



# 100AH 12V LiFePO4 Battery

## Technology

### FEATURES:

- Smart BMS(Battery Management System)**  
 Built-in BMS to protect the battery from overcharge, over temperature, over discharge, over current, low temperature and short circuit.
- Superior Thermal Stability & Safety**  
 LiFePO4 chemistry resists thermal runaway and combustion risks, even under extreme conditions, ensuring unmatched operational safety for high-stress environments.
- Extended Cycle Life**  
 With over 3,000-5,000 charge-discharge cycles (80% capacity retention), these batteries deliver long-term reliability, drastically reducing replacement frequency and lifecycle costs.
- High Energy Density**  
 Compact and lightweight design maximizes energy storage capacity per unit, ideal for space-constrained applications
- Eco-Friendly Composition**  
 Free from toxic heavy metals (e.g., cobalt, lead), LiFePO4 batteries align with global sustainability standards (RoHS compliant) and enable easier recycling.
- Low Self-Discharge Rate**  
 Minimizing energy waste and ensuring readiness for seasonal or emergency use.
- Wide Temperature Tolerance**  
 Performs reliably in extreme climates (-20°C to 55°C / -4°F to 131°F), making it adaptable for outdoor solar storage, marine, and automotive applications.
- SOC And Status LED Lights**  
 LED display screen that provides real-time monitoring of the State of SOC and battery status. It allows you to easily track the battery's performance and health. With clear visual indicators, you can optimize usage and maintenance, making it an excellent choice for a variety of applications, from RVs to solar energy systems.
- BCI Group 27 Size, Universal Fit**  
 ECO-WORTHY 12V 100Ah is crafted to meet the BCI battery size standard "Group 27". It's also a perfect replacement for Group 27 lead-acid and AGM, SLA batteries. Just simply replace your Group27 battery without the hassle of modifying your existing electrical system or wiring.

| Lithium Iron Phosphate (LiFePO4)      |                                                                                                                                                                            |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nominal Voltage                       | 12.8V                                                                                                                                                                      |
| Rated Capacity                        | 100Ah                                                                                                                                                                      |
| Charge Method                         | CC/CV                                                                                                                                                                      |
| Charge Voltage                        | 14.6V                                                                                                                                                                      |
| Bulk/Absorption Voltage               | 14.6V                                                                                                                                                                      |
| BMS Balancing Voltage                 | Any cell voltage $\geq 3.45V$<br>Max Voltage difference between cells $> 30mV$<br>In Charging                                                                              |
| Equalize Voltage                      | Not applicable                                                                                                                                                             |
| Float Voltage *                       | Not applicable                                                                                                                                                             |
| Temperature Compensation              | No/Disable                                                                                                                                                                 |
| Charge Cut-off Voltage                | 14.6V                                                                                                                                                                      |
| Discharge Cut-off Voltage             | 10V                                                                                                                                                                        |
| Recommended Charge Current            | 50A                                                                                                                                                                        |
| Recommended Discharge Current         | 50A                                                                                                                                                                        |
| Maximum Continuous Charge Current     | 100A                                                                                                                                                                       |
| Maximum Continuous Discharge Current  | 100A                                                                                                                                                                       |
| Peak Current                          | 120A(10s)                                                                                                                                                                  |
| WiFi                                  | No                                                                                                                                                                         |
| Bluetooth                             | Yes                                                                                                                                                                        |
| Communication                         | No                                                                                                                                                                         |
| Self Heating                          | No                                                                                                                                                                         |
| Protection Rating                     | IP65                                                                                                                                                                       |
| BMS Protection                        | <ul style="list-style-type: none"> <li>Over and Low voltage</li> <li>Charge and Discharge Over current</li> <li>Short circuit</li> <li>High and Low temperature</li> </ul> |
| Internal Resistance                   | $\leq 10m\Omega$                                                                                                                                                           |
| BMS Leakage Current                   | $\leq 10mA$                                                                                                                                                                |
| Charge Temperature Range              | 32°F (0°C) to 131°F (55°C)                                                                                                                                                 |
| Discharge Temperature Range           | -4°F (-20°C) to 131°F (55°C)                                                                                                                                               |
| Storage Temperature 1 week            | -4°F (-20°C) to 149°F (65°C)                                                                                                                                               |
| Storage Temperature 1 month           | -4°F (-20°C) to 113°F (40°C)                                                                                                                                               |
| Storage Temperature 1 year            | -4°F (-20°C) to 77°F (25°C)                                                                                                                                                |
| Humidity Operating:                   | 5% to 90 % RH                                                                                                                                                              |
| Humidity Storage:                     | 35% to 85% RH                                                                                                                                                              |
| Certifications: MSDS; UN38.3; CE; PSE |                                                                                                                                                                            |
| Cycle Life                            | 4000 cycles                                                                                                                                                                |

