

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

RNG-50DB-H

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 |

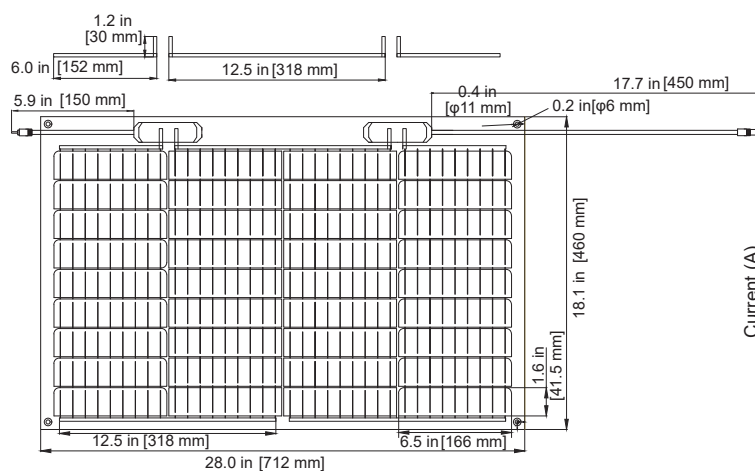
Thermal Characteristics

| | |
|---|-----------------------------|
| 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



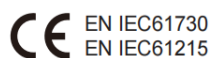
Mechanical Data

| | |
|-------------------|------------------------------------|
| Solar Cell Type | Monocrystalline (6.5 x 1.6 in) |
| Number of Cells | 36 (4 x 9) |
| Dimensions | 712 x 460 x 4 mm (28.0x18.1x0.2in) |
| Weight | 1.4 kg (3.1lbs) |
| 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 |

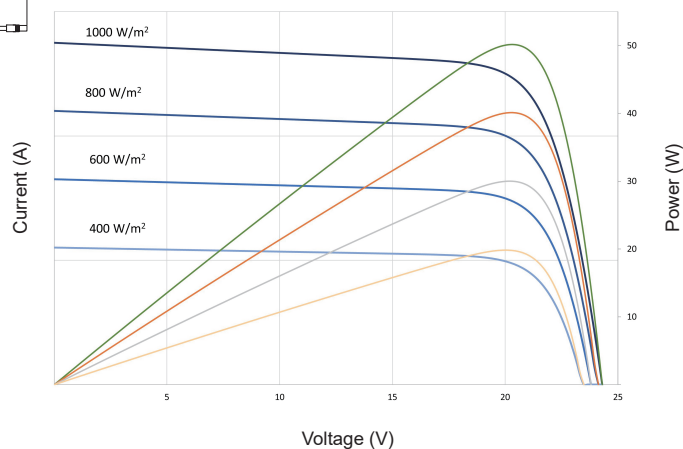
Certifications



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