



LFP 20-12

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.

FUNCTIONAL SPECIFICATIONS

Cell Chemistry :	LiFePO ₄
Cell Type :	Prismatic
Nominal Voltage :	12.8V
Nominal Capacity :	20Ah
Stored Energy :	256Wh
Internal Resistance :	<30mΩ
Self-Discharge per Month :	<2%
Cycle life @ 80% DOD : . . . . .	.2000 Cycles*
Series Connection :	4 Units
Parallel Connection :	4 Units
Combination Mode :	4S1P(3.2V, 25Ah)
Communication Interface : . . . . .	.NA

MECHANICAL SPECIFICATIONS

Dimensions (L*W*H) :	180*78*165mm
Weight :	2.2±0.2 Kg
Terminal Type : . . . . .	.M5
Case Material : . . . . .	.ABS
Ingress Protection Marking : . . . . .	.IP65

CHARGE SPECIFICATIONS

Recommended Charge Voltage :	≤14.6V
Recommended Charge Current :	≤5A (0.25C)**
Max. Charge Current :	≤ 20A
Over Voltage Protection :	14.6±0.2V
Reconnect Voltage :	14.2V
Primary Charge Current Protection : . . . . .	.50±5A/0.5±0.2s

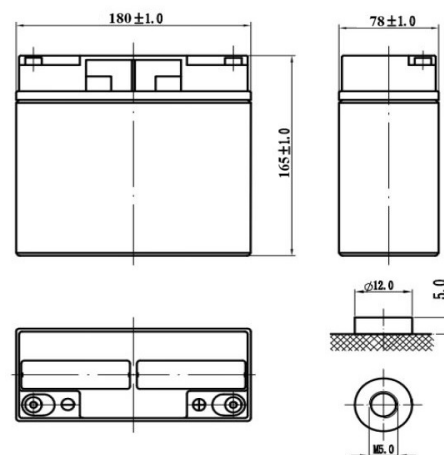
DISCHARGE SPECIFICATIONS

Recommend Discharge Current :	≤10A (0.5C)**
Max. Discharge Current :	≤20A/50A,10S
Max. Discharge Voltage :	≥11.2V
Low Voltage Protection : . . . . .	.9.2±0.4V
Reconnect Voltage : . . . . .	.10.8±0.4V
Primary Discharging Current Protection : . . . . .	.75±5A/1±0.2s
Short Circuit Protection :	220A/<500 μs

ENVIRONMENTAL SPECIFICATIONS

Charge Temperature : . . . . .	.0~45°C
Discharge Temperature :	-20~60°C
Storage Temperature :	-10~40°C
Optimal Operation Humidity :	5~95% RH/Non-condense

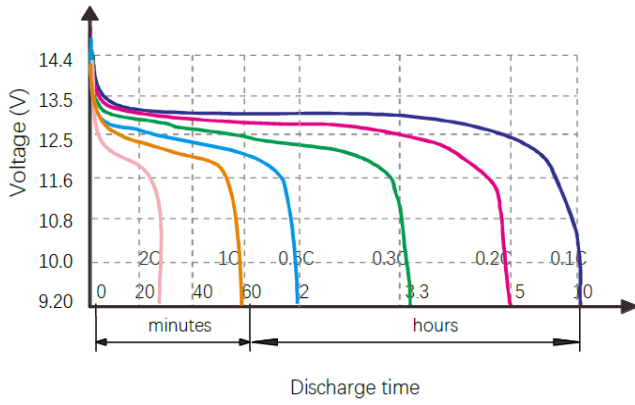
OUTLINE DIMENSION



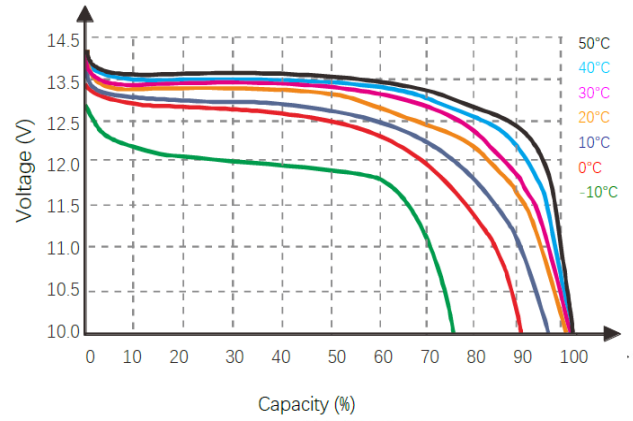
*Refer to warranty terms for cycle life performance conditions

