



# LFP 40-12

Rechargeable Lithium Iron Phosphate Battery



LiFePO<sub>4</sub>

## PRODUCT FEATURES



• **Super Safe Lithium Iron Phosphate Chemistry.**



• **High Performance and Durability:** Offers significantly longer cycle life compared to traditional lead-acid batteries, ensuring reliable performance in a wide temperature range from -20°C to 60°C.



• **Faster Charging and Lower Self-Discharge:** Outperforms lead-acid batteries in both areas.



• **Compact and Lightweight:** High energy density in a small, lightweight design, ideal for space and weight-sensitive applications.



• **Long Lifespan:** Over 15 years of stable, maintenance free performance.



• **Unique Built-In BMS:** Monitors and controls battery parameters, providing protection against over-charging, over-discharging, over-current, and short circuits.

## FUNCTIONAL SPECIFICATIONS

Cell Chemistry :	LiFePO <sub>4</sub>
Cell Type :	Prismatic
Nominal Voltage :	12.8V
Nominal Capacity :	40Ah
Stored Energy :	512Wh
Internal Resistance :	<15mΩ
Self-Discharge per Month :	<2%
Cycle life @ 80% DOD :	3500 Cycles*
Series Connection :	4 Units
Parallel Connection :	4 Units
Combination Mode :	4S1P(3.2V, 48Ah)
Communication Interface :	.NA

## MECHANICAL SPECIFICATIONS

Dimensions (L*W*H) :	196*167*172 mm
Weight :	5.8±0.2 Kg
Terminal Type :	.M6
Case Material :	ABS
Ingress Protection Marking :	.IP65

## CHARGE SPECIFICATIONS

Recommended Charge Voltage :	≤14.6V
Recommended Charge Current :	≤8A (0.2C)**
Max. Charge Current :	≤40A
Over Voltage Protection :	15±0.2V
Reconnect Voltage :	14.2V
Primary Charge Current Protection :	70±10A/10±5s

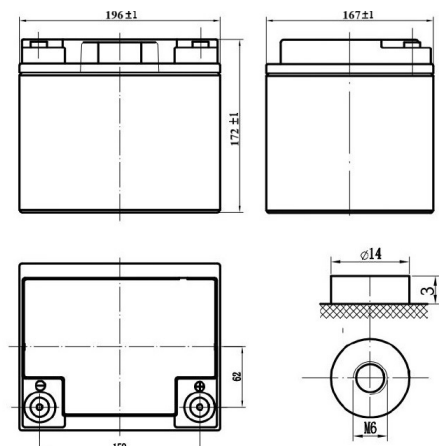
## DISCHARGE SPECIFICATIONS

Recommend Discharge Current :	≤20A (0.5C)**
Max. Discharge Current :	≤40A/60A, 10s
Max. Discharge Voltage :	≥10.4V
Low Voltage Protection :	8.8±0.4V
Reconnect Voltage :	10.4±0.4V
Primary Discharging Current Protection :	70±10A/10±5s
Short Circuit Protection :	750±150A/<500 μs

## ENVIRONMENTAL SPECIFICATIONS

Charge Temperature :	0~45°C
Discharge Temperature :	-20~60°C
Storage Temperature :	-10~40°C
Optimal Operation Humidity :	5~95% RH/Non-condense

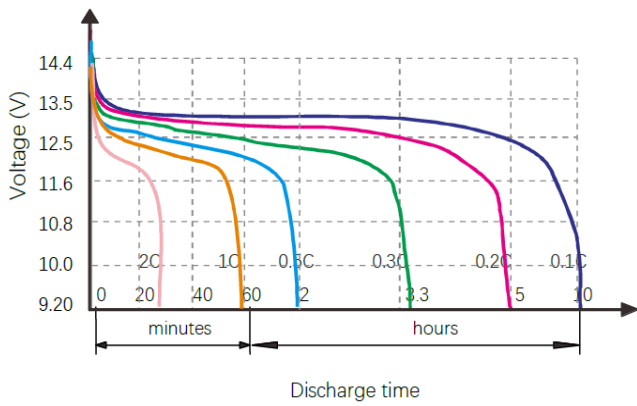
## OUTLINE DIMENSION



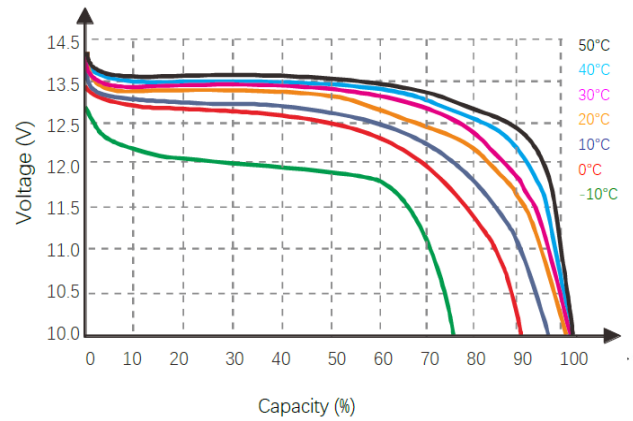
\*Refer to warranty terms for cycle life performance conditions

