

EXTRACELL Lithium Iron Phosphate (LiFePO₄) Battery

ELFP12.8-30

Features of LiFePO₄ Battery

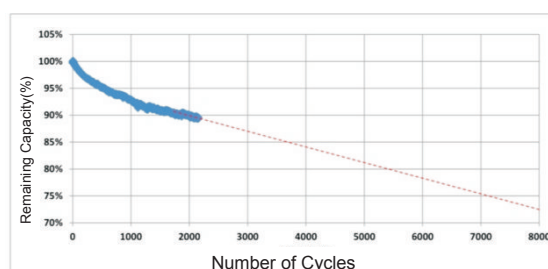
- **Longer Cycle Life:** Offers up to 20 times longer cycle life and five times longer float/calendar life than lead acid battery, helping to minimize replacement cost and reduce total cost of ownership.
- **Lighter Weight:** About 40% of the weight of a comparable lead acid battery. A 'drop in' replacement 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	30Ah (C ₅ , 25°C)
	Energy	384Wh
	Internal Resistance	≤150mΩ
	Cycle Life	>2500 cycles @1C 100%DOD
	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 14.6V, charge current to 0.02C (CC/CV)
	Charger Current	6A
	Max. Charge Current	30A
	Charge Cut-off Voltage	15.6V ± 0.2V
Standard Discharge	Continuous Current	6A
	Max. Discharge Current	90A (<3S)
	Discharge Cut-off Voltage	10.5V
Environmental	Charge Temperature	0°C ~ 45°C (32°F to 113°F) @60±25% Relative Humidity
	Discharge Temperature	-20°C ~ 60°C (-4°F to 140°F) @60±25% Relative Humidity
	Storage Temperature	0°C ~ 40°C (32°F to 104°F) @60±25% Relative Humidity
	Water Dust Resistance	IP56
Mechanical	Cell Type	LiFePO ₄
	Plastic Case	ABS
	Dimensions (in./mm.)	166*175*125 mm
	Weight (lbs./kg.)	4.5Kg
	Terminal	M5
	Protocol (optional)	4S30A

ELCART DISTRIBUTION SPA via Michelangelo Buonarroti, 46 - 20093 Cologno Monzese (Milano) ITALY
 Tel. +39 02.25117310 Fax +39 02.25117610 sito internet: www.elcart.com e-mail: tecnico@elcart.it

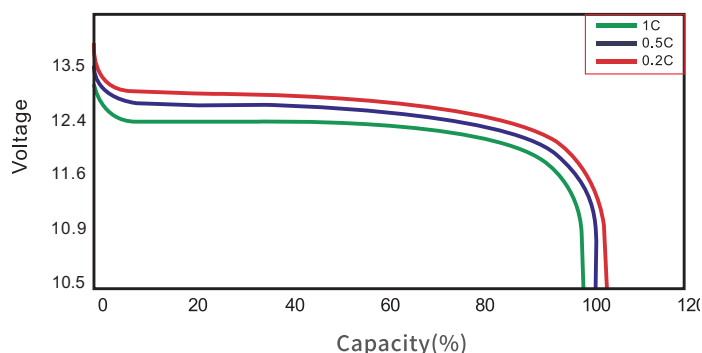
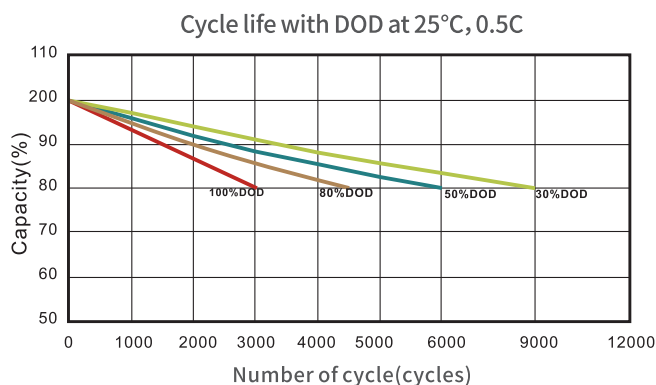
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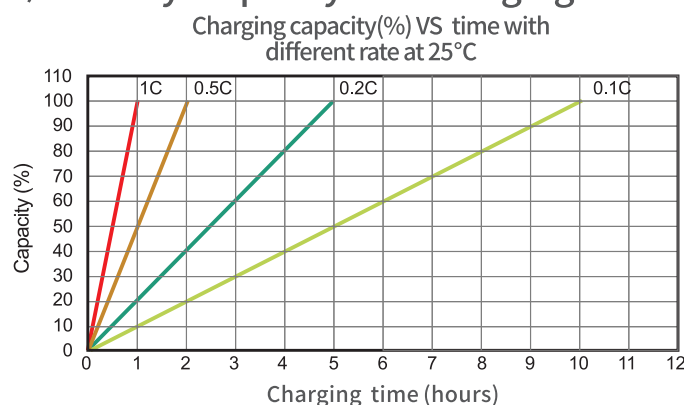
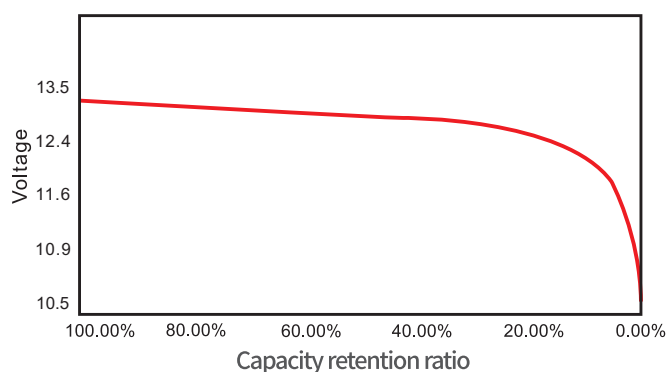
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Model Performance Diagrams

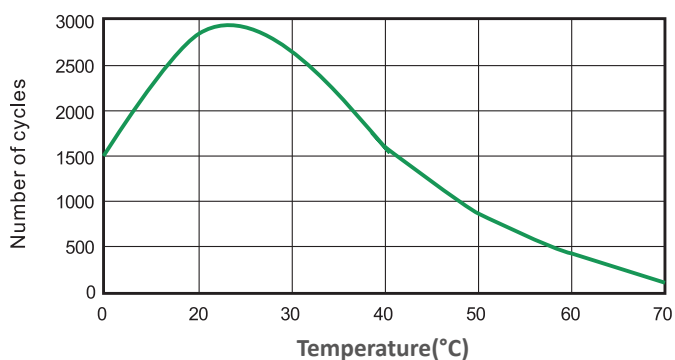
Number of Cycles Vs. DOD



Battery Capacity (C) VS. Open Circuit Voltage (OCV) Battery Capacity Vs. Charging Time



Cycle Life in Relation to Temperature



Temperature Effects on Capacity

