



# Lithium Iron Phosphate (LiFePO4) Battery

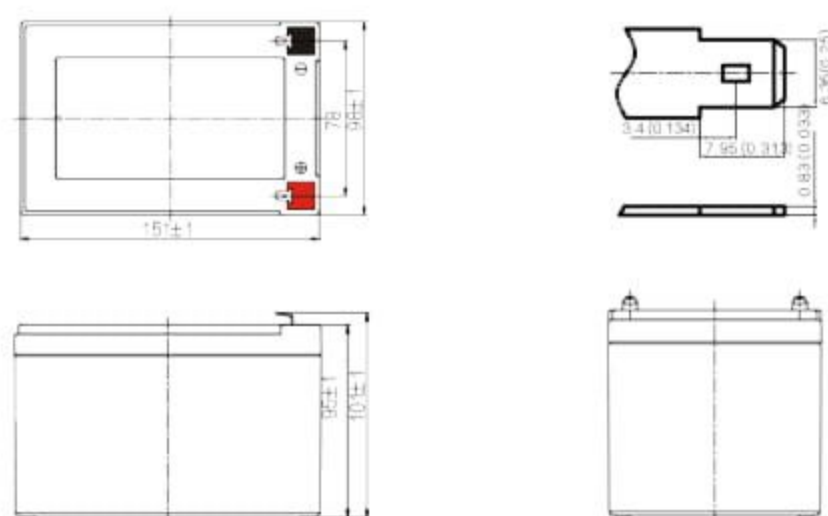
## LFP12.8-12 (12.8V, 12AH)

### 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.



### Physical Dimension



### Application

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

### Specification

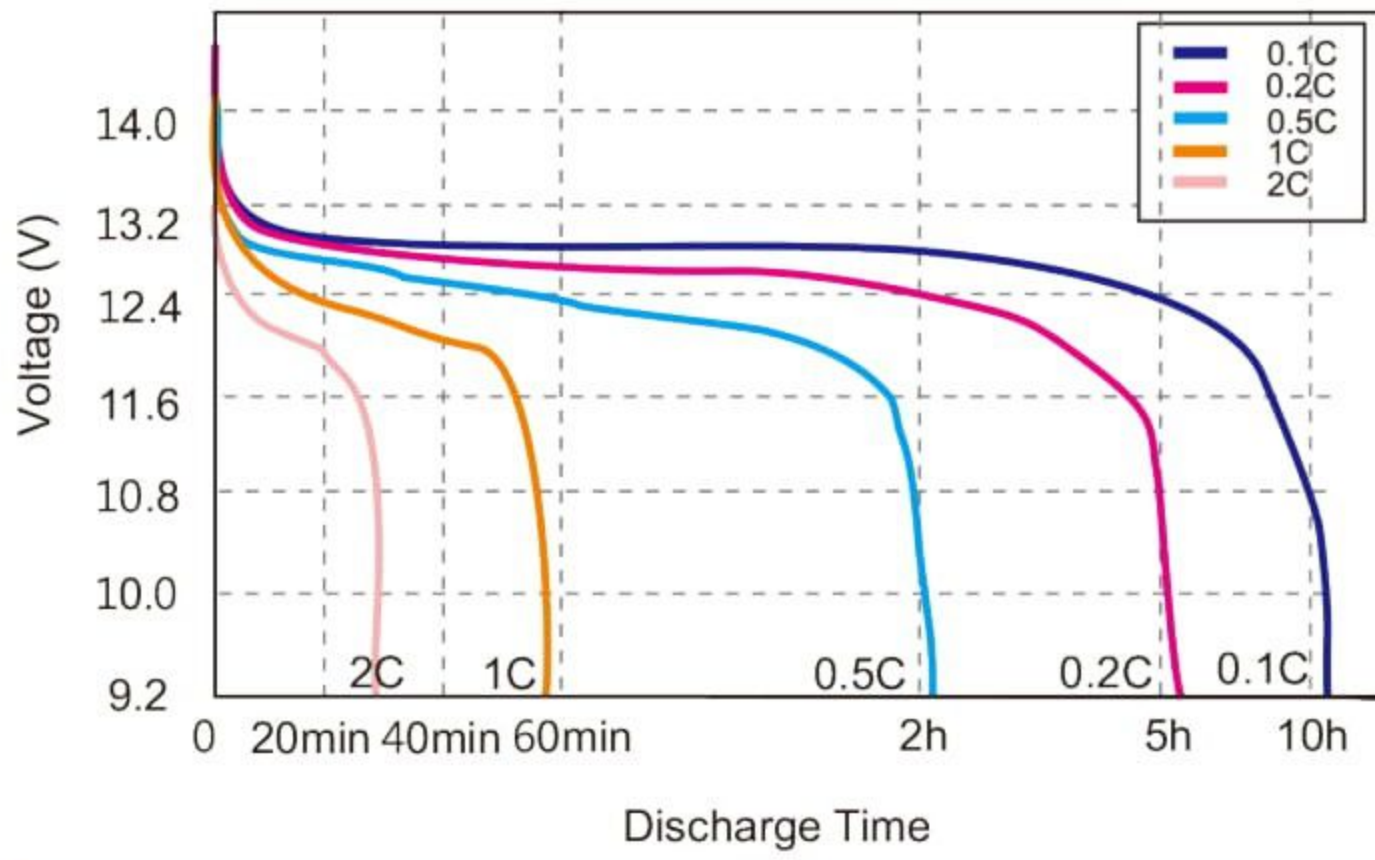
Electrical Characteristics	Nominal Voltage	12.8V
	Nominal Capacity	12Ah (C <sub>5</sub> , 25°C)
	Energy	153.6Wh
	Internal Resistance	≤50mΩ
	Cycle Life	>2000 cycles @1C 100%DOD
	Months Self Discharge	<3%
	Efficiency of Charge	100% @0.5C
	Efficiency of Discharge	96~99% @1C
Standard Charge	Charge Voltage	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	12A
	Charge Cut-off Voltage	15.6V±0.2V
Standard Discharge	Continuous Current	24A
	Max. Pulse Current	30A(<3s)
	Discharge Cut-off Voltage	8V
Environmental	Charge Temperature	0 °C to 45 °C (32F to 113F) @60±25% Relative Humidity
	Discharge Temperature	-20 °C to 60 °C (-4F to 140F) @60±25% Relative Humidity
	Storage Temperature	0 °C to 40 °C (32F to 104F) @60±25% Relative Humidity
	Water Dust Resistance	IP56
Mechanical	Cell & Method	18650 4S8P
	Plastic Case	ABS
	Dimensions (in./mm.)	151*98*95mm (5.95"*3.86"*3.74")
	Weight (lbs./kg.)	1.70kg (3.751lbs)
	Terminal	T2
	Protocol (optional)	SMBus/RS485/RS232
	SOC (optional)	LED





