Lithium Iron Phosphate (LiFePO4) Battery
PB.LI.12-50D

Features of LiFePO4 Battery

- **Longer Cycle Life:** Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- **Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement for lead acid batteries.
- **Higher Power**: Delivers twice power of lead acid battery, even high discharge rate, while maintaining high energy capacity.
- **Wider Temperature Range**: -20℃~60℃.
- **Superior Safety:** Lithium Iron Phosphate chemistry eliminates the risk of explosion or combustion due to high impact, overcharging or short circuit situation.
- **Increased Flexibility:** Modular design enables deployment of up to four batteries in series and up to ten batteries in parallel.



BMS Specification

- Overcharge detection function
- Over discharge detection function
- Over current detection function
- Temperature protection
- Short detection function
- Balance function

Application

- Electric vehicles, electric mobility
- Solar/wind energy storage system
- UPS, backup power
- Telecommunication
- Medical equipment
- Lighting

Specification

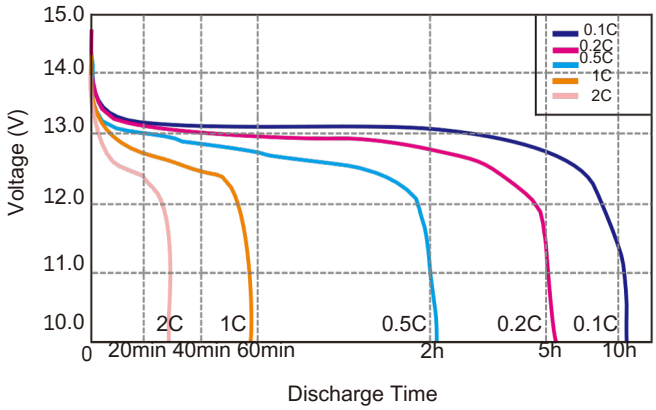
Electrical Characteristics	Nominal Voltage	12.8V
	Nominal Capacity	50Ah
	Energy	640Wh
	Internal Resistance	≤ 20mΩ
	Cycle Life	＞3000cycles @100%DOD
	Months Self Discharge	＜3%
	Efficiency of Charge	100%@0.2C
	Efficiency of Discharge	96~99%@0.5C
Standard Charge	Charge Voltage	14.6±0.1V
	Charge Mode Charge	0.2C to 14.6V,then 14.6V,charge current to 0.02C(CC/CV)
	Current	25A
	Max. Charge Current	50A
	Charge Cut-off Voltage	14.6V±0.1V
Standard Discharge	Continuous Current	50A
	Max. Pulse Current	150A(<3S)
	Discharge Cut-off Voltage	10V
Environmental	Charge Temperature	0 ℃ to 45 ℃ (32F to 113F) @60±25% Relative Humidity
	Discharge Temperature	-20 ℃ to 60 ℃ (-4F to 140F) @60±25% Relative Humidity
	Storage Temperature	0 ℃ to 40 ℃ (32F to 104F) @60±25% Relative Humidity
	Water Dust Resistance	IP65
Mechanical	Cell & Method	3.2V 50Ah 4S1P
	Shell material	ABS
	Dimensions (in./mm.)	197*165*174mm±2mm
	Weight (lbs./kg.)	Approx: 7Kgs
	Terminal	M8
	Communication	Bluetooth 4.0
	Heating elements	Automatic heating in cold weather(Optional)

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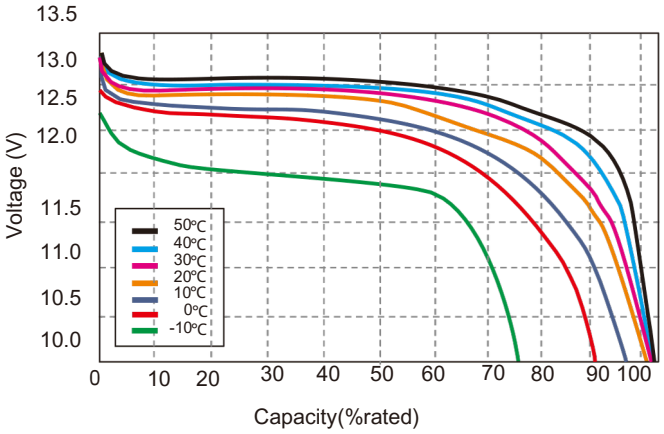
Different Rate Discharge Curve

