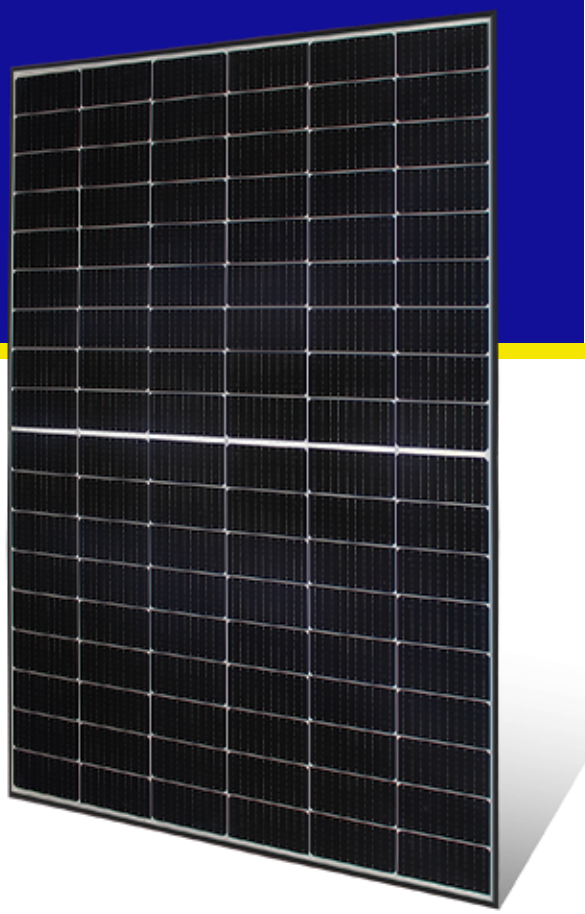
RENOGY

BIFACIAL MONOCRYSTALLINE SOLAR PANEL

POWER OUTPUT RANGE 420 - 430WP



KEY FEATURES

The Renogy Bifacial Solar Panel is designed to maximize energy production by capturing sunlight from both sides of the panel. This advanced technology allows the rear side to utilize reflected and diffused sunlight, boosting overall energy output by up to 30% compared to traditional solar panels. Perfect for residential, commercial, and off-grid applications, this panel ensures higher efficiency, better performance in varied environments, and exceptional value for your energy needs.

- Boosting overall energy output by up to 30%
- High module efficiency up to 22.02%
- Power output range 420 - 430 Wp
- 100% EL Testing
- Mechanical Load up to 5400 Pa
- Positive power tolerance +5%
- IEC EN 61215-1,-1-1,-2
  IEC EN 61730-1,-2

WARRANTY

15 15-Year Materials and Workmanship Warranty

30 30-Year Limited 80% Output Power

For more detailed information, please refer to Renogy's warranty policy.

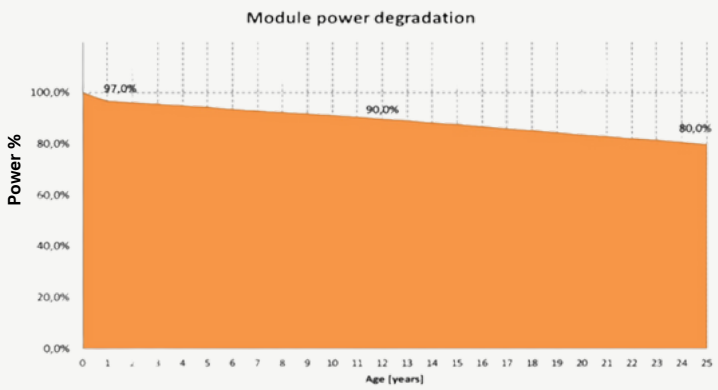
MECHANICAL DATA		
Dimensions	mm	1722 x 1134 x 30 (H x W x D)
Weight	kg	24.3
Solar Cells		108 cells, mono-Si, 182x91 mm +/-1mm
Cells Encapsulation		POE(Polyolefin Elastomer) / Ethylene vinyl acetate (EVA)
Front		Tempered solar glass 2.0mm
Back		Tempered solar glass 2.0mm
Frame		Black anodized aluminum frame with twin-wall profile and drainage holes
Junction Box		min. IP68 with 3 bypass diodes
Cable and Connections		Solar cable 4mm², length 1100mm, MC4 compatible connections