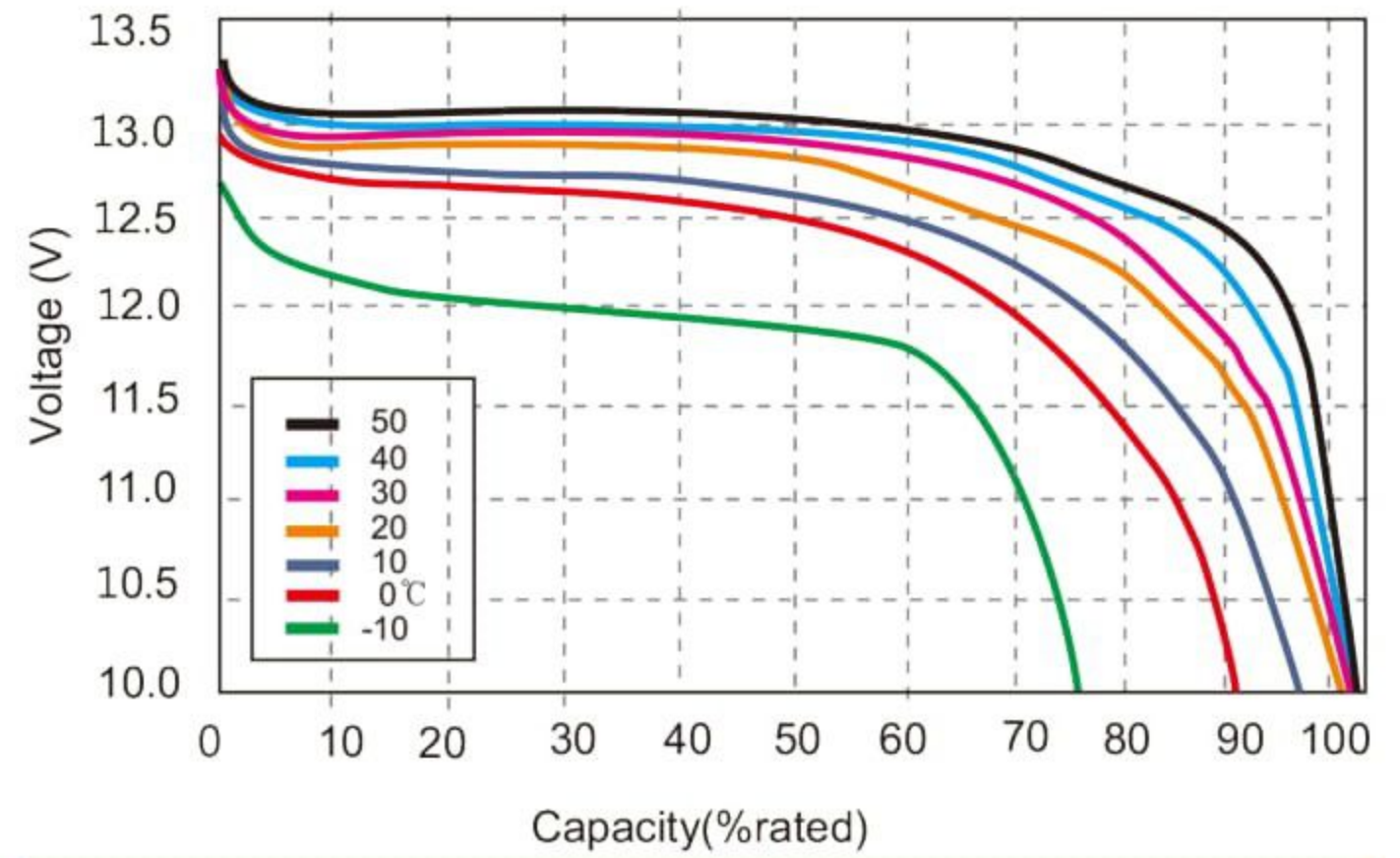
### Different Rate Discharge Curve

Different Rate Discharge