

## EXTRACELL Lithium Iron Phosphate (LiFePO<sub>4</sub>) Battery

# ELFP12.8-24

### Features of LiFePO<sub>4</sub> Battery

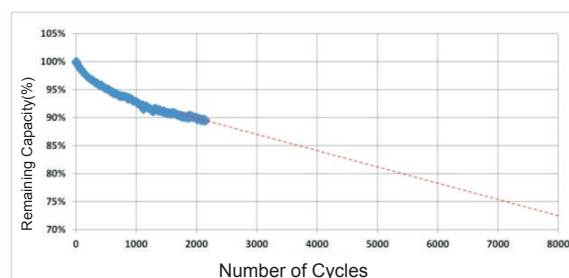
- **Longer Cycle Life:** Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- **Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement 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	24 Ah ( C <sub>5</sub> ,25°C)
	Energy	307.2Wh
	Internal Resistance	≤100mΩ
	Cycle Life	>2000 cycles@1 C100% DOD
	Months Self Discharge	<3%
	Efficiency of Charge	100%@0.2 C
	Efficiency of Discharge	96~99%@1 C
Standard Charge	Charge Voltage	14.6±0.2V
	Charge Mode	0.2Cto14.6V,then 14.6V till currentto0.02 C(CC/CV)
	Charger Current	4.8A
	Max. Charge Current	24A
	Charge Cut-off Voltage	14.8V±0.2V
Standard Discharge	Continuous Current	4.8A
	Max. Pulse Current	72A(<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	3.2V6AH-4S4P
	Plastic Case	ABS
	Dimensions (in./mm.)	166*175*125mm
	Weight (lbs./kg.)	3.2Kg
	Terminal	M5
	Protocol (optional)	NO
	BMS	4S30A

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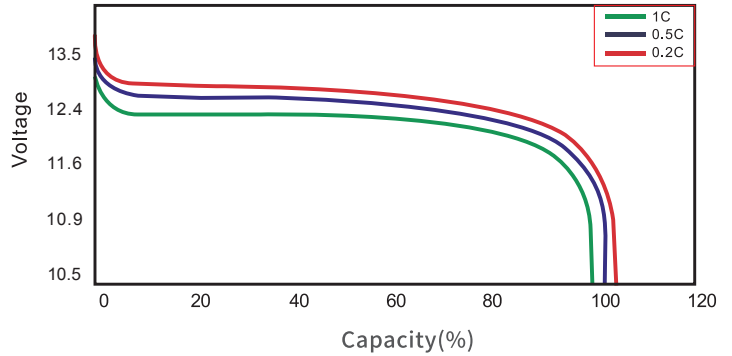
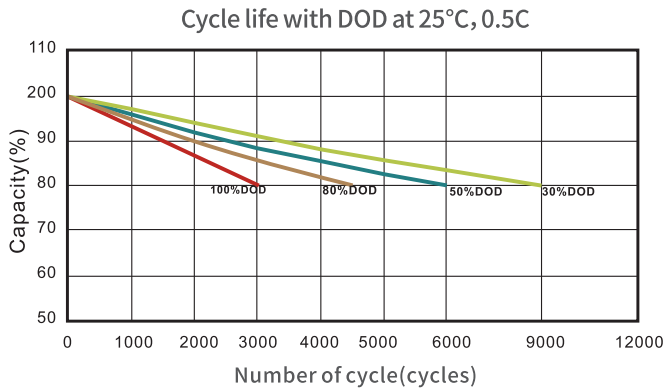
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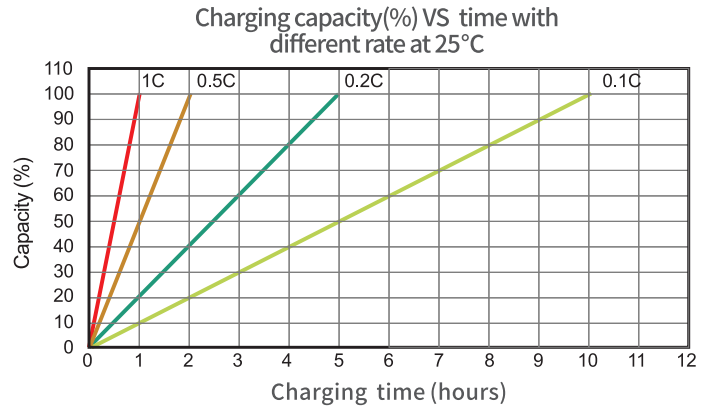
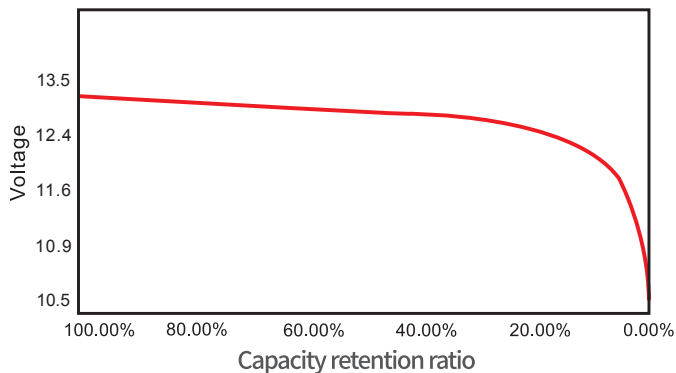
## ELFP12.8-24

### Model Performance Diagrams

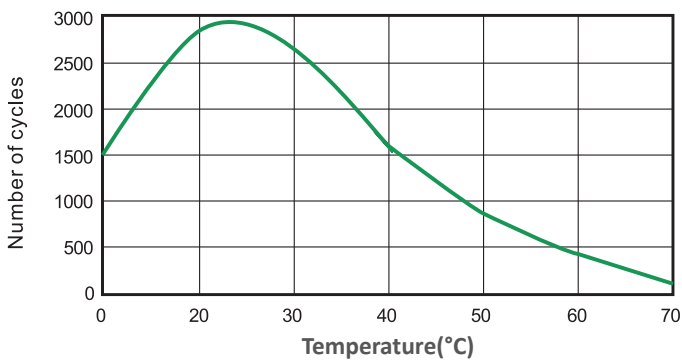
#### Number of Cycles Vs. DOD



#### Battery Capacity (C) VS. Open Circuit Voltage (OCV) SOC Vs OCV



#### Cycle Life in Relation to Temperature



#### Temperature Effects on Capacity

