



MPL 51.2V160 HCBT

Rechargeable Lithium Iron Phosphate Battery



LiFePO₄

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.



• **CANBus communication:** Offers real time monitoring, diagnostics, and seamless communication with other system components.



• **Bluetooth Connectivity:** Displays the battery's state of charge (SOC) and operating status.

FUNCTIONAL SPECIFICATIONS

Cell Chemistry :	LiFePO ₄
Cell Type :	Prismatic
Nominal Voltage :	51.2V
Nominal Capacity :	160Ah
Stored Energy :	8192Wh
Internal Resistance :	≤10.5 mΩ
Self-Discharge per Month :	<2%
Cycle life @ 80% Initial Capacity : . . . . .	.4000 Cycles*
Series Connection : . . . . .	.Single Use
Parallel Connection : . . . . .	.2 Units
Combination Mode :	16S1P(3.2V, 160Ah)
Communication Interface :	CANBus/Bluetooth

MECHANICAL SPECIFICATIONS

Dimensions (L*W*H) :	540*360*250mm
Weight :	62±0.2Kg
Terminal Type : . . . . .	.M8
Case Material : . . . . .	.Metal
Ingress Protection Marking : . . . . .	.IP67

CHARGE SPECIFICATIONS

Recommended Charge Voltage :	≤55.2V
Recommended Charge Current :	≤80A(0.5C)**
Max. Charge Current :	≤160A
Over Voltage Protection : . . . . .	.59.2V
Reconnect Voltage : . . . . .	.58.2V
Primary Charge Current Protection :	375±11A/1±0.5s

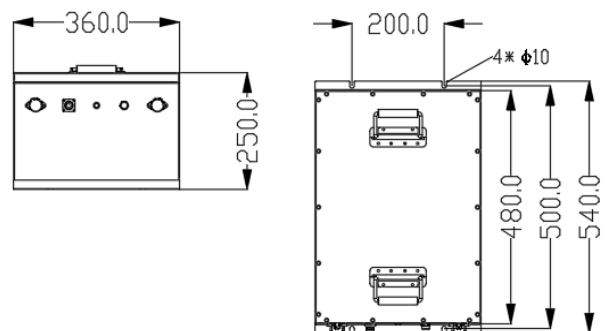
DISCHARGE SPECIFICATIONS

Recommend Discharge Current :	≤ 80A(0.5C)**
Max. Discharge Current :	160A/300A~10s
Max. Discharge Voltage :	≥40V
Low Voltage Protection : . . . . .	.39.2V
Reconnect Voltage : . . . . .	.40.2V
Primary Discharging Current Protection :	300±11A/1±0.5s
Short Circuit Protection :	2000A/10~500 μs

ENVIRONMENTAL SPECIFICATIONS

Charge Temperature :	-20~55°C
Discharge Temperature :	-20~60°C
Storage Temperature : . . . . .	.Less than 1 year: 0~25°C
. . . . .	.Less than 3 months: -5~35°C
Optimal Operation Humidity :	60±25%RH/Non-Condense

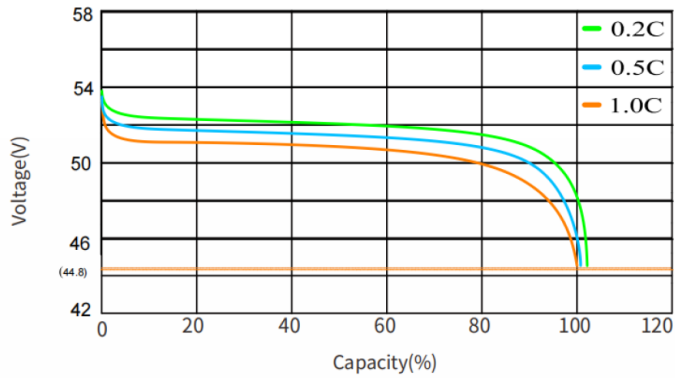
OUTLINE DIMENSION



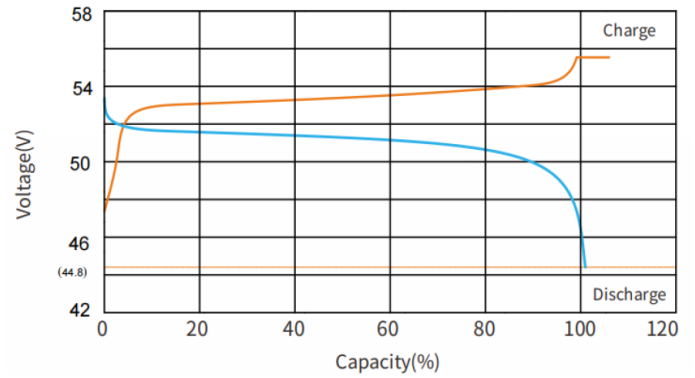
*Refer to warranty terms for cycle life performance conditions

** C=Capacity

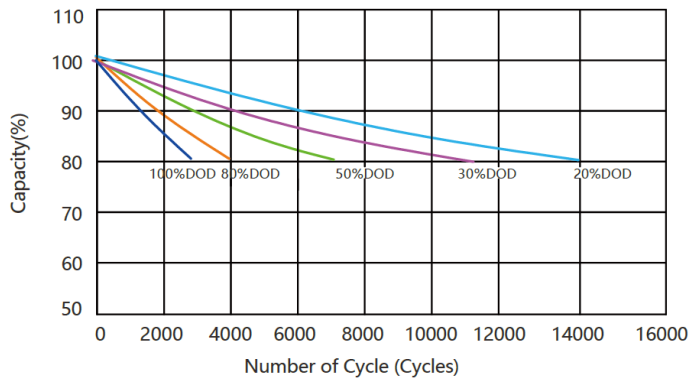
Discharge Performance @ 25°C



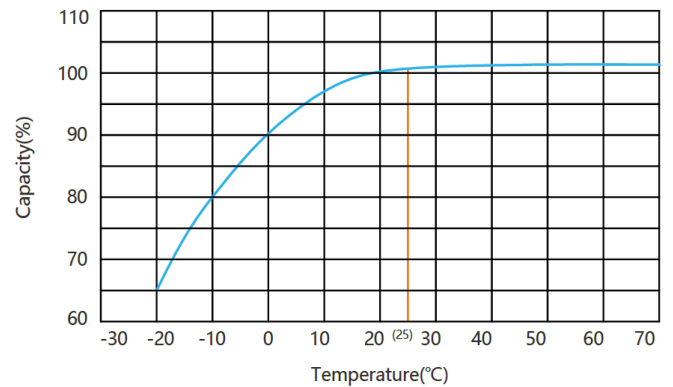
Charge & Discharge at 0.5C @ 25°C



Cycle Life vs. Dept of Discharge (DOD) Discharge 1C/Charge 1C @ 25°C



Discharge Voltage Profile at Various Rate @ 25°C



APPLICATIONS



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

CERTIFICATIONS

- UN38.3
- CE -EMC
- RoHS
- IEC 62619

SHIPPING CLASSIFICATION

- UN 3480
- Class 9