LIFE 50-48SHC

Rechargeable Lithium Iron Phosphate Battery

$LiFePO_4$

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.
- **Smart Design:** Anti-theft protection and support constant voltage (57V) discharge for remote power supply, reduced line loss, no need for thick wires, and 100% discharge capability.
- **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 & Bidirectional DCDC:** Monitors and controls battery parameters, protecting against over-charging, over-discharging, over-current, and short circuits, supporting mixed battery use.
- **CANBus communication:** Offers real time monitoring, diagnostics, and seamless communication with other system components.

FUNCTIONAL SPECIFICATIONS

Cell Chemistry	$LiFePO_4$
Cell Type	Prismatic
Nominal Voltage	48V
Nominal Capacity	50Ah
Stored Energy	2400Wh
Internal Resistance	≤40 mΩ
Self Discharge per Month	<5%
Cycle life @ 80% DoD	6000 Cycles*
Series Connection	Single Use
Parallel Connection	≤32 Units
Combination Mode	15S1P(3.2V, 50Ah)
Communication Interface	CANBus/ RS485

MECHANICAL SPECIFICATIONS

Dimensions (L *W * H)	442*395*134.5 mm
Weight	28±0.3 Kg
Terminal Type	M6
Case Material	Steel
Ingress Protection Marking	IP20

CHARGE SPECIFICATIONS

Recommended Charge Voltage	≤54V
Recommended Charge Current	≤25A(0.5C)**
Max. Charge Current	≤ 50A
Over Voltage Protection	56±0.5V
Reconnect Voltage	50.25±0.5V
Primary Charge Current Protection	125±3A

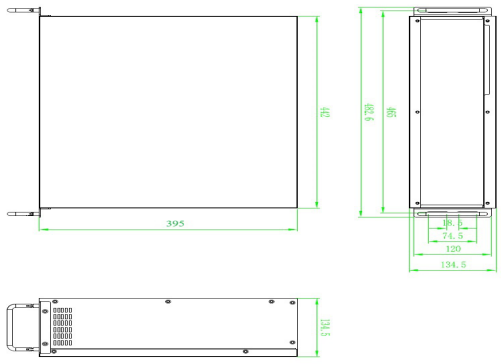
DISCHARGE SPECIFICATIONS

Recommend Discharge Current	≤ 25A(0.5C)**
Max. Discharge Current	≤ 50A
Max. Discharge Voltage	≥41.5V
Low Voltage Protection	40.5±0.5V
Reconnect Voltage	45±0.5V
Primary Discharging Current Protection	125±3A/15s
Short Circuit Protection	200A/170-200μs

ENVIRONMENTAL SPECIFICATIONS

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

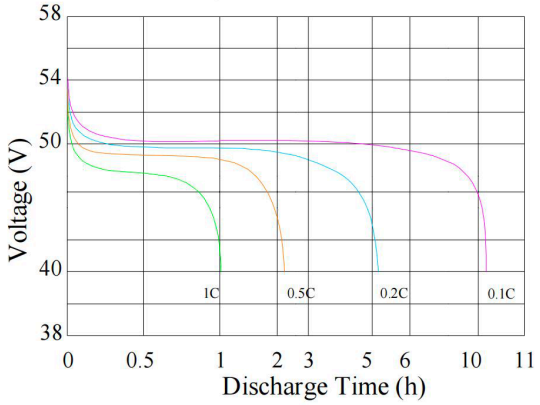
OUTLINE DIMENSION



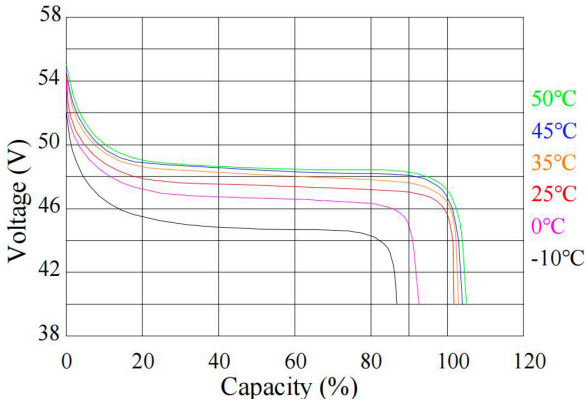
*Refer to warranty terms for cycle life performance conditions

** C=Capacity

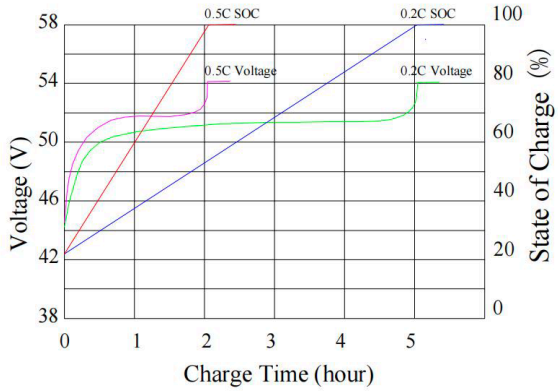
Discharge Performance



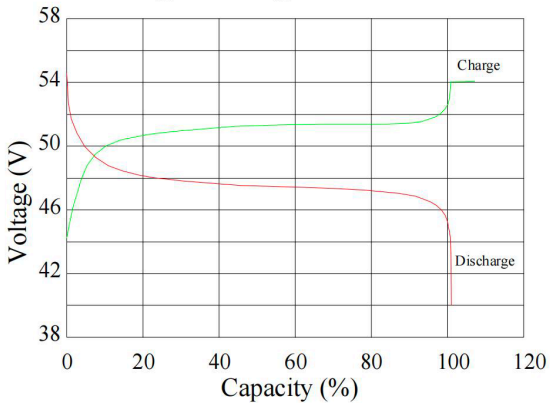
Temperature effect on Discharging



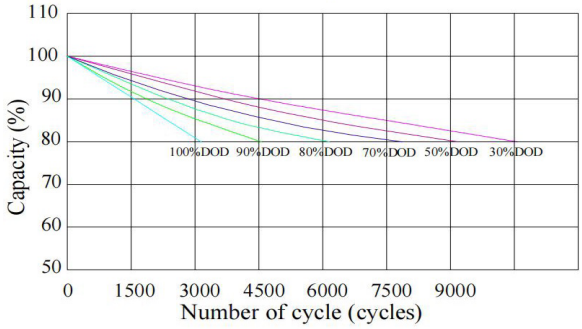
State of Charge (25˚C)



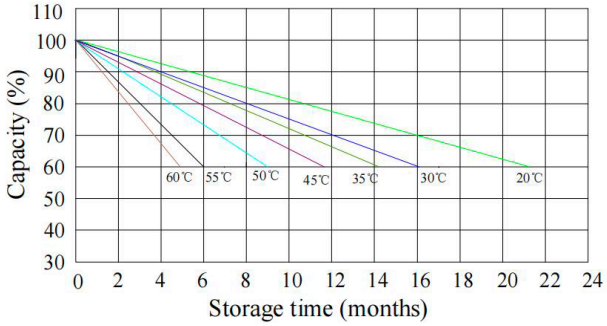
Discharge and Charge Performance



Cycle life in relation to Depth of Discharge



Self-Discharge Characteristics



APPLICATIONS

- Telecom and Data Centers
- Energy Storage Systems
- Uninterruptible Power Supply (UPS)
- Remote Power Supply
- Industrial Applications

SHIPPING CLASSIFICATION

- UN 3480
- Class 9