



## Features of LiFePO4 Battery

- Extended Cycle Life:** The LiFePO4 battery offers a significantly prolonged cycle life, up to 20 times greater when compared to lead acid batteries. Additionally, it boasts an impressive five times longer float/calendar life. This enhanced durability minimizes the need for frequent replacements, thereby reducing the overall cost of ownership.
- Reduced Weight:** The LiFePO4 battery weighs approximately 40% less than an equivalent lead acid battery, making it a convenient 'plug and play' replacement option for lead acid batteries without the need for substantial modifications.
- Higher Power Output:** This advanced battery technology provides twice the power output of lead acid batteries, even under high discharge rates, while maintaining a high energy storage capacity. This feature ensures reliable and consistent power delivery for various applications.
- Wide Temperature Range:** The LiFePO4 battery operates efficiently within a broad temperature range, spanning from -20°C to 60°C. This versatility makes it suitable for deployment in diverse environmental conditions.
- Enhanced Safety:** Utilizing Lithium Iron Phosphate chemistry, this battery eliminates the risks associated with explosion or combustion due to high-impact situations, overcharging, or short circuits. This ensures a higher level of safety during operation and maintenance.
- Modular Design for Flexibility:** The LiFePO4 battery features a modular design that allows for easy scalability. It enables the deployment of up to four batteries in series and up to ten batteries in parallel, offering increased flexibility to meet specific power and energy requirements.



## BMS Specifications

- Overcharge Detection Function
- Over Discharge Detection Function
- Over Current Detection Function
- Temperature Protection
- Balance Function

## Applications

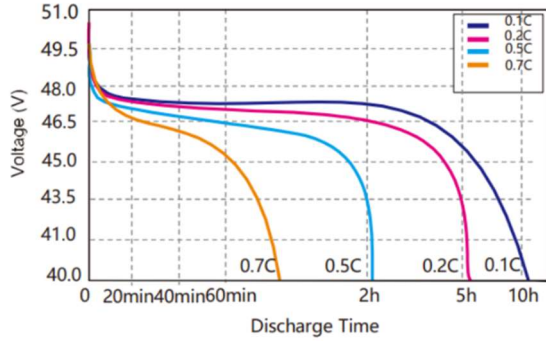
- Telecom Energy Storage
- Solar/Wind Energy Storage
- UPS/Backup System
- E-bike/Golf Battery
- Lighting System

## Electrical Specifications

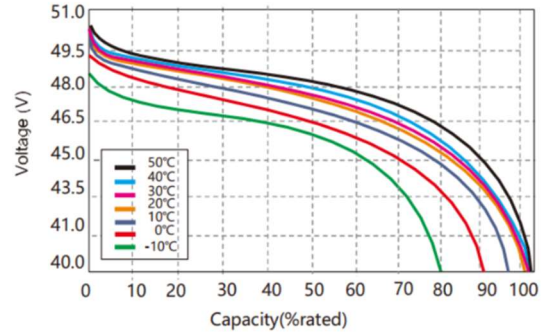
<b>Electrical Characteristics</b>	Nominal Voltage	48.0V
	Nominal Capacity	50Ah
	Energy	2400Wh
	Internal Resistance	≤75mΩ
	Cycle Life	>4000 cycles @ 0.5C 80% DOD
	Self-Discharge	<3%/Month
	Charge Efficiency	100% @ 0.2C
<b>Standard Charge</b>	Discharge Efficiency	96~99% @ 0.5C
	Charge Voltage	52±0.5V
	Method of Charge	0.2C to 54.0V, then 54.0V, charge current to 0.02C (CC/CV)
	Standard Charge Current	10A / 0.2C
	Max. Constant Charge Current	50A (if over, limited 20A)
	Charge Cut-off Voltage	54-56V
	<b>Standard Discharge</b>	Continuous Current
Max. Constant Discharge Current		50A Constant, Peak 100A for 10s
Discharge Cut-off Voltage		40.0V
<b>Environmental</b>	Charge Temperature	0°C to 45°C @ 60±25% Relative Humidity
	Discharge Temperature	-20°C to 60°C @ 60±25% Relative Humidity
	Storage Temperature	0°C to 40°C @ 60±25% Relative Humidity
		IP21
<b>Mechanical</b>	Cell & Method	GSP27135250-50Ah 15S1P
	Pack Case	Iron Case for Pack, Aluminium Shell for Cell
	Dimensions (mm)	442 X 400 X 132mm / 19inch Rack on 3U
	Weight (kg)	±30kg
	Gravimetric Specific Energy	115WH/kg
	Protocol (Optional)	Modbus/RS485/RS232/CAN (Optional SNMP)
	SOC (Optional)	LED & LCD Display



## Discharge Curves at Varying Rates

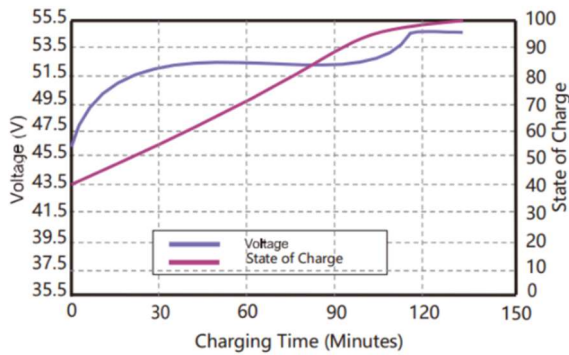


## Temperature-dependant Discharge Curves



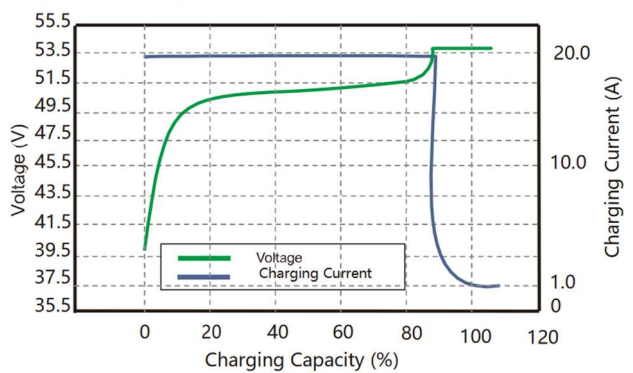
## State of Charge Curve

State of Charge Curve @0.5C 25°C



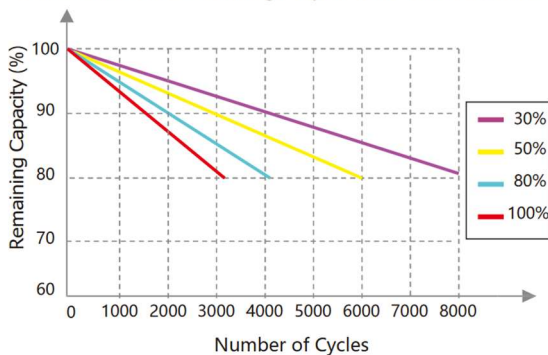
## Charging Characteristics Curve

Charging Characteristics @0.2C 25°C



## Cycle Life Curve

Different DOD Discharge Cycle Life Curve @0.5C



## Self-Discharge Characteristics Curve

Different Temperature Self Discharge Curve

