

Litime 36V 60Ah GC Battery

Litime 36V 60Ah LiFePO4 Lithium Battery Instruction Manual

Model: 36V 60Ah GC Battery

Brand: Litime

1. INTRODUCTION

Thank you for choosing the Litime 36V 60Ah LiFePO4 Lithium Battery. This battery is engineered for high performance and longevity, making it an ideal power solution for golf carts, trolling motors, RVs, and home backup systems. Featuring an integrated 120A Battery Management System (BMS) and Grade A cells, it offers robust protection and consistent power output. This manual provides essential information for safe installation, operation, maintenance, and troubleshooting to ensure optimal performance and extend the lifespan of your battery.

2. KEY FEATURES

- **Optimized for Golf Carts:** Designed as a direct drop-in replacement for AGM batteries in golf carts, supporting motors up to 3kW with a maximum continuous power output of 4.6kW. Provides 2304Wh of energy for extended runtime.
- **Lightweight and Easy Installation:** Weighs approximately 43.6 pounds, significantly lighter than traditional lead-acid batteries, improving vehicle maneuverability and reducing wear. Its compact size (8.46 x 8.15 x 20.94 inches) allows for easy fitting in most golf cart battery compartments without complex wiring.
- **Exceptional Longevity:** Utilizes 2C Rate Grade A LiFePO4 cells, offering over 4000 deep cycles at 100% Depth of Discharge (DOD). This ensures a long service life, typically exceeding 10 years, and a reliable energy storage solution.
- **Advanced BMS Protection:** Built-in 120A BMS provides comprehensive protection against over-charge, over-discharge, over-current, short circuits, and high-temperature cutoff, ensuring safe and stable operation.
- **Consistent Power Output:** Features a flat voltage curve, maintaining stable power delivery throughout its discharge cycle, which is crucial for motors and sensitive electronics.
- **Fast Recharge Capability:** Supports up to 60A charging current, allowing for rapid recharging.

3. WHAT'S IN THE BOX

Upon unboxing, please verify that all components are present and undamaged:

- 1 x Litime 36V 60Ah LiFePO4 Lithium Battery

Note: Additional accessories such as chargers or monitoring displays may be shipped separately or purchased independently.

Video: *Unboxing the Litime 36V 100Ah LiFePO4 Battery. This video demonstrates the typical unboxing experience and included items for a similar Litime battery model.*

4. TECHNICAL SPECIFICATIONS

Specification	Value
Model	36V 60Ah GC Battery
Brand	Litime
Voltage	36 Volts
Battery Cell Composition	Lithium-Phosphate (LiFePO4)
Battery Capacity	60 Amp Hours (Ah)
Integrated BMS	120 Amps (A)
Energy	2304 Wh
Max Continuous Power Output	4.6 kW
Cycle Life	4000+ cycles @ 100% DOD
Item Weight	43.6 pounds
Product Dimensions (L x W x H)	20.94 x 8.15 x 8.46 inches
Terminal Specifications	M8 Bolts

DESIGN SPECIFICALLY FOR **GOLF CARTS** ($\leq 3000W$)

Lighter, Smaller & More Powerful Replacement for Your Lead Acid

ZOOM IN DETAIL



Terminal Specifications

M8 Bolts

Weight

43.56 lbs

Product Size

L20.94 x W8.15 x H8.46 inch

8.46 in

20.94 in

8.15 in

Image: Litime 36V 60Ah LiFePO4 Battery with key dimensions (20.94 x 8.15 x 8.46 inches) and weight (43.56 lbs) highlighted, along with M8 bolt terminal specifications.

