



# MPL 24-12

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 :	Cylindrical
Nominal Voltage :	25.6V
Nominal Capacity :	12.5Ah
Stored Energy :	320 Wh
Internal Resistance :	≤40 mΩ
Self Discharge per Month :	<3%
Cycle life @ 100% DOD :	≥2000 Cycles*
Series Connection :	Single Use
Parallel Connection :	≤4 Units
Combination Mode :	.8S1P(3.2V, 12.5Ah)

## MECHANICAL SPECIFICATIONS

Dimensions (L *W * H) :	181*76*165 mm
Weight :	3.2±0.5 Kg
Terminal Type :	.M6
Case Material :	ABS
Ingress Protection Marking :	IP54

## CHARGE SPECIFICATIONS

Recommended Charge Voltage :	≤29.2V
Recommended Charge Current :	≤6A(0.5C)**
Max. Charge Current :	9A
Over Voltage Protection :	30.8±0.4V
Reconnect Voltage :	29.2±0.4V
Primary Charge Current Protection :	10A/0.1s

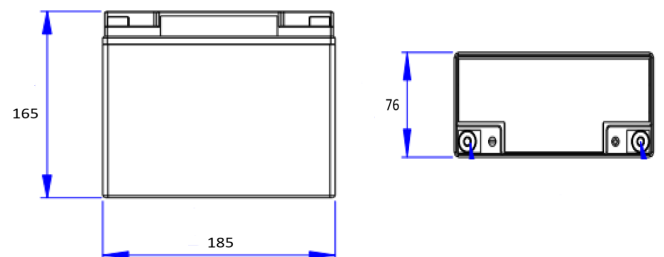
## DISCHARGE SPECIFICATIONS

Recommend Discharge Current :	≤ 6A(0.5C)**
Max. Discharge Current :	10A
Max. Discharge Voltage :	≥18.4V
Low Voltage Protection :	18.4±0.48V
Reconnect Voltage :	20±0.48V
Primary Discharging Current Protection :	.30A/220ms

## ENVIRONMENTAL SPECIFICATIONS

Charge Temperature :	0~45°C
Discharge Temperature :	-20~60°C
Storage Temperature :	15~35°C
	..... Less than 3 months :-10~45°C
Optimal Operation Humidity :	5~75%RH/Non-Condense

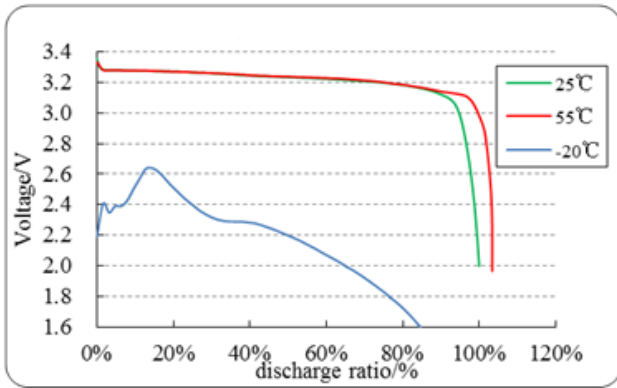
## OUTLINE DIMENSION



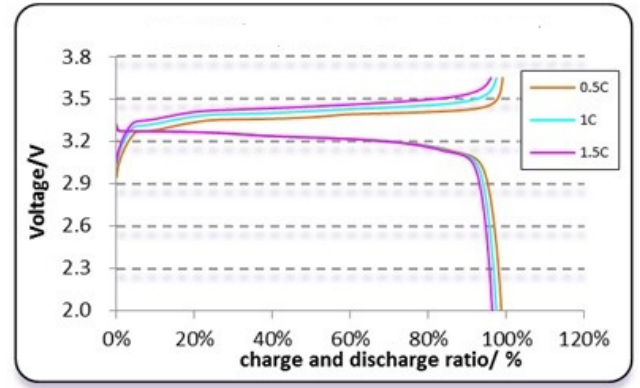
\*Refer to warranty terms for cycle life performance conditions

\*\* C=Capacity

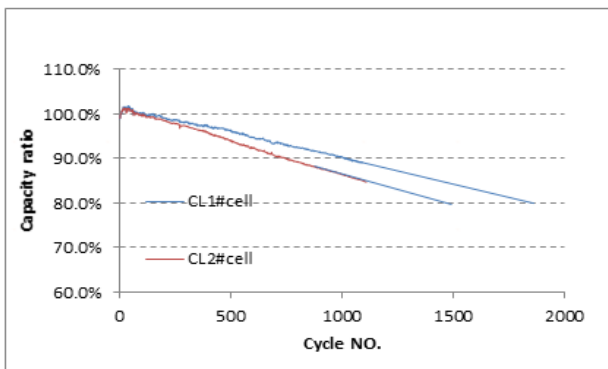
## Discharge Performance at Various Temperatures (Cell)



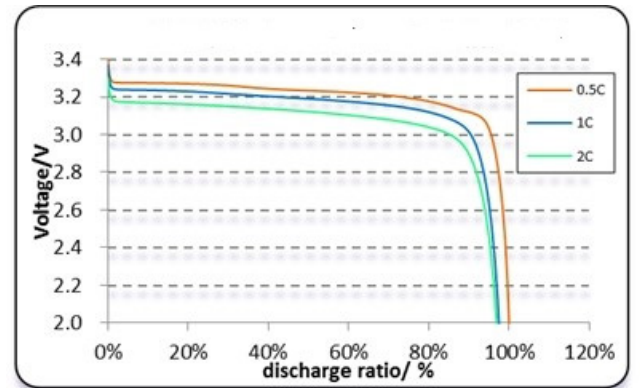
## Charge Performance (Cell)



## Cycle Life (Cell)



## Discharge Voltage Profile at Various Rate (Cell)



## 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