Curve @25°C



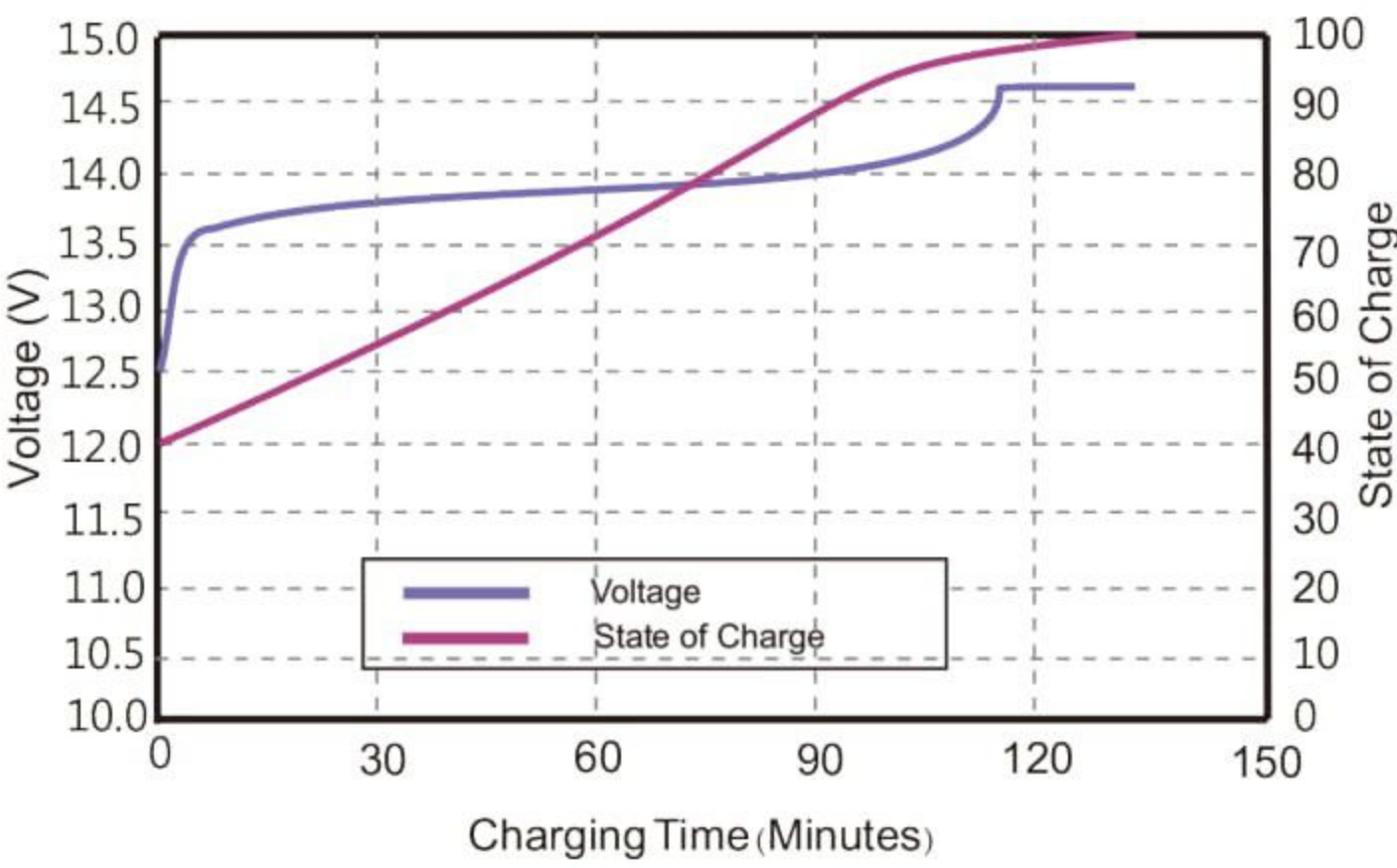
### Different Temperature Discharge Curve