** C=Capacity

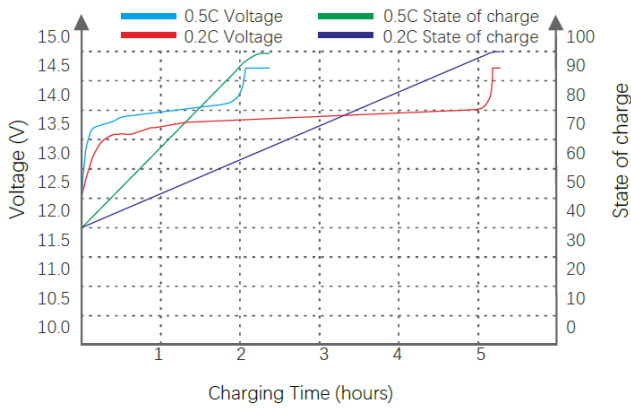
Discharge Performance (25°C)



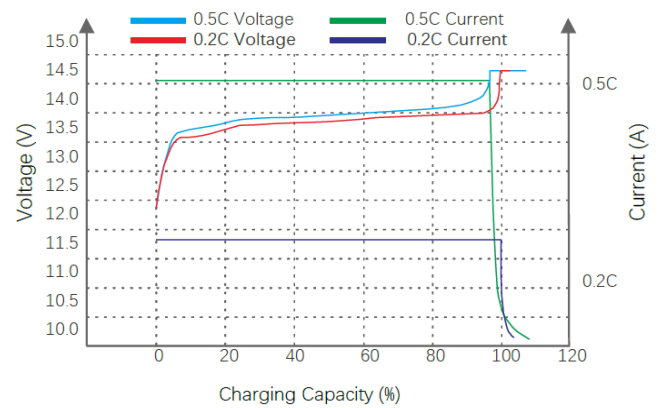
Temperature Impact on Discharge Performance (0.5C)



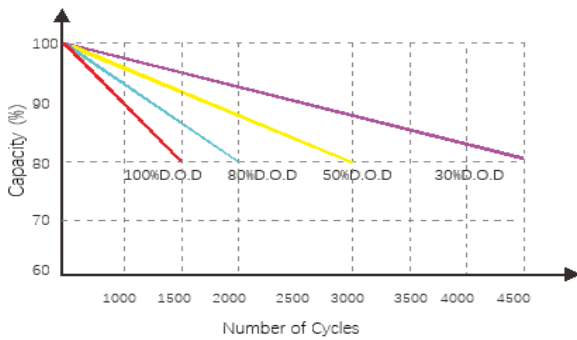
State of Charge Curve (25°C)



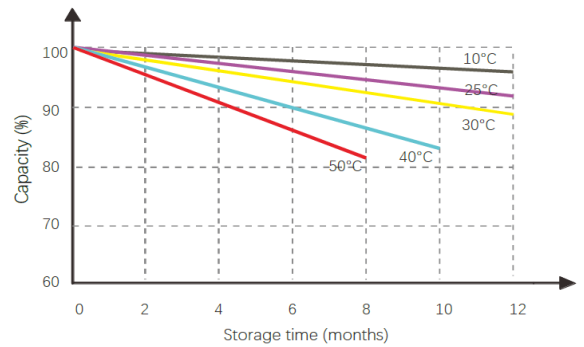
Charge Characteristics (25°C)



Cycle life in relation to Depth of Discharge (0.2C)(25°C)



Self-Discharge Characteristics



APPLICATIONS



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

CERTIFICATIONS

- UN38.3
- CE
- RoHS

SHIPPING CLASSIFICATION

- UN 3480
- Class 9