Different Rate Discharge Curve @25℃



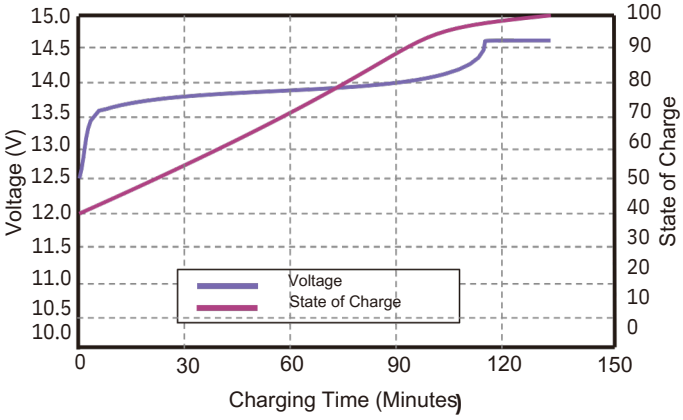
Different Temperature Discharge Curve

Different Temperature Discharge Curve @0.5C



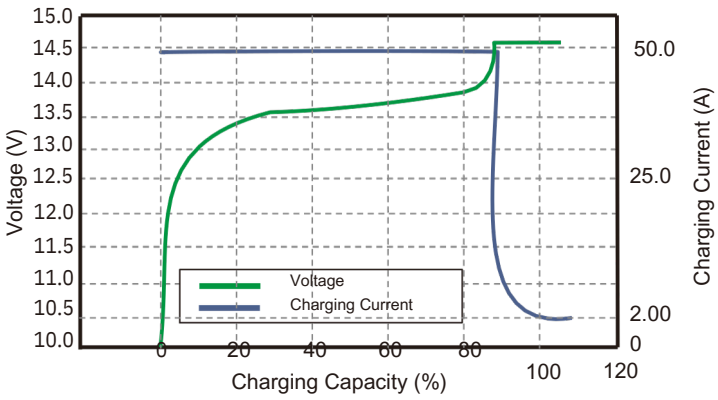
State of Charge Curve

State of Charge Curve @0.5C 25℃



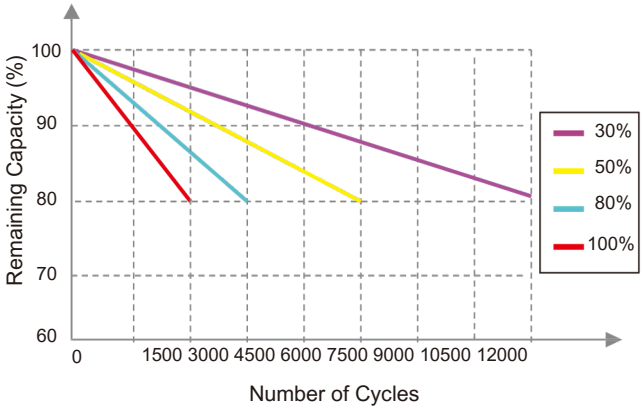
Charging Characteristics

Charging Characteristics @0.5C 25℃



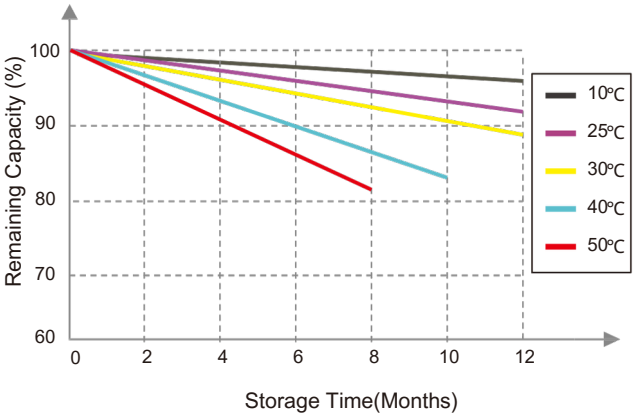
Cycle Life Curve

Different DOD Discharge Cycle Life Curve @1C



Self Discharge Characteristics Curve

Different Temperature Self Discharge Curve



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