Max Connected  
IN Parallel  
4 Units

Max Connected  
IN Series  
4 Units

# Unit Dimensions



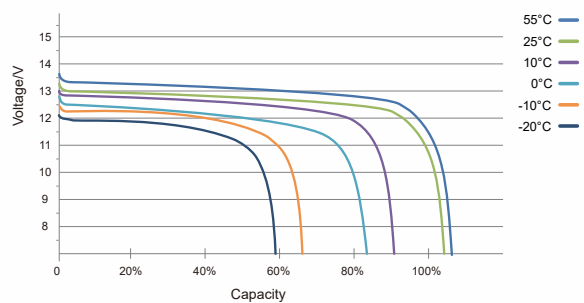
## Mechanical

|           |                     |
|-----------|---------------------|
| Length    | 11.81 in / 300 mm   |
| Width     | 6.89 in / 175 mm    |
| Height    | 8.66 in / 220 mm    |
| Weight    | 34.61 lbs / 15.7 kg |
| Terminals | M8 insert           |

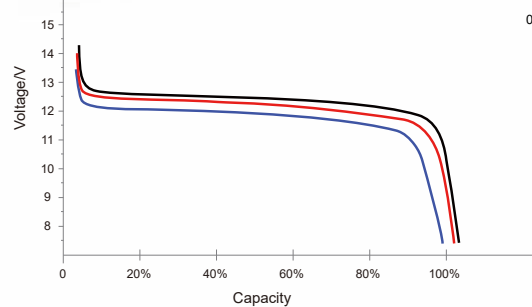
## Materials

|                |        |
|----------------|--------|
| Case and Cover | ABS    |
| Color          | ORANGE |

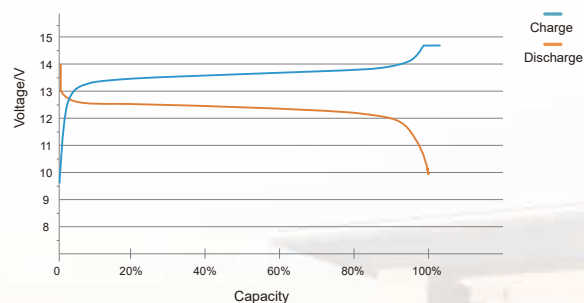
### Discharge Characteristics At Various Temperatures



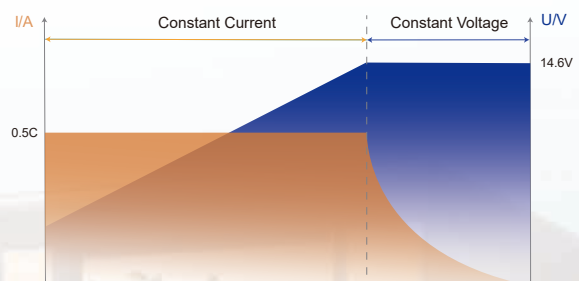
### Discharge Characteristics At Various Rates



### Charge & Discharge Voltage Characteristics



### LiFePO4 Battery Charging Logic @0.5C



## PLEASE NOTE

- ★ Lithium batteries ship under Class 9 Dangerous Goods PI 965 Section IA. Please contact your carrier company to determine their requirements for shipping. MSDS Sheets are available upon request.
- ★ Float charging is not applicable to lithium iron phosphate batteries, long-term float charging will accelerate battery aging or damage. If you have to set the float voltage for MPPT/PWM charge controller in solar system, we suggest to set it to (12V Battery)13.2V-13.6V, (24V Battery)26.4V-27.2V, (36V Battery)39.6V-40.8V, (48V Battery)52.8V-54.4V.