5. SAFETY GUIDELINES

Adhering to these safety guidelines is crucial for preventing damage to the battery, property, and personal injury:

- Always wear appropriate personal protective equipment (PPE), including safety glasses and insulated gloves, when handling the battery.
- Ensure the battery is installed in a well-ventilated area, away from flammable materials, heat sources, and direct sunlight.
- Do not short-circuit the battery terminals. This can cause severe damage to the battery and pose a fire hazard.
- Use only Litime-approved chargers specifically designed for LiFePO4 batteries. Using incompatible chargers can lead to overcharging, overheating, and damage.
- Avoid dropping, puncturing, or subjecting the battery to severe impact.
- Do not disassemble, modify, or attempt to repair the battery. Unauthorized modifications can be dangerous and void the warranty.

- Keep the battery away from children and pets.
- In case of fire, use a Class D fire extinguisher. Water or ABC extinguishers may not be effective and could worsen the situation.
- If the battery emits smoke, heat, or an unusual odor, immediately disconnect it from any loads or chargers and move it to a safe, open area.

6. INSTALLATION

The Litime 36V 60Ah LiFePO4 battery is designed for straightforward installation as a drop-in replacement for lead-acid batteries in compatible systems. Follow these general steps:

1. **Preparation:** Ensure the vehicle or system is turned off and disconnected from any power sources. Wear appropriate PPE.
2. **Remove Old Batteries:** Carefully disconnect and remove the existing lead-acid batteries. Note the wiring configuration before removal.
3. **Position the Litime Battery:** Place the Litime 36V 60Ah battery in the designated battery compartment. Its compact size should fit most standard golf cart trays.
4. **Secure the Battery:** Use appropriate straps or mounting hardware to secure the battery firmly in place to prevent movement during operation.
5. **Connect Wiring:** Connect the positive (+) and negative (-) terminals of the Litime battery to your system's corresponding positive and negative cables. Ensure all connections are tight and secure. Use M8 bolts for terminals.
6. **Verify Connections:** Double-check all wiring to ensure correct polarity and secure connections. Incorrect wiring can cause severe damage.

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Video: Installation of Litime 36V 60Ah LiFePO4 Battery for Golf Cart. This video demonstrates the physical installation and wiring process for the battery in a golf cart.



Image: A Litime 36V 60Ah LiFePO4 battery securely installed in the battery compartment of a golf cart, demonstrating its compact fit.

