



LAL-12V6AH-YP

Lithium Iron Phosphate (LiFePO4) Battery

Features

- ◆ Built-in automatic protection for over-charge, over discharge, over current and over temperature.
- ◆ Free of maintenance .
- ◆ Internal cell balancing.
- ◆ Lighter weight: About 40% ~50% of the weight of a comparable lead acid battery.
- ◆ Can be charged using most standard lead-acid charges .
- ◆ Wider temperature range:-20°C~60°C.
- ◆ Support for Series application expansion (up to 51.2V) and two in parallel.

Application

- ◆ Alarm
- ◆ Gate Motor
- ◆ Electric Fence

Warning

- ◆ Do not use in a UPS as this will void the warranty on the battery

Advantages of LifePO4 (Lithium iron phosphate

Lithium iron phosphate batteries (LiFePO4) offer lots of benefits Compared to leadacid batteries, namely: Longer life span, no maintenance, lightweight, improved discharge and charge efficiency.



Lithium has a long lifespan

Lithium iron phosphate batteries live up to 2000 cycles at 80 percent depth of discharge, without decreasing in performance. The average lifetime of lead acid is 150 - 200 cycles.

High Efficiency

Lithium iron phosphate batteries (LiFePO4) have 100% of their capacity available. Additionally, their fast charge and discharge rates cause them to be a great fit for all sorts of applications. Fast charging reduces any downtime and increases efficiency.

Lightweight

Lithium iron phosphate batteries (LiFePO4) offer high power density which causes lithium batteries to be relatively small and light. Compared to lead-acid batteries lithium provides great energy density and are at least half the mass.

No Active Maintenance

Lithium iron phosphate batteries (LiFePO4) don't require active maintenance to extend their service life. Also, the batteries show no memory effects and due to low self-discharge (<3% per month), you can store for months. Lead-acid batteries need to be cycled every 2 months as the acid will start to sulphate on the top of the battery and will start decreasing the life of the battery.



Lithium Iron Phosphate (LiFePO₄) Battery

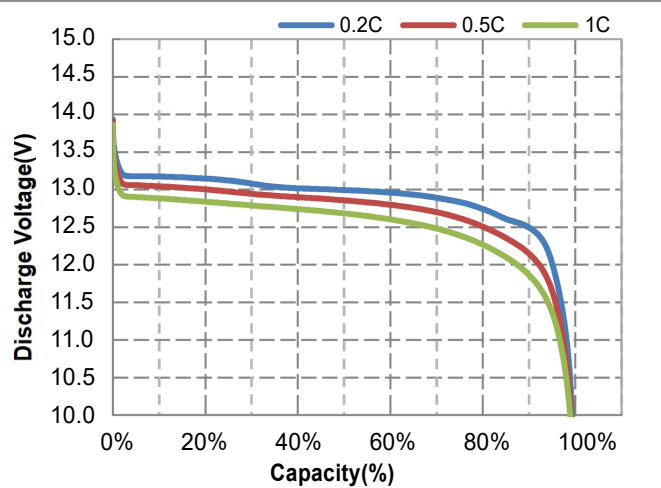
General Specification

Electrical Characteristics	Nominal Voltage	12.8V
	Nominal Capacity	6Ah@0.2C
	Energy	76.8Wh
	Internal Resistance	≤50mΩ
	Cycle Life	2000 Cycles @ 0.2C Charging/Discharging ,Until 70% Capacity
	Cell Rating	1C
	Self Discharge	≤3.5% per month at 25℃
Standard Charging	Max.Charging Voltage	14.0~14.6V
	Charging Mode	At 0℃~45℃ temperature, charged to 14.6V at a constant current of 0.2C, and then,changed continuously with constant voltage of 14.6V until the current was not more than 0.02C
	Charging Current	3A
	Max.Charging Current	6A
Standard Discharging	Discharging Current	3A
	Max. Continuous Current	6A
	Max.Pulse Current	10A(<3S)
Operating Condition	Discharging Cut-off Voltage	10.0
	Charge Temperature	0℃ to 45℃ (32°F to 113°F) @60±25% Relative Humidity
	Discharge Temperature	-20℃ to 60℃ (-4°F to 140°F) @60±25% Relative Humidity
	Storage Temperature	0℃ to 45℃ (32°F to 113°F) @60±25% Relative Humidity
Structure	Water Dust Resistance	IP55
	Cell & Format	IFR32700 N60,4S1P
	Casing	Plastic
	Dimension(L*W*H*TH)	152*65*104mm
	Weight	Approx. 0.7Kg
	Terminal	F1

