



RNG-50DB-H

50W Flexible Monocrystalline Solar Panel

Key Features

The Renogy 50 Watt 12 Volt Flexible Monocrystalline Solar Panel is the most convenient panel to convert your house from an energy dependant home to an energy producing location.

- Extreme flexibility
- Ultralight and extremely durable design
- Quick and inexpensive mounting
- Ultra thin lamination
- No hot spots guaranteed

Potential Uses

The Renogy 50 Watt Flexible Monocrystalline Panel can be primarily used on off-grid applications that include rooftop, RV, boats and any curvy surfaces.



Power Output Warranty



Material and Workmanship Warranty

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50W Flexible Monocrystalline Solar Panel

Electrical Data

Maximum Power at STC*	50 W
Optimum Operating Voltage (V_{mp})	20.3 V
Optimum Operating Current (I_{mp})	2.47 A
Open Circuit Voltage (V_{oc})	24.3 V
Short Circuit Voltage (I_{sc})	2.75 A
Module Efficiency	15.3 %
Maximum System Voltage	600 VDC UL
Maximum Series Fuse Rating	15 A

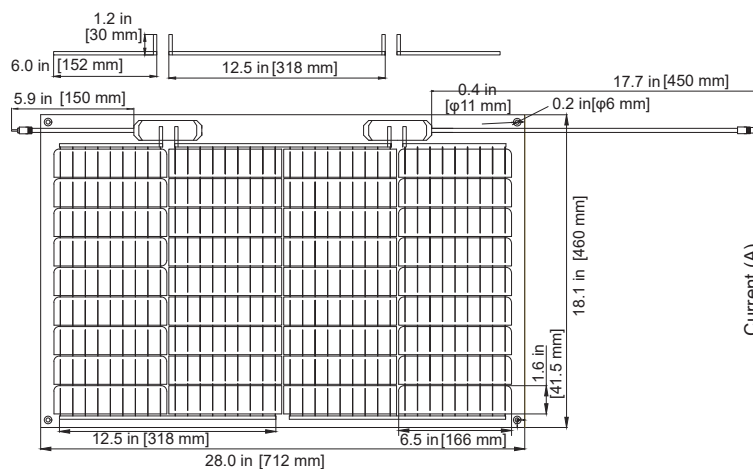
Thermal Characteristics

Operating Temp. Range	-40°C -45°C (-40°F - 113°F)
Nominal Operating Cell Temperature (NOCT)	45±2°C
Temperature Coefficient of Pmax	-0.37%/°C
Temperature Coefficient of Voc	-0.28%/°C
Temperature Coefficient of Isc	0.05%/°C

Junction Box

IP Rating	IP 65
Number of Diodes	2 Diode(s)
Output Cables	12 AWG (Negative length: 450mm/17.7 in) Positive length: 150mm/5.9 in)

Module Diagram



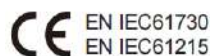
Mechanical Data

Solar Cell Type	Monocrystalline (6.5 x 1.6 in)
Number of Cells	36 (4 x 9)
Dimensions	712 x 460 x 4 mm (28.0x18.1x0.2 in)
Weight	1.4 kg (3.1 lbs)
Application Class	Class A
Frame	None
Connectors	Solar Connectors
Fire Performance	Type 1

MC4 Connectors

Rated Current	30A
Maximum Voltage	1000V DC
Maximum AWG Size Range	10 AWG
Temperature Range	-40°F to 194°F (-40°C -90°C)
IP Rating	IP 67

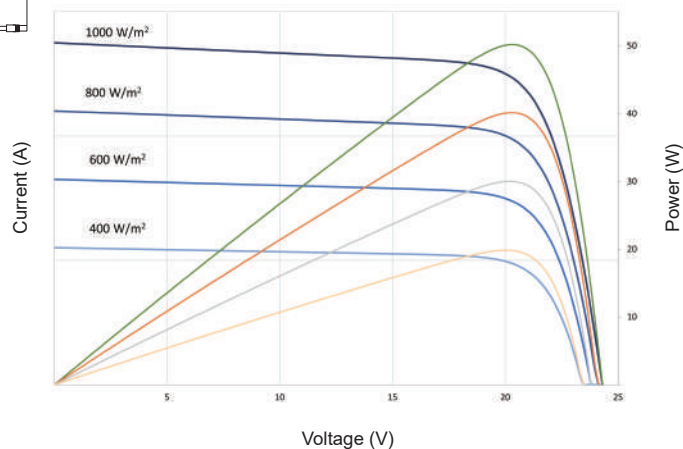
Certifications



ISO 9001:
Quality Management System

IV-Curve

RNG-50DB-H 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