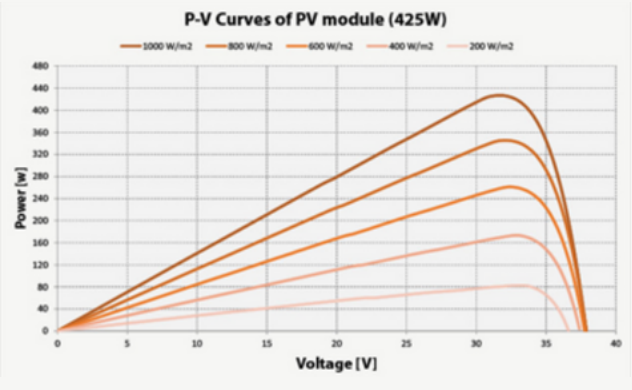
Electrical Parameters at Standard Test Conditions (STC)				
MODEL		RSP420DCG-108-EFGG22HCM10	RSP425DCG-108-EFGG22HCM10	RSP430DCG-108-EFGG22HCM10
Peak Power	W	420	425	430
Peak Power Tolerance	W		-0 / +5%	
Short Circuit Current Isc	A	14.15	14.23	14.31
Open Circuit Voltage Voc	V	37.89	38.07	38.25
Rated Current Impp	A	13.40	13.48	13.56
Rated Voltage Vmpp	V	31.36	31.55	31.73
Current and Voltage Tolerance	%		±3	
Module Efficiency	%	21.51	21.76	22.02

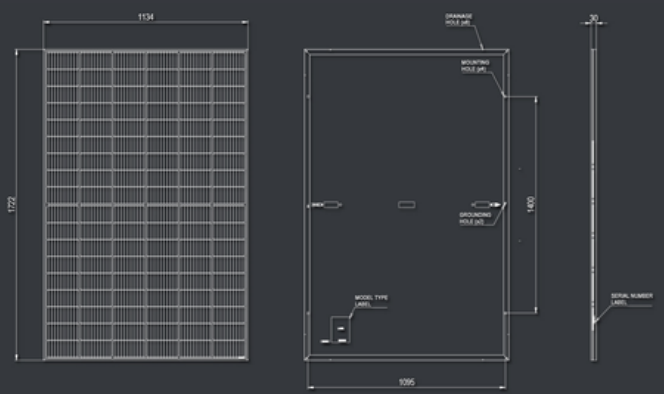
STC: 1000W/㎡ irradiance, 25℃ cell temperature, AM1.5g spectrum according to EN 60904-3
Average relative efficiency reduction of 3.4% at 200W/㎡ according to EN 60904-1

Electrical Parameters at Nominal Module Operating Temperature (NMOT)				
MODEL		RSP420DCG-108-EFGG22HCM10	RSP425DCG-108-EFGG22HCM10	RSP430DCG-108-EFGG22HCM10
Peak Power	W	318	321.8	325.6
Peak Power Tolerance	W		-0 / +5%	
Short Circuit Current Isc	A	11.43	11.50	11.56
Open Circuit Voltage Voc	V	36.0	36.2	36.3
Rated Current Impp	A	10.67	10.73	10.78
Rated Voltage Vmpp	V	29.8	30.0	30.2

NMOT: Module operating parameters at 800 W/㎡ irradiance, 20℃ ambient temperature, 1m/s wind speed







OPERATING CONDITIONS	
Temperature Range	-40 to 85
Max. System Voltage	1500
Max. Series Fuse Rating	30A
Limiting Reverse Current	25A
Max. Surface Load Capacity	5400Pa (Snow Load)
Resistance Against Hail	Max. diameter of 25 mm with impact speed 23 m/s

THERMAL CHARACTERISTICS	
Temperature Coefficient of Pmpp	-0.289%/k
Temperature Coefficient of Isc	0.045%/k
Temperature Coefficient of Voc	-0.244%/k