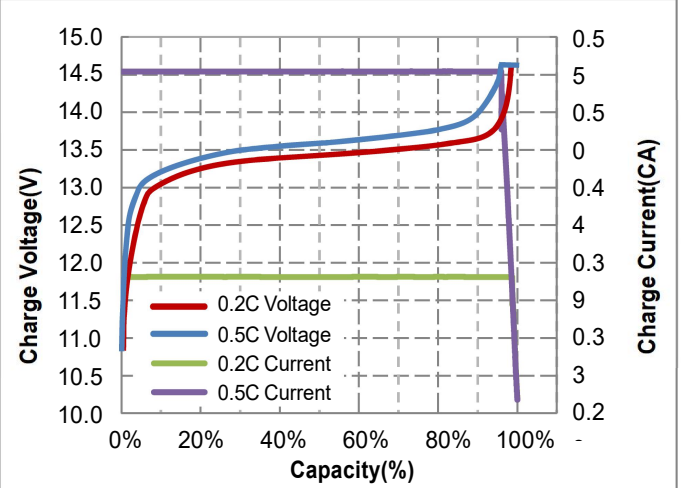


Lithium Iron Phosphate (LiFePO₄) Battery

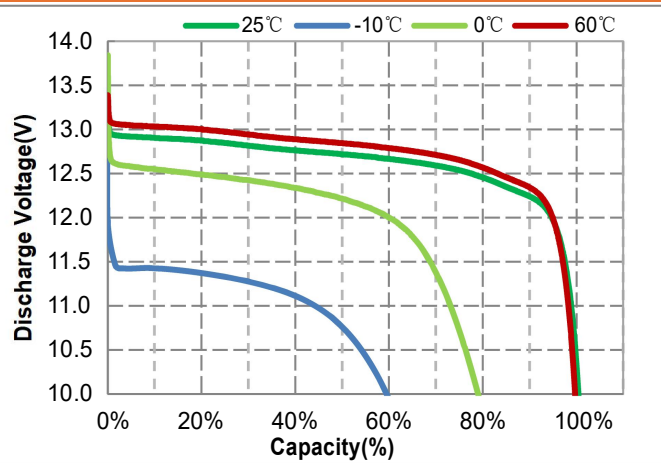
Different Rate Discharge Curve @25°C



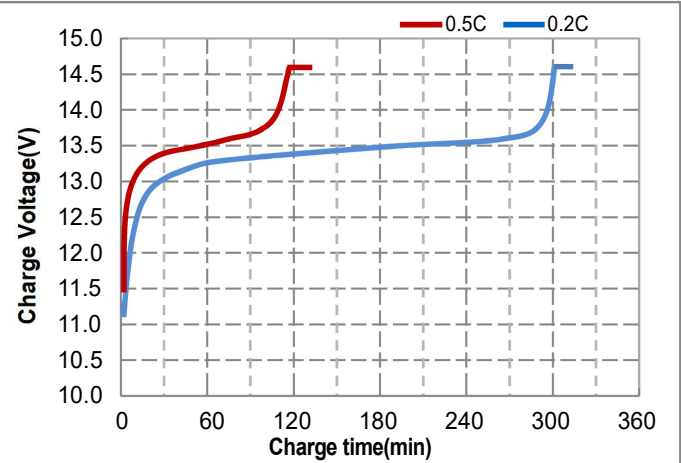
Charge Characteristics of capacity-voltage@0.2C&0.5C, 25°C



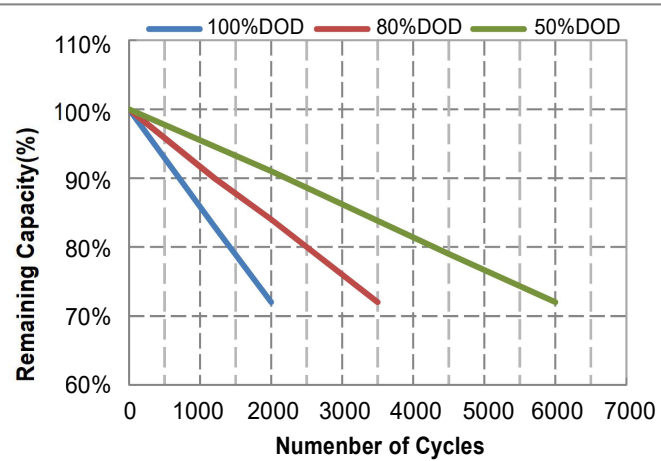
Different Temperature Discharge Curve @0.5C, 25°C



Charge Characteristics of time-voltage@0.2C&0.5C, 25°C



Different DOD Discharge Cycle Life Curve @0.2C, 25°C



Open circuit voltage VS SOC% @25°C

