Blue Pacific Solar®

www.BluePacificSolar.com

Grid-tied & Off-grid Solar Kits

400 Watt Power System	
Solar Panel:	400W (2 x 200W)
Battery:	1 pcs -12V, 200AH Lead-acid
Inverter:	500W
Charge Controller:	12V 20A
Size:	22.8 x 11.5 x 25.5 in
Output:	AC and DC

400 Watt Solar Generator w/Battery in Cabinet

These emergency generators, like the others in the series, come ready to set up and power most small appliances, computers and radio communications. The emergency solar power systems provide AC and DC electric power when you need it most. All off-grid power requires the owner be aware of their energy demands while off grid and battery DOD. On a cloudy day you are going to want to conserve more energy than you normally would. Manage your critical loads and this solar generator can make all

Blue Pacific Solar® is a specialized solar equipment dealer; affordable grid-tied kits, off-grid DIY packages & portable solar products.

How Long Will This Solar Generator Provide Power?

Typical Power Consumption	Watts	Hours	WH
DC to AC Derate Factor (1)	50	5	460
Energy Star Refrigerator (2)	50	10	500
13" TV/VCR	100	1	100
(2) 40w CFL Light Bulbs)	80	4	320
Laptop Computer	50	1	50
Misc Power Allowance			200
Total Power Consumed 24 Hour Period Approx.			1,630 WH
Power Generated by 2 Solar Panels (3) Approx.			2,000 Watts
Battery Capacity 12v 200 aH @ 80% DOD (4) Approx.			1,920 WH

Answer: Indefinitely, if power is managed and rationed by owner.

1 An DC to AC derate factor is a commonly used methodology, that accounts for normal losses from such things as voltage drops across diodes, inverter resistive losses, pv module current voltage characteristics and other normal occurrences.

2 All appliances are energy star rated in the "Best in class" category by Consumer Search (.) Com www.consumersearch.com/refrigerators/compare

3 Based on 5 average sun-hours STC (Standard Test Conditions). Operating times assume fully charged batteries. These examples assume sunny day with the solar panels oriented to maximize solar collection with no shading or dirt collected on the panels. Actual results may vary depending on site conditions. For a better understanding of STC www.bluepacificsolar.com/solar-energy/solar_glossary.html#STC

4 State of charge, or conversely, the depth of discharge (DOD) is a measure of the voltage. Normal DOD should not occur below 50% of aH rated capacity of batteries. Though DOD beyond 50% is available during emergency situations, repeated DOD beyond 50% will substantially shorten the useful life of the battery.

5 The size of an off-grid power system depends on the amount of power that is required (watts), the amount of time appliances and lights are used (hours) and the amount of energy available from the sun (sun-hours per day). The owner has control of the first two variables as well as the position of the solar panels; the third depends on the location.