



LIFE 50-48S

Rechargeable Lithium Iron Phosphate Battery



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 :4000 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

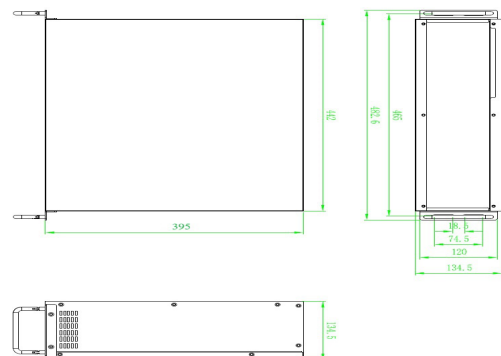
DISCHARGE SPECIFICATIONS

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

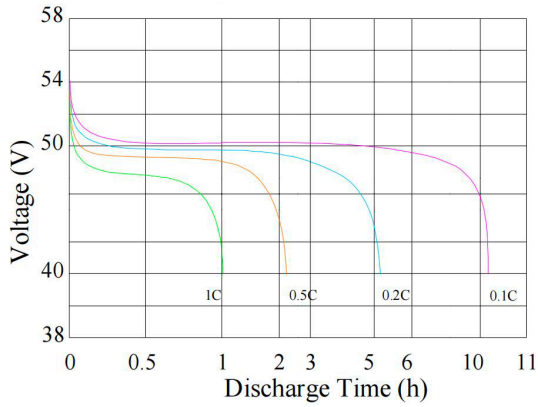
Charge Temperature :0~60°C
Discharge Temperature :	-20~60°C
Storage Temperature :	-10~45°C
Optimal Operation Humidity :	5~95%RH/Non-Condense

OUTLINE DIMENSION

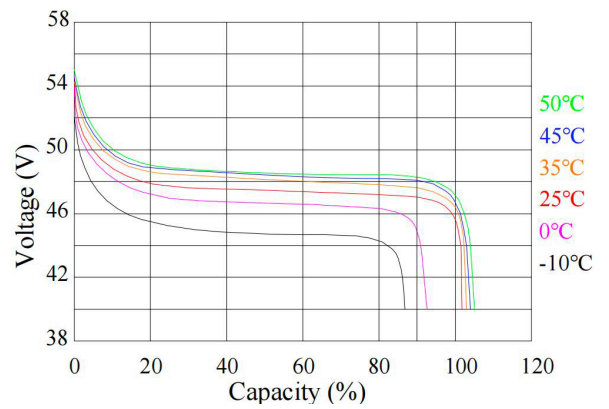


*Refer to warranty terms for cycle life performance conditions
 ** C=Capacity

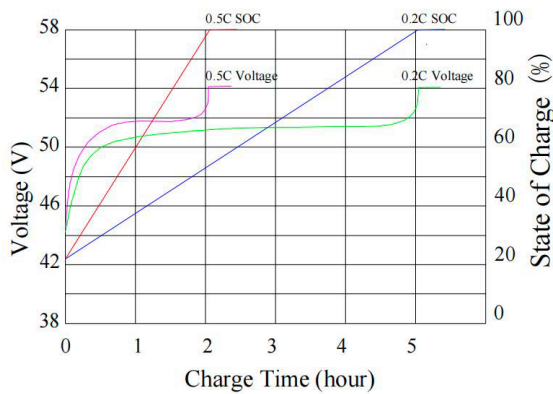
Discharge Performance



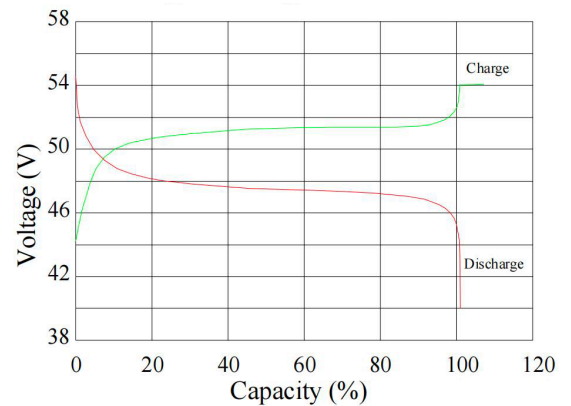
Temperature effect on Discharging



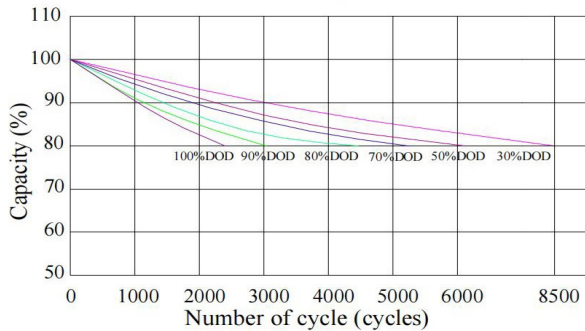
State of Charge (25°C)



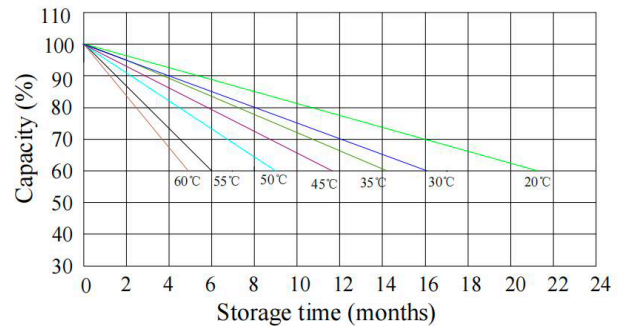
Discharge and Charge Performance



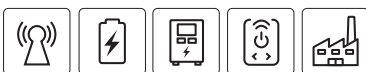
Cycle life in relation to Depth of Discharge



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