

# Lithium Iron Phosphate (LiFePO4) Battery

GRELF1250 (LFP 12.8V 50Ah)

#### 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.



#### **Physical Dimension-mm**



Dimension: L198Xw166xH170mm Color: Black/ Orange

Terminal Specifications: M6 Terminal



## **Specification**

## **Typical Applications**

- Solar/Wind Energy Storage
- Back-up Power for UPS/ EPS
- Telecommunication
- Low Speed Electric Vehicles
- Marine Boats
- DC Power Supply
- Auto Control System
- Power Tools
- Electric Toys

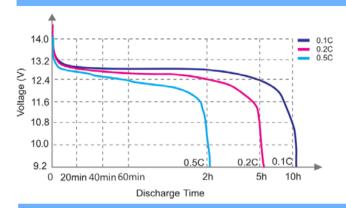
Electrical Characteristics	Nominal Voltage	12.8V
	Nominal Capacity	50Ah
	Minimum Capacity	50Ah
	Energy	640Wh
	Cycle Life	>2000 cycles @0.5C 100%DOD
	Months Self Discharge	<3%
	Efficiency of Charge	100% @0.5C
	Efficiency of Discharge	96~99% @0.5C
Standard Charge	BMS Functions	Over charge, over discharge, over current, short circuit and temperature protection
	Charge Voltage	14.6±0.2V
	Charge Mode	0.2C to 14.6V, then 14.6V, charge current to 0.02C (CC/CV)
	Charge Current	10A (can be customized)
	Max. Charge Current	50A
Standard Discharge	Charge Cut-off Voltage	14.6V±0.2V
	Max Continuous Discharge Current	50A (can be customized)
	Peak Discharge Current	150A 1-3S
	Discharge Cut-off Voltage	10V±0.5V
Environmental	Charge Temperature	0 °C to 55 °C (32F to 131F) @60±25% Relative Humidity
	Discharge Temperature	-20 °C to 60 °C (-4F to 140F) @60±25% Relative Humidity
	Storage Temperature	-20 °C to 45 °C (-4F to 113F) @60±25% Relative Humidity
	IP Class	IP65
	Plastic Case	ABS
	Approx. Dimensions	L198Xw166xH170mm
Mechanical	Approx. Weight	6.2kgs



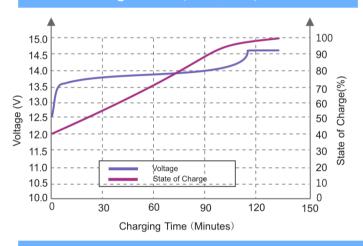
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## GRELF1250 (LFP 12.8V 50Ah)

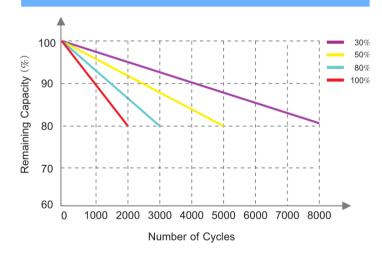
#### Different Rate Discharge Curve (25°C)



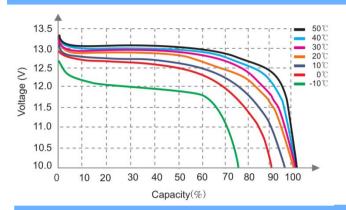
### State of Charge Curve (0.5C, 25°C)



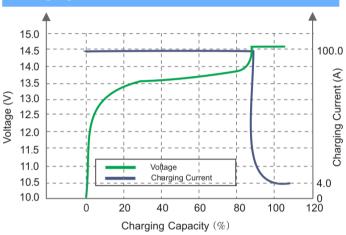
### Different DOD Discharge Cycle Life Curve (0.5C)



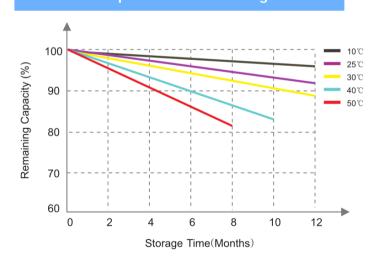
#### **Different Temperature Discharge Curve (0.5C)**



#### Charging Characteristics (0.5C, 25°C)



### **Different Temperature Self Discharge Curve**



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