



MPL 48V32 GC2

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.

FUNCTIONAL SPECIFICATIONS

Cell Chemistry :	LiFePO ₄
Cell Type :	Cylindrical
Nominal Voltage :	51.2V
Nominal Capacity :	32Ah
Stored Energy :	1638.4 Wh
Internal Resistance :	≤50 mΩ
Self Discharge per Month :	<3%
Cycle life @ 100% Initial Capacity :	2000 Cycles*
Series Connection :	Single Use
Parallel Connection :	≤10 Units
Combination Mode :	16S8P(3.2V, 4Ah)
Communication Interface :	CANBus

MECHANICAL SPECIFICATIONS

Dimensions (L *W * H) :	260*180*260 mm
Weight :	16.74 Kg
Terminal Type :	M8*1.25mm
Case Material :	ABS+PC
Ingress Protection Marking :	IP67

CHARGE SPECIFICATIONS

Recommended Charge Voltage :	≤58.4V
Recommended Charge Current :	≤6.4A(0.2C)**
Max. Charge Current :	≤ 32A
Over Voltage Protection :	59.2±0.8V
Reconnect Voltage :	56±0.8V
Primary Charge Current Protection :	65±5A/5s

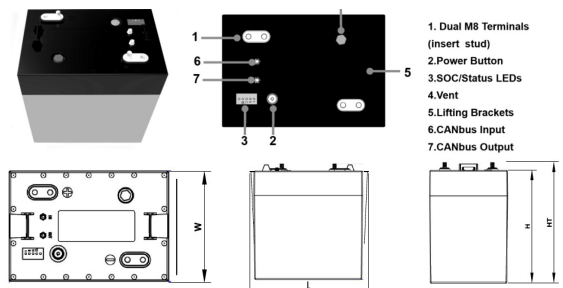
DISCHARGE SPECIFICATIONS

Recommend Discharge Current :	≤ 6.4A(0.2C)**
Max. Discharge Current :	60A/100A<60s/200A<3s
Max. Discharge Voltage :	≥40V
Low Voltage Protection :	40±0.8V
Reconnect Voltage :	44.8±0.8V
Primary Discharging Current Protection :	200±10A/15s
Short Circuit Protection :	520±30A/<400 μs

ENVIRONMENTAL SPECIFICATIONS

Charge Temperature :	0~55°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

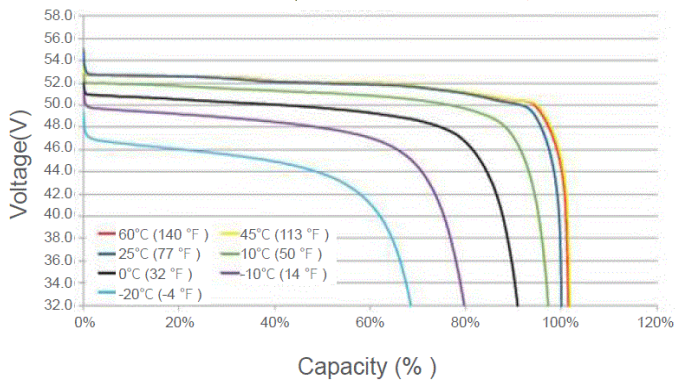


L mm(°)	W mm(°)	H mm(°)	HT mm(°)
260 (10.2)	180 (7.1)	260 (10.2)	278 (10.9)

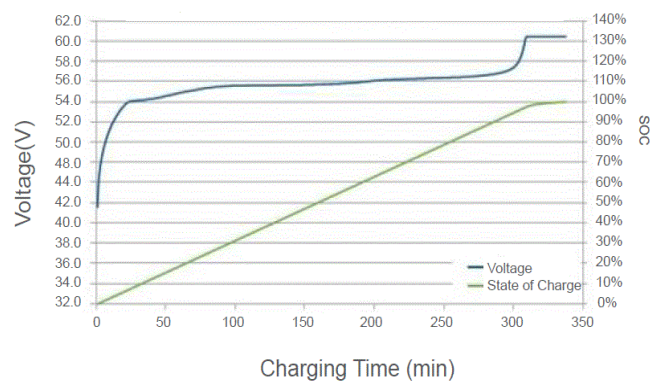
*Refer to warranty terms for cycle life performance conditions

** C=Capacity

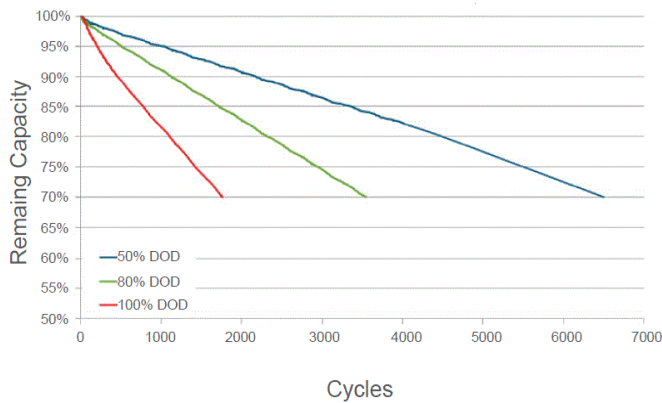
Discharge Performance at Various Temperatures Discharge 1C



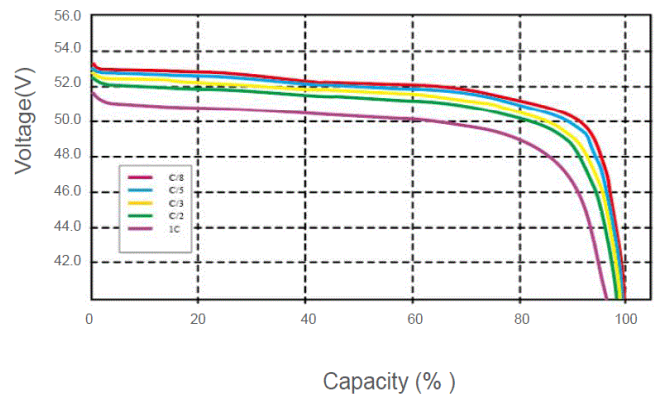
Charge Performance Charge 0.2C @ 25°C



Cycle Life vs. Dept of Discharge (DOD) Discharge 0.5C/Charge 0.5C @ 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

SHIPPING CLASSIFICATION

- UN 3480
- Class 9