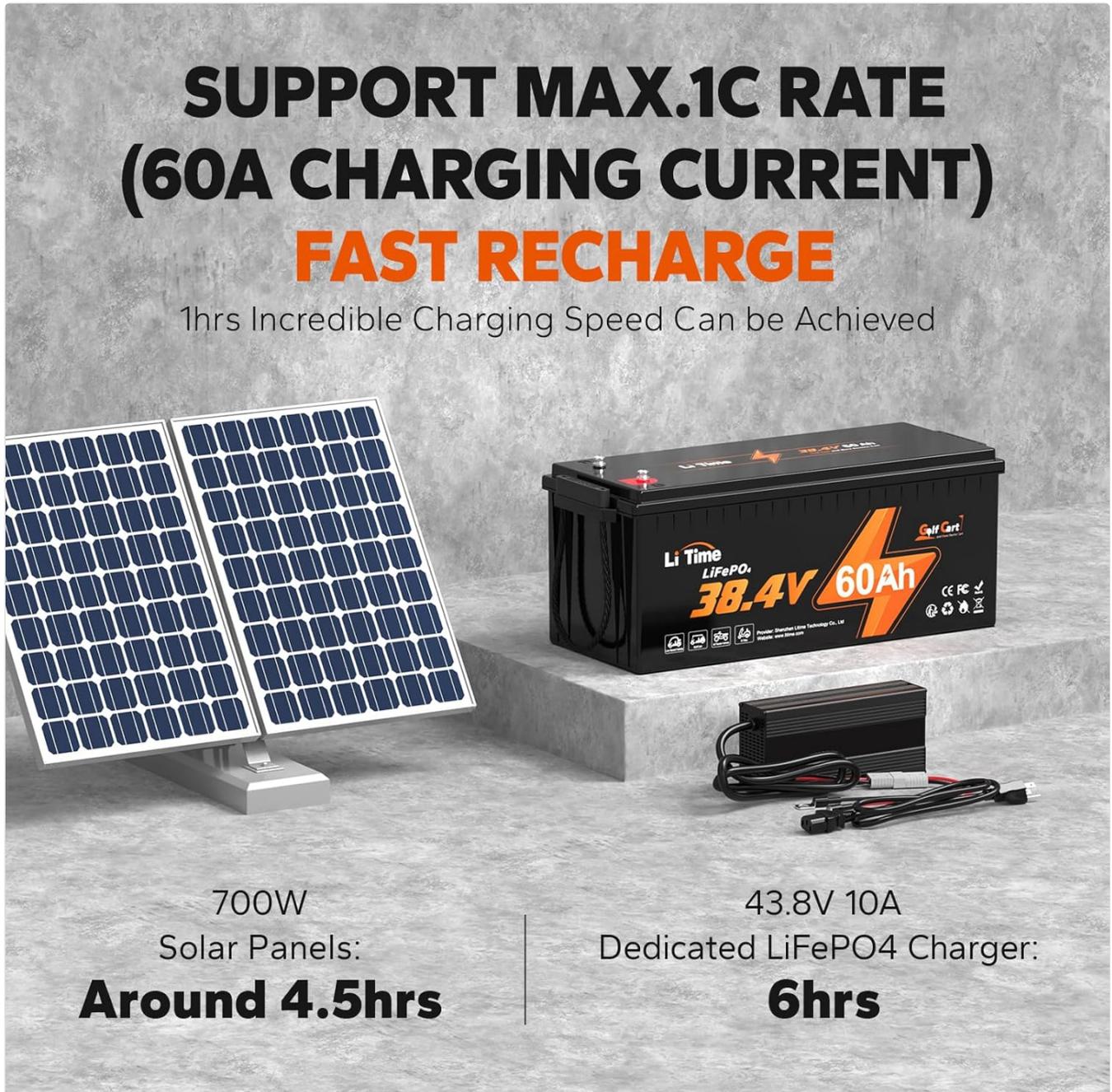
7. CHARGING

To charge your Litime 36V 60Ah LiFePO4 battery, follow these instructions:

1. **Use Compatible Charger:** Always use a Litime-approved LiFePO4 charger with the correct voltage and current specifications (e.g., 36V LiFePO4 charger).
2. **Connect Charger:** Plug the charger into a power outlet, then connect the charger's output cable to the battery's charging port or terminals. Ensure correct polarity.
3. **Monitor Charging:** The battery's integrated BMS will manage the charging process. Some chargers may have indicator lights to show charging status.
4. **Charging Time:** The 60Ah capacity and 60A max charging current allow for relatively fast charging. Actual time may

vary based on charger output and battery's state of charge.

5. **Low-Temperature Charging Protection:** The BMS includes low-temperature cutoff protection. Charging will stop if the battery temperature drops below 32°F (0°C) and resume when it rises above 41°F (5°C) to prevent damage.



**SUPPORT MAX.1C RATE
(60A CHARGING CURRENT)
FAST RECHARGE**

1hrs Incredible Charging Speed Can be Achieved

700W
Solar Panels:
Around 4.5hrs

43.8V 10A
Dedicated LiFePO4 Charger:
6hrs

The image features a black rectangular battery with 'Li Time LiFePO4 38.4V 60Ah' printed on its side. To the left, two blue solar panels are mounted on a silver stand. To the right, a black rectangular charger with various cables is shown. The background is a textured grey wall.

Image: Illustration of charging options for the Litime 36V 60Ah LiFePO4 battery, showing compatibility with 700W solar panels (approx. 4.5 hours) and a 43.8V 18A dedicated LiFePO4 charger (approx. 6 hours).