\*\* C=Capacity

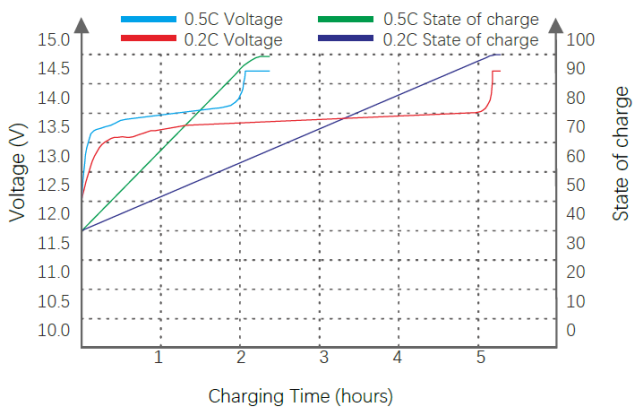
### Discharge Performance (25°C)



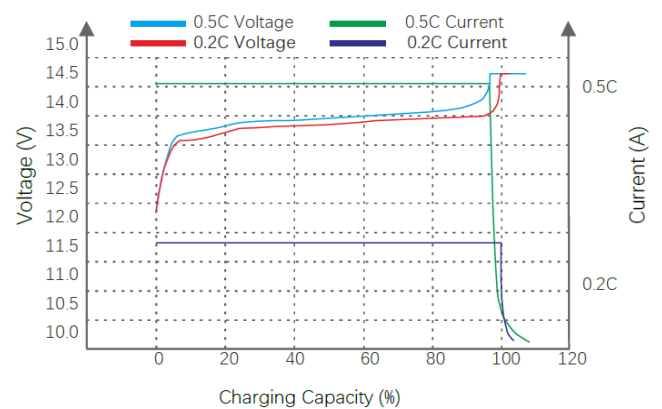
### Temperature Impact on Discharge Performance (0.5C)



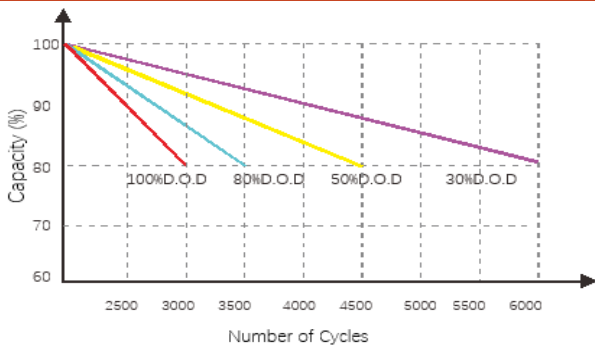
### State of Charge Curve (25°C)



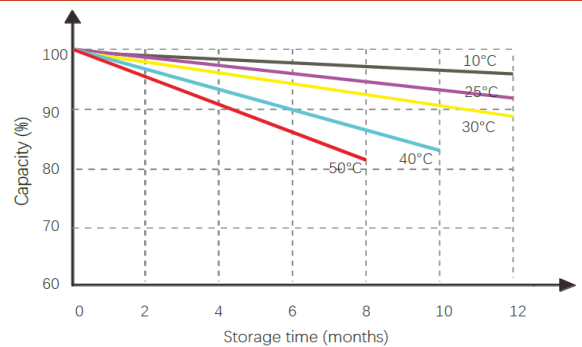
### Charge Characteristics (25°C)



### Cycle life in relation to Depth of Discharge (0.2C)(25°C)



### Self-Discharge Characteristics



## APPLICATIONS



- Renewable Energy Storage
- Recreational Vehicles (RVs)
- Small Electric Vehicles (EVs)
- Backup Power Systems
- Portable Power Packs
- Emergency Lighting and Equipment
- Marine Applications
- Remote Monitoring and Telemetry

## CERTIFICATIONS

- UN38.3
- CE
- RoHS

## SHIPPING CLASSIFICATION

- UN 3480
- Class 9