Different Temperature Discharge Curve @0.5C



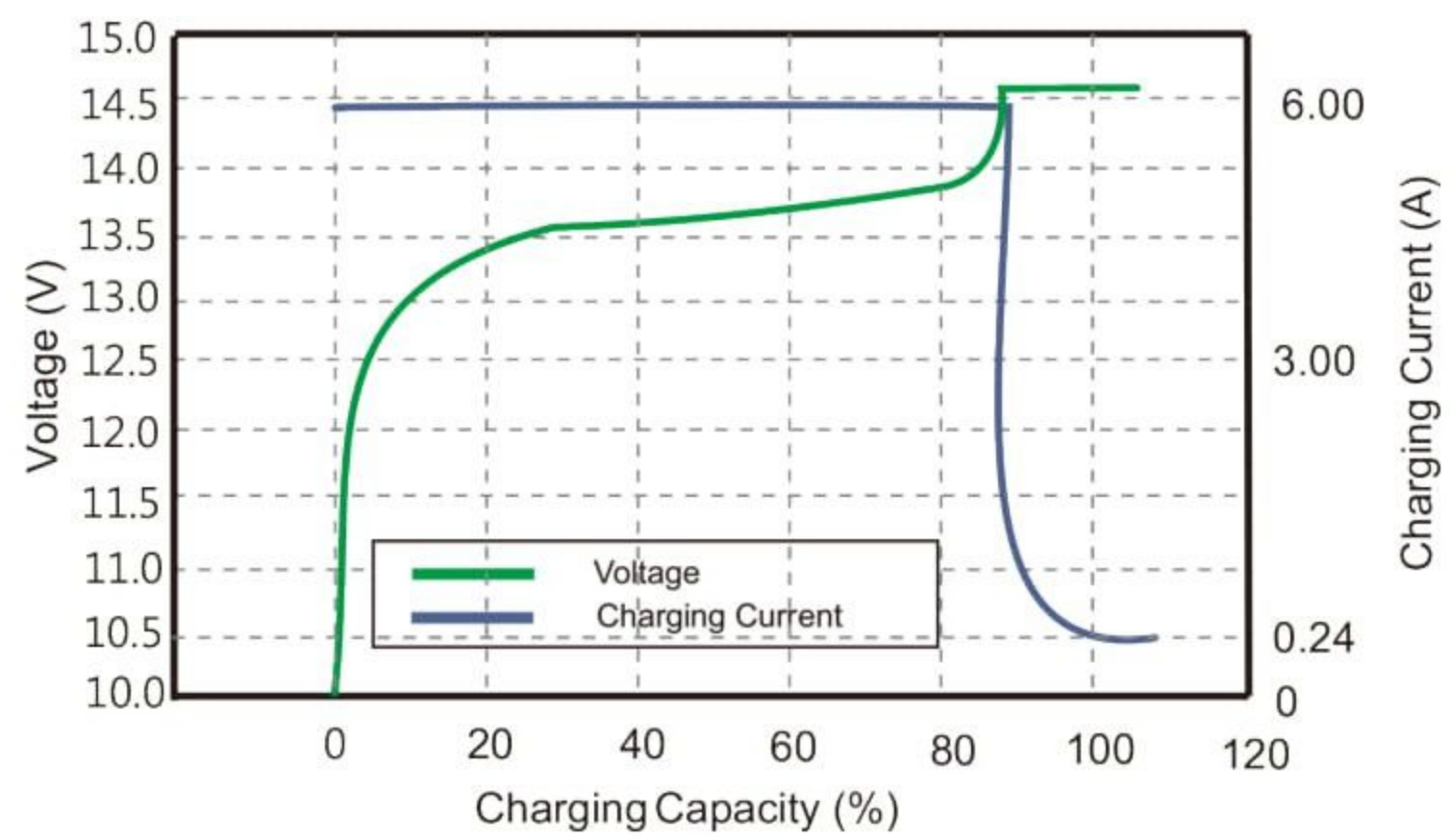
### State of Charge Curve

State of Charge Curve @0.5C 25



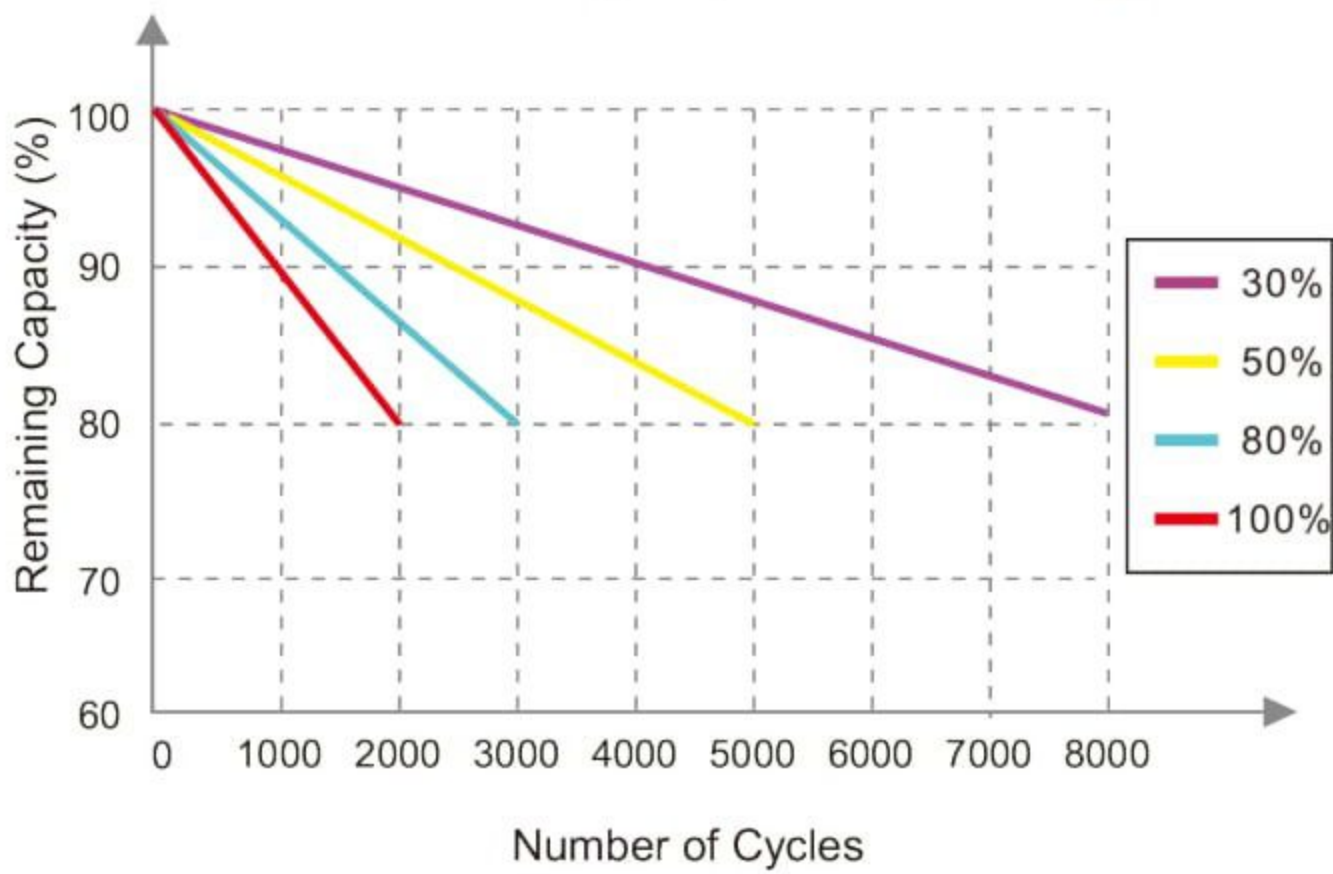
### Charging Characteristics

Charging Characteristics @0.5C 25



### Cycle Life Curve

Different DOD Discharge Cycle Life Curve @1C



### Self Discharge Characteristics Curve

Different Temperature Self Discharge Curve

