RENOGY
TRUSTED ENERGY SOLUTIONS

320W/400W N-Type Bifacial Solar Panel (2-Pack)

RSP320DT-BKx2-G2/RSP400DCT-108x2

Description

Renogy 320W/400W Bifacial Solar Panels are built for higher-output off-grid systems that need more power with fewer panels. By capturing sunlight from both the front and rear, they can generate up to 30% more energy than standard monofacial panels in reflective, elevated, or rear-exposed installations.

Using Grade A+ N-Type monocrystalline cells with up to 25% cell efficiency, the panels deliver strong performance in heat and low light, along with slower long-term degradation. The half-cut cell design improves output under partial shading, while pre-drilled mounting holes support faster installation for cabins, sheds, farms, and ground-mounted systems.

Key Features

- **Bifacial Boost for 30% Extra Energy**

Capture reflected light from both sides to gain up to 30% more power in environments like sand, snow, or light-colored surfaces, without extra effort or repositioning.

- **Maximum Output with Next-Gen N-Type Cells**

High-efficiency 16BB N-Type cells deliver more energy per square foot, helping you maximize output even when installation space is limited. Up to 25% cell efficiency delivers higher power output than traditional panels.

- **More Power with Less Setup**

Achieve the same system output with fewer panels, reducing installation time, wiring, and overall system complexity.

- **Improved Performance in Partial Shading**

The half-cut cell parallel design divides the panel into two independent power zones, allowing one side to keep generating power even if the other is shaded, reducing power loss in real-world conditions.

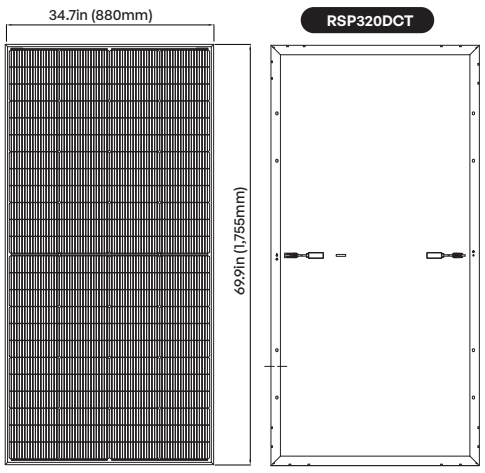
- **Stable Output in Real Conditions**

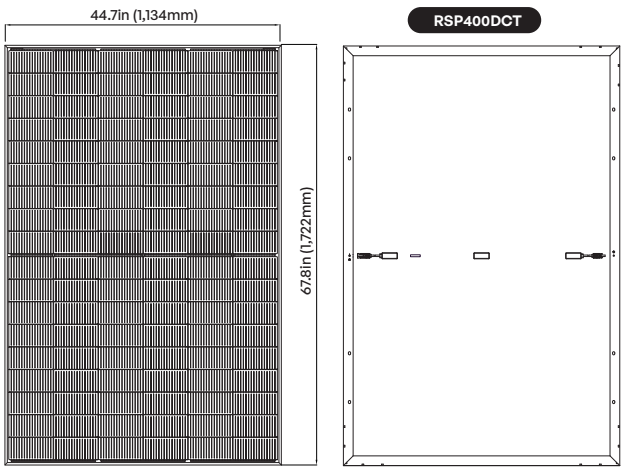
Maintains consistent performance in heat, low light, and changing outdoor conditions with a lower temperature coefficient and LECO tech, so you get reliable power throughout the day.

- **Built to Deliver Reliable Power for Years**

Engineered with IP68 durable materials, low-degradation N-Type cells, and a reinforced structure, this panel delivers consistent performance over time, backed by a 10-year product warranty and a long-term power output guarantee.

Module Diagram





Technical Specifications

Electrical Data

Model	RSP320DT-BKx2-G2	RSP400DCT-108x2
Maximum Power at STC	320W	400W
Optimum Operating Voltage (Vmp)	30.29V	34.0V
Optimum Operating Current (Imp)	10.57A	11.76A
Open-Circuit Voltage (Voc)	35.04V	39.42V
Short-Circuit Current (Isc)	10.94A	13.06A
Module Efficiency	20.5%	21.5%
Maximum System Voltage	1,500VDC	1,500VDC
Maximum Series Fuse Rating	25A	25A

Mechanical Data

Solar Cell Type	Mono N-Type	Mono N-Type
Number of Cells	96 (12 x 4 x 2)	108 (9 x 6 x 2)
Dimensions	69.9 x 34.7 x 1.4in / 1,755 x 880 x 35mm	67.8 x 44.7 x 1.4in / 1,722 x 1134 x 35mm
Weight	36.82 lbs / 16.7kg	45.42 lbs / 20.6kg
Front Film	Tempered Glass 0.13in / 3.2mm	Tempered Glass 0.13in / 3.2mm
Connectors	Solar Connectors	Solar Connectors
Frame	Anodized Aluminum Alloy	Anodized Aluminum Alloy
Fire Performance	Type I	Type I

Thermal Characteristics

Operating Temperature Range	-40°F to 185°F / -40°C to 85°C	-40°F to 185°F / -40°C to 85°C
Nominal Operating Cell Temperature	45±2°C	45±2°C
Temperature Coefficient of Pmax	-0.32%/°C	-0.32%/°C
Temperature Coefficient of Voc	-0.26%/°C	-0.26%/°C
Temperature Coefficient of Isc	0.046%/°C	0.046%/°C

MC4 Connectors

Maximum Voltage	1,500VDC	1,500VDC
Rated Current	40A	40A
Temperature Range	-40°F to 185°F / -40°C to 85°C	-40°F to 185°F / -40°C to 85°C
IP Rating	IP68	IP68

Junction

IP Rating	IP68	IP68
Number of Diodes	2	3
Output Cables	12 AWG 59.06in / 1,500mm	12 AWG 66.93in / 1,700mm

Warranty

Power Output Warranty	25-Year	25-Year
Material and Workmanship Warranty	10-Year	10-Year
Certification	CE, RCM, TSCA, CA65	CE, RCM, TSCA, CA65

All specifications and data described in this data sheet are tested under Standard Test Conditions (STC - Irradiance: 1,000W/m2, Temperature: 25°C, Air Mass: 1.5) and may deviate marginally from actual values. Renogy and any of its affiliates have 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 datasheets can be found in the downloads section of our website, www.renogy.com.