



24V 100Ah

LITHIUM-ION BATTERY PRODUCT SPECIFICATION

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24V100Ah LiFePO4 Battery



1. Overview

LFP-24100L is 24V100Ah Lithium iron phosphate battery module which designed for UPS, solar system, portable devices, energy storage and medical cart applications. This battery module integrated with intelligent BMS inside, has big advantages on safety, cycle life, energy density, temperature range and environmental protection. This product specification describes the type, size, structure, electrochemistry performance, service life, and BMS characteristics.

2. Advantages

The battery module consists of single LFP cells, wire, BMS and container.

- Packed with high performance LFP single cell, long life, safety and wide temperature range
- High energy density, small size, light weight, no pollution;
- High efficiency, fast charging;
- Built-in BMS, protect voltage, current, temperature in whole process
- Standard VRLA battery case , can replace the VRLA battery directly
- Customize dimension and capacity, Support maximum 4 batteries in series
- 10 years design life, Stable performance, maintenance-free

3. Application scenario



Sailboat



RV



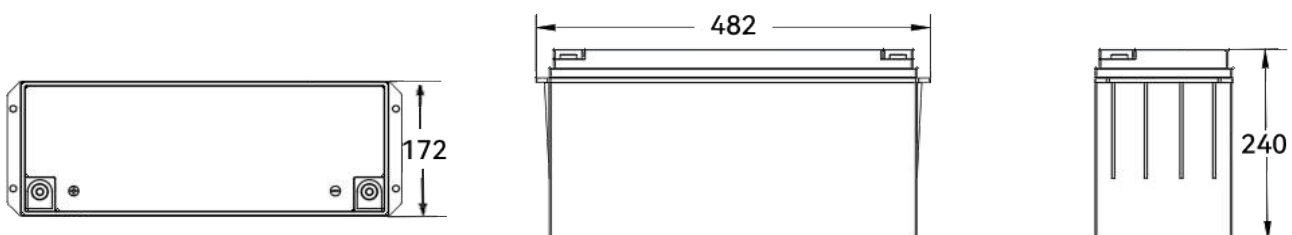
Residence



signal tower

4. Battery module specification

NO.	Item	Specification	Notes	
1	Typical Capacity	100Ah	0.2C charge and discharge for cut-off voltage	
	Minimum Capacity	96Ah		
2	Initial Impedance	Pack $\leq 50\text{m}\Omega$	After standard charge, AC1KHz test	
3	Weight	Approx: 19KG		
4	Nominal Voltage	25.6V		
5	Charge Limit Voltage	29.2V		
6	Discharge Cut-Off Voltage	21.6V		
7	Standard Charge Current	20A	0°C~45°C	
8	Maximum Charge Current	100A	10°C~45°C	
9	Standard Discharge Current	20A	-10°C~60°C	
10	Maximum Discharge Current	100A	10°C~60°C	
11	Unit Voltage	21.6V-29.2V	40%-60%	
12	Operating Temperature	0°C~45°C	Charging	
		-20°C~60°C	Discharging	
	Storage Temperature	-20°C~ +60°C	less than 1 month	Recommended storage temperature: 25°C, at the shipment state
		-10°C~ 40°C	less than 3 months	
13	Recoverable Capacity	Constant current 0.2C charge to 29.2V,, then constant voltage 29.2V charge to current declines to 0.01C, rest for 10min, constant current 0.2C discharge to 21.6V, rest for 10min. Repeat above steps 3 times, recording the maximum capacity		
14	Cycle Performance	Under the temperature of 23±20°C, charge the batter with 0.2C, when the voltage reaches up to 29.2V charge with constant voltage until the charge current $\leq 0.02\text{C}$, then stop charging, then rest for 0.5h, then discharge with 0.2C to 21.6V. Cycle with the above mode, when the continuous discharge time <3H stop cycling. The cycle life is required ≥ 2000 times.		
15	Storage Humidity	$\leq 75\% \text{ RH}$		
16	Appearance	Without distortion and leakage		
17	Standard Testing Condition	Temperature: 25±2°C Humidity : $\leq 75\% \text{ RH}$ Atmospheric Pressure: 86-106 Kpa		



5. BMS specification

BMS provides complete management and protection for the battery.

- Voltage warning and protection for module and each single cell.
- Current warning and protection, and the maximum operating current can be customized.
- Temperature warning and protection, 4 sensors for battery pack and 1 sensor for BMS.
- Battery module SOC and SOH calculation, display the accurate battery status.
- Pre-charge/discharge logic, make sure safety use in whole process.
- Switch-off mode, sleep mode, and operating mode, different mode for different condition.

BMS parameters.

Item	Details	Condition
Cell Over-Charge Protection	Over-Voltage Protection Voltage	3.65±0.050V
	Over-Charge Protection Delay Time	Typical:2S
	Over-Charge Protection Recovery Voltage	3.45V±0.050V
Cell Over-Discharge Protection	Over-Discharge Protection Voltage	2.7±0.1V
	Over-Discharge Protection Delay Time	Typical:2.0s
	Over-Discharge Protection Recovery Voltage	2.8±0.1V or charge release
Over-Current	Charge Over-Current Protection	100A
	Charge Over-Current Detection Delay Time	10S
	Discharge Over-Current Protection	100A
	Discharge Over-Current Detection Delay Time	10S
Short Protection	Short Protection Current	1350A
	Protection Condition	External short circuit
	Protection Release Condition	Charging release
Temperature(T)	Charge High T Protection	65°C
	Charge High T Recover	55°C
	Discharge High T Protection	70°C
	Discharge High T Recover	60°C
	Charge Low T Protection	-5°C
	Charge Low T Recover	0°C
	Discharge Low T Protection	-20°C
	Discharge Low-T Recovery	-15°C
Alarm	It has over-temperature, over charge, under-voltage, over-current, short circuit alarm Function.	