
EN IEC61730
EN IEC61215



ISO 9001: Quality Management System

IV-Curve

RNG-50D-SS Characteristics Versus Voltage



*All specifications and data described in this data sheet are tested under Standard Test Conditions (STC - Irradiance: 1000W/m², 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