

EXTRACELL Lithium Iron Phosphate (LiFePO₄) Battery

ELFP12.8-100

Features of LiFePO₄ Battery

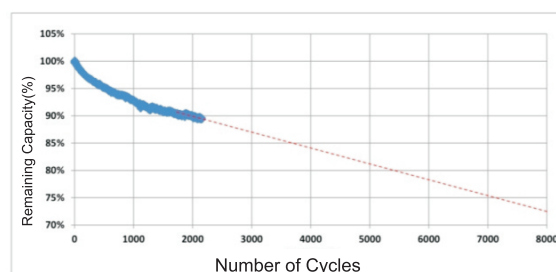
- **Longer Cycle Life:** Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- **Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement 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°C~60°C.
- **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.



Application

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

Cycle Life Curve



Specification

Electrical Characteristics	Nominal Voltage	12.8V
	Nominal Capacity	100Ah (C ₅ , 25°C)
	Energy	1280Wh
	Internal Resistance	≤ 150mΩ
	Cycle Life	> 6000cycles@0.2C
	Months Self Discharge	<3%
	Efficiency of Charge	100% @0.2C
	Efficiency of Discharge	96~99% @1C
Standard Charge	Charge Voltage	14.6±0.2V
	Charge Mode	0.2C to 14.6V, then 14.6, charge current 0.02C(CC/CV)
	Charger Current	20A
	Max. Charge Current	100A
	Charge Cut-off Voltage	14.8V±0.2V
Standard Discharge	Continuous Current	20A
	Max. Pulse Current	300A(<3s)
	Discharge Cut-off Voltage	10.5V
Environmental	Charge Temperature	0°C~45°C(32°Fto113°F)@60±25% Relative Humidity
	Discharge Temperature	-20°C~60°C(-4°Fto140°F)@60±25% Relative Humidity
	Storage Temperature	0°C~40°C(32°Fto104°F)@60±25% Relative Humidity
	Water Dust Resistance	
Mechanical	Cell & Method	3.2V100AH-4S1P (PRISMATIC CELL)
	Plastic Case	ABS
	Dimensions (in./mm.)	330*173*220 mm
	Weight (lbs./kg.)	10.3Kg
	Terminal	M8
	Protocol (optional)	NO
	BMS	4S100A

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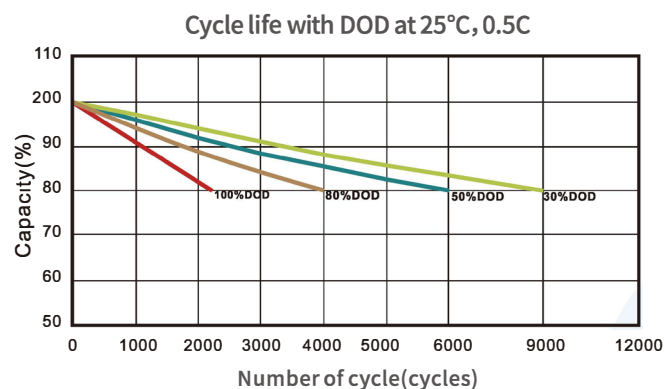
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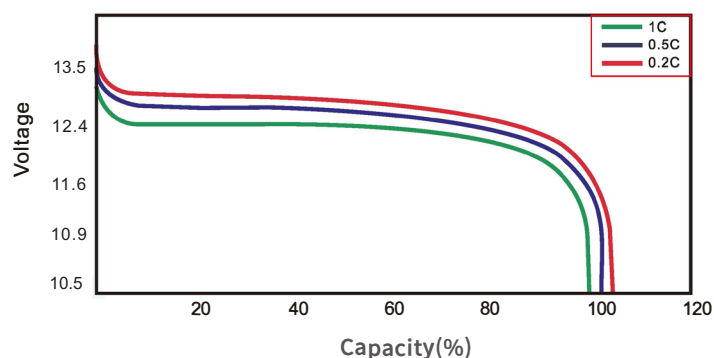
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Model Performance Diagrams

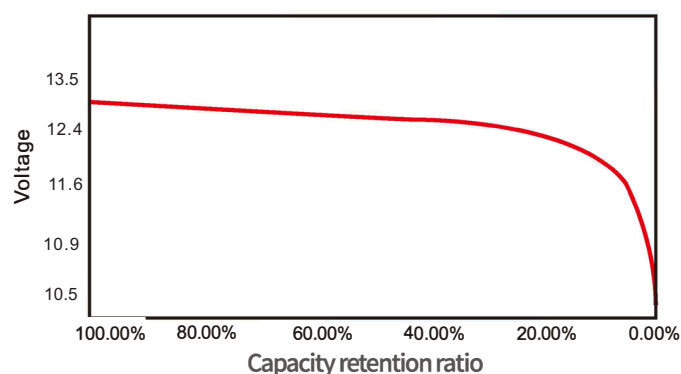
Number of Cycles Vs. DOD



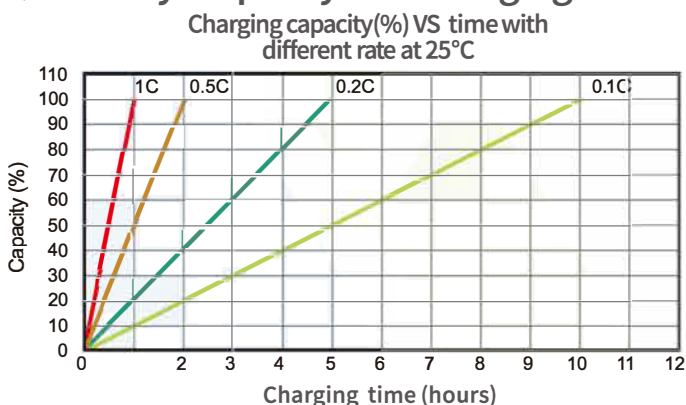
Discharge Performance at R.T.



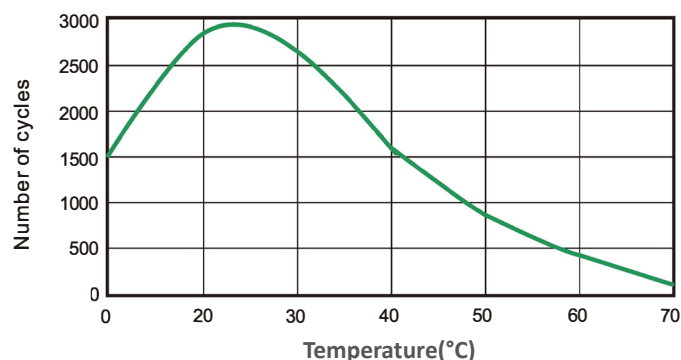
Battery Capacity (C) VS. Open Circuit Voltage (OCV)



Battery Capacity Vs. Charging Time



Cycle Life in Relation to Temperature



Temperature Effects on Capacity

