

# LiFePO4 Battery

## POW-100AH-12.8V

POWMr

### Perfect Upgrade Replacement:

The ideal upgrade replacement for lead-acid battery packs with high energy density.

### A-Grade Cells:

Safe and efficient.

### Long Cycle Life:

0.2C discharge, at 25°C and 80% DOD, cycle life exceeds 6000 cycles.

### High Capacity and Endurance:

Supports up to 1280W continuous load power, capable of powering multiple loads simultaneously.

### Comprehensive Protection:

Built-in safe, reliable, and highly compatible BMS, ensuring energy storage safety.

### More Energy Storage:

Store more energy within the same volume.

### Efficient Charging:

Maximum charging current of 100A, achieving full charge in as little as one hour.

### Flexible Configuration:

Configurable up to 4 in series and 4 in parallel, achieving a total capacity of up to 400Ah, a total voltage of up to 51.2V, and a total energy of up to 20.48kWh.



Overvoltage



Undervoltage



Overcurrent



Short Circuit



Overtemperature



## Product Overview

The POW lithium battery series delivers exceptional performance, capacity, and reliability. Utilizing the latest high-power battery technology, the POW lithium batteries are designed for applications in environmentally sensitive areas that require enhanced commercial cycle life capabilities. These batteries are widely used across industrial, residential, commercial, and private sectors, meeting a diverse range of needs. With a maintenance-free structure and advanced design features, the POW lithium series is the ideal choice for various markets, including solar and renewable energy storage, electric vehicles, golf carts, industrial equipment, floor machines, forklifts, aerial work platforms, and robotics; marine, RV, and idle-free solutions; mobile and medical equipment; as well as telecommunications, broadband, and cable TV UPS systems. The POW lithium battery series, with its superior technology and reliability, ensures optimal performance in all applications.

## BATTERY SPECIFICATION

Battery Type-Chemistry	LiFePO4
Nominal Voltage	12.8V
Nominal Capacity	100Ah
Energy Density	1280Wh
Dimensions (LxWxH)	330x171x215mm
Weight	10.5kg
Terminal Type	M8
Terminal Torque	8.5Nm
Case Material	ABS
BMS Built-in	Yes
AH Efficiency-round trip	>98%
Self-Discharging Per Month	<3%
Max in Parallel	4
Max in Series	4
Charging Voltage Range	10.8~14.6V
Recommend Charge Voltage	14V
Max Charge Voltage	14.6V
Recommend Charge Current	20A
Max Continuous Current	100A
Recommend Discharge Voltage	11.2V
Max Discharge Voltage	10.8V
Max Continuous Discharge Current	100A
Cycle Life (0.2C, 25°C@80% DOD)	6000 Cycle
Discharge Temperature	-20~55°C
Charge Temperature	