8. OPERATING

Once installed and charged, your Litime 36V 60Ah LiFePO4 battery is ready for use. Here are general operating guidelines:

- **Initial Activation:** If the battery is in a deep sleep state (0V), it may require a brief charge (3-10 seconds) from a compatible charger to activate the BMS and power on.
- **Power On/Off:** The battery will typically power on automatically when a load is applied or a charger is connected. For models with a power button, press and hold to turn on/off.
- **Monitoring:** For models equipped with Bluetooth, download the Litime App to monitor real-time battery status, including State of Charge (SOC), voltage, current, temperature, and cycle times.
- **Discharge:** The battery provides a stable voltage output throughout its discharge cycle, ensuring consistent

performance for your application.

- **Low-Temperature Discharging Protection:** The BMS will stop discharging if the battery temperature drops below -4°F (-20°C) to protect the cells.

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Video: Bluetooth Connection Guide and Troubleshooting for Litime Batteries. This video provides instructions on how to connect your Litime battery to the mobile app for real-time monitoring and control.

9. MAINTENANCE

The Litime LiFePO₄ battery requires minimal maintenance compared to lead-acid batteries. Follow these simple steps to ensure its longevity:

- **Regular Inspection:** Periodically check the battery terminals for cleanliness and tightness. Ensure there is no corrosion or loose connections.
- **Keep Clean:** Wipe the battery casing with a dry, soft cloth to remove dust and debris. Avoid using harsh chemicals or abrasive materials.
- **Storage:** If storing the battery for an extended period, ensure it is charged to approximately 50-70% State of Charge (SOC) and stored in a cool, dry place. Disconnect it from all loads.
- **Avoid Extreme Temperatures:** While the battery has temperature protection, prolonged exposure to extreme heat or cold can affect its performance and lifespan.
- **No Watering Required:** Unlike lead-acid batteries, LiFePO₄ batteries are maintenance-free and do not require watering.



Image: A Litime 36V 60Ah LiFePO₄ battery stored on a shelf, illustrating proper storage conditions in a cool, dry environment.

10. TROUBLESHOOTING

If you encounter issues with your Litime 36V 60Ah LiFePO₄ battery, refer to the following common problems and solutions:

- **Battery Not Powering On:**
 - Check if the battery is in a deep sleep state. Connect a compatible LiFePO₄ charger for 3-10 seconds to activate the BMS.
 - Ensure all connections are secure and correct polarity is maintained.
 - Verify the charger is functioning correctly and providing the appropriate voltage.
- **BMS Tripping/Battery Shutting Off:**
 - This indicates a protection event (e.g., over-current, over-discharge, over-temperature). Reduce the load or allow the battery to cool down.
 - If the BMS trips due to over-discharge, recharge the battery immediately.
 - Ensure the motor or load does not exceed the battery's maximum continuous discharge current (120A) or peak

current (400A for 1 second).

- **Battery Not Charging:**

- Check if the battery temperature is below 32°F (0°C). Charging will be disabled in cold conditions. Move the battery to a warmer environment.
- Verify the charger is specifically designed for LiFePO4 batteries and is functioning correctly.
- Ensure all charging cables are securely connected.

- **Inaccurate SOC Reading (if using external monitor):**

- Ensure the external monitor is correctly calibrated and connected.
- If using the Litime App, ensure Bluetooth is connected and the app is updated.

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Video: How to activate a 'dead' Litime battery. This video provides a visual guide on how to reactivate a deeply discharged Litime battery.

11. WARRANTY & SUPPORT

Litime stands by the quality of its products. Your Litime 36V 60Ah LiFePO4 battery comes with a manufacturer's warranty. Please refer to the warranty card included with your purchase for specific terms and conditions.

For technical support, troubleshooting assistance, or any product-related questions, please contact Litime customer service. Our professional technical support team is available to provide fast feedback within 24 hours.

- **Customer Service:** Refer to the contact information provided on the product packaging or Litime's official website.