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## ECO-WORTHY US-L02M100N-CWMZIUS600L50-2

# ECO-WORTHY 200 Watt 12V Complete Solar Panel Starter Kit User Manual

Model: US-L02M100N-CWMZIUS600L50-2

## PRODUCT OVERVIEW

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The ECO-WORTHY 200 Watt 12V Complete Solar Panel Starter Kit is designed for off-grid applications, providing a reliable power solution for RVs, campers, trailers, boats, and cabins. This comprehensive kit includes solar panels, a charge controller, a lithium battery, and a power inverter, ensuring a complete and user-friendly setup for generating and storing solar energy.

- **Complete & Friendly:** Beginner-friendly Solar Kit, including all accessories required for connection. 800Wh daily output depends on the 4 hours sunlight availability. The reasonable matches ensures the sufficient use of solar power and doesn't cause waste. Suitable for RV, camper, trailer, boats, cabins, etc. wherever you need power.
- **Durable and 21% High Conversion Efficiency:** 100Watt aluminum frame and tempered glass panel for extended outdoor use, allowing the panels to last for decades. Monocrystalline panel's compact design with the size of 35.24x 23x 1.37 inch (Height, Length and width). The IP65 waterproof panel can also withstand high winds (2400Pa) and snow loads (5400Pa).
- **Long Life:** ECO-Worthy lithium iron phosphate battery (LiFePO4) can be recharged 4000~15000 times in a deep cycle to achieve a longer cycle life. More than 10 times higher than lead-acid batteries (generally only 300-400 cycles can be charged).
- **Efficient and Powerful:** With 600W Pure Sine Wave Power Inverter, Get 600W continuous DC to AC power and 1200W peak surge during load start-up. The inverter's conversion efficiency exceeds 92%, effectively reducing conversion losses and providing pure sine wave power.

## WHAT'S IN THE BOX

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Your ECO-WORTHY 200 Watt 12V Complete Solar Panel Starter Kit includes the following main components:

- Solar Panels (200W total)
- 30A Charge Controller
- 50Ah Lithium Battery (LiFePO4)
- 600W Solar Power Inverter (Pure Sine Wave)
- Necessary cables and connectors

- Mounting hardware (Frame)



Figure 1: All components included in the ECO-WORTHY 200W Solar Kit.

## SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your solar system. Please follow these steps carefully.

### 1. Understanding the System Components and Connections

Before beginning installation, familiarize yourself with the main components and their interconnections. The system typically involves solar panels, a charge controller, a battery, and an inverter.



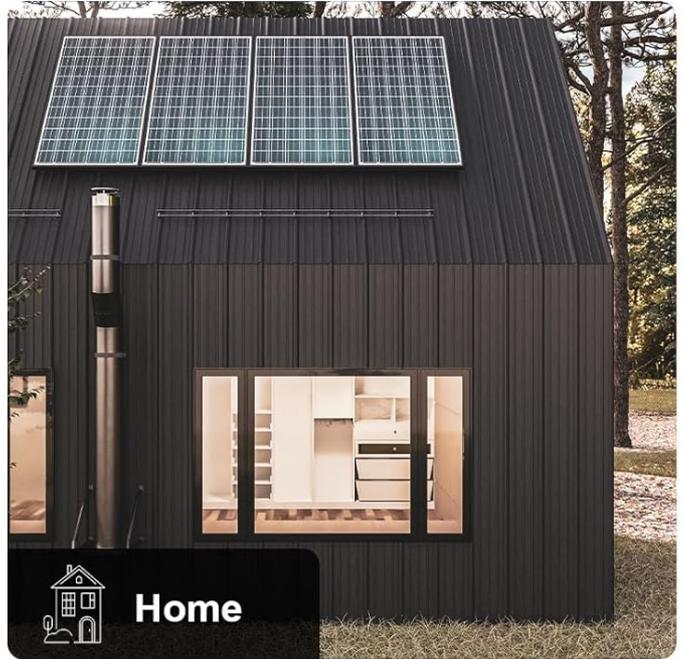
 **RV**



 **Camper**



 **Boat**



 **Home**

Figure 2: Easy connection diagram for the solar system components.

## 2. Solar Panel Installation

Mount the solar panels in a location that receives maximum direct sunlight throughout the day. Ensure proper ventilation and avoid shading. The panels are designed for outdoor use and can withstand various weather conditions.

# DURABLE WITH HIGH-QUALITY MATERIALS

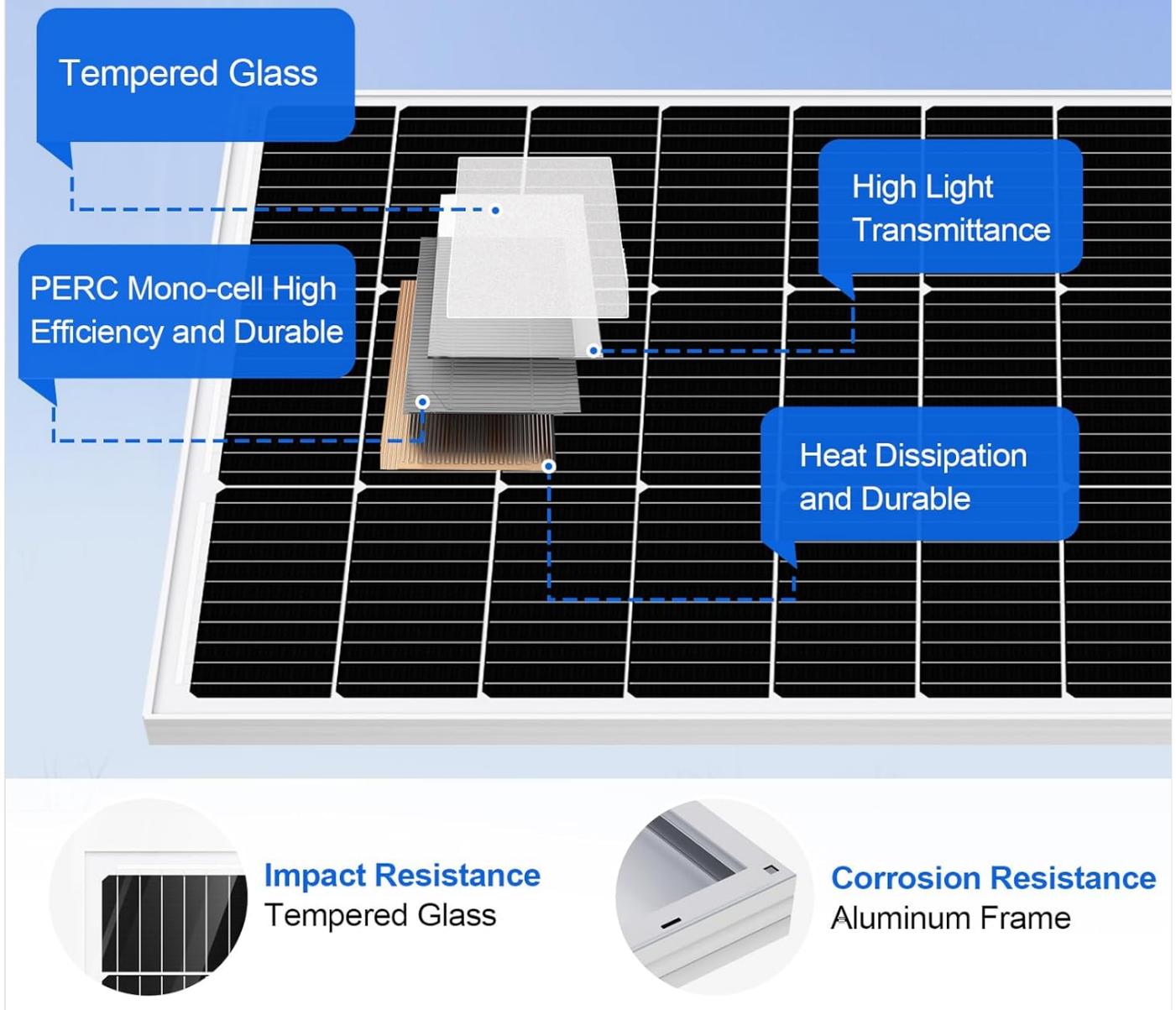


Figure 3: Solar panel durability and construction details.

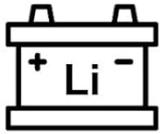
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Video 1: Demonstrates the installation process of the 200W Solar Kit by a customer, providing a real-world example of setup.

### 3. Battery and Inverter Connection

Connect the battery to the charge controller, ensuring correct polarity. The lithium iron phosphate battery offers a long cycle life. Then, connect the inverter to the battery. The 600W pure sine wave inverter converts DC power from the battery to AC power for your appliances.

# 10+ YEARS CONSTANT POWER



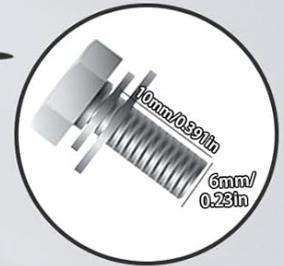
Lithium Iron Phosphate Battery



3000+ Cycle



BMS Protection



M6\*10 Terminal



Light Weight :  
12.65 lbs

Figure 4: Features and dimensions of the 12.8V 50Ah LiFePO4 battery.

# RUN THE LOADS STEADILY ALL TIME

Pure-Sine-Wave Technology



Figure 5: Inverter connections and supported loads.

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Video 2: A user manual video demonstrating the use and features of the upgraded 600W Solar Power Inverter.

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Video 3: Detailed installation guide for the 200W Complete Lithium Battery System.

## 4. Charge Controller Configuration

The 30A charge controller manages the power flow from the solar panels to the battery, preventing overcharging and over-discharging. It also provides various protections for the system.

# ALL-ROUND PROTECTIONS



Figure 6: All-round protections provided by the 30A Solar Power Controller.

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Video 4: Explains the configuration process for the 30A Charge Controller.

## 5. System Expansion

The ECO-WORTHY solar kit is designed to be expandable. You can add more solar panels and batteries to increase power generation and storage capacity as your needs grow.

# 100W 12V MONO SOLAR PANEL

Rated Power	100W
Solar Cell	Monocrystalline
Maximum/Peak Voltage(Vmp)	19.5V
Open Circuit Voltage(Voc)	22.70V
Short circuit current(Isc)	5.55A
Maximum current(Imp)	5.13A
Output Tolerance	±3%
Temperate coefficient of Isc	(010+/-0.01)%/°C
Temperate coefficient of Voc	-(0.38+/-0.01)%/°C
Temperature range	-40°C ~ +85°C
Frame	Aluminum alloy frame
Length of extension cable	90cm (2.95ft)
Size of extension cable	4mm <sup>2</sup> (11AWG) /MC4 Connector
Weight	14.55 lbs (6.6 kg)
Size	35.24*23*1.37in(895*585*35mm)

			
1.36KWh/Day 4h of Electricity	21% Conversion	2400Pa of Wind Load	5400Pa of Snow Load



Figure 7: Expandable solar kit options.

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Video 5: An overview of ECO-WORTHY's Solar System, highlighting its use for RV life and system expansion capabilities.

## OPERATING INSTRUCTIONS

Once installed, operating your ECO-WORTHY solar system is straightforward. The charge controller display provides real-time information about your system's status.

- **Monitoring:** The charge controller's LCD screen displays battery voltage, charging current, and load current.
- **Load Control:** The controller allows you to manage the DC load connected to it. Refer to the controller's specific manual for detailed load control settings.
- **Inverter Use:** To use AC appliances, ensure the inverter is switched ON. The inverter will convert the DC power from the battery to usable AC power. When not in use, turn off the inverter to conserve battery power.

## MAINTENANCE

Regular maintenance ensures the longevity and efficiency of your solar power system.

- **Solar Panels:** Regularly clean the surface of the solar panels to remove dust, dirt, and debris that can reduce efficiency. Use a soft cloth and water. Inspect for any physical damage or loose connections.
- **Battery:** While LiFePO4 batteries require minimal maintenance, periodically check the battery terminals for corrosion and ensure they are securely tightened. Avoid fully discharging the battery frequently to maximize its lifespan.
- **Connections:** Periodically inspect all wiring and connections for signs of wear, corrosion, or looseness. Ensure all components are securely mounted.
- **Ventilation:** Ensure the inverter and charge controller have adequate ventilation to prevent overheating. Keep vents clear of obstructions.

## TROUBLESHOOTING

Here are some common issues and their potential solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No power output from inverter	Inverter switch OFF; Low battery voltage; Overload; Loose connections	Turn inverter ON; Charge battery; Reduce load; Check and tighten connections
Battery not charging	Insufficient sunlight; Shaded panels; Faulty charge controller; Loose panel connections	Ensure panels receive full sun; Clear obstructions; Check controller status; Verify panel wiring
Charge controller display OFF	No power from battery; Reverse polarity connection	Check battery connections; Verify correct battery polarity (positive to positive, negative to negative)
Inverter fan constantly running	High ambient temperature; High load; Poor ventilation	Ensure adequate ventilation; Reduce load if possible; Relocate inverter to cooler area

If you encounter issues not listed here or if solutions do not resolve the problem, please contact ECO-WORTHY customer support.

## SPECIFICATIONS

- **Product Dimensions:** 35.24 x 23 x 1.37 inches; 46.8 Pounds
- **Item Model Number:** US-L02M100N-CWMZIUS600L50-2
- **Brand:** ECO-WORTHY
- **Material:** Aluminum
- **Efficiency:** High Efficiency
- **Manufacturer:** ECO-WORTHY

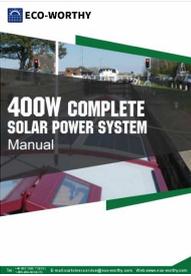
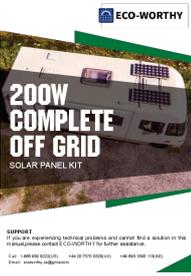
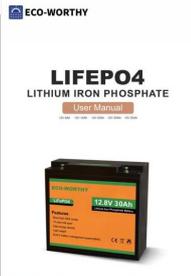
## WARRANTY AND SUPPORT

ECO-WORTHY products come with a manufacturer's warranty. For specific warranty details and to register your product, please refer to the official ECO-WORTHY website or the included user manual PDF.

For technical support, troubleshooting assistance, or parts replacement, please contact ECO-WORTHY customer service. You can often find contact information on the product packaging or the official brand website.

A detailed User Manual (PDF) is available for download: [User Manual PDF](#)

### Related Documents - US-L02M100N-CWMZIUS600L50-2

	<p><a href="#">ECO-WORTHY 400W Off-Grid Solar Power System Manual</a></p> <p>This manual provides comprehensive instructions for the ECO-WORTHY 400W Off-Grid Solar Power System. It covers safety precautions, product overview, detailed component descriptions, step-by-step installation guides, testing procedures, troubleshooting tips, maintenance recommendations, and support contact information.</p>
	<p><a href="#">ECO-WORTHY Solar &amp; Battery Products Catalog   Lithium Batteries, Solar Panels, Inverters</a></p> <p>Explore the comprehensive ECO-WORTHY product catalog featuring high-performance lithium batteries, efficient solar panels, versatile inverters, and solar charging solutions. Find specifications, applications, and system references for your renewable energy needs.</p>
	<p><a href="#">ECO-WORTHY 200W Complete Off-Grid Solar Panel Kit User Manual</a></p> <p>Comprehensive guide for installing and maintaining the ECO-WORTHY 200W Complete Off-Grid Solar Panel Kit, featuring monocrystalline panels, lithium battery, and pure sine-wave inverter for RVs, sheds, and homes.</p>
	<p><a href="#">ECO-WORTHY APP User Manual: Connect and Control Your Device via Bluetooth &amp; WiFi</a></p> <p>Comprehensive user manual for the ECO-WORTHY APP, guiding you through app installation, Bluetooth and WiFi connection, device management, and troubleshooting. Learn to connect your ECO-WORTHY device easily.</p>
	<p><a href="#">ECO-WORTHY LiFePO4 Lithium Iron Phosphate Battery User Manual</a></p> <p>User manual for ECO-WORTHY LiFePO4 Lithium Iron Phosphate batteries, covering specifications, charging methods, and troubleshooting for 12V 8Ah, 10Ah, 20Ah, 30Ah, and 50Ah models.</p>
	<p><a href="#">ECO-WORTHY 12V 600W Pure Sine Wave Off-Grid Inverter User Manual</a></p> <p>User manual for the ECO-WORTHY 12V 600W Pure Sine Wave Off-Grid Inverter, providing detailed information on safety instructions, product features, panel functions, indicator lights, fault codes, installation, grounding, DC and AC side connections, product parameters, remote control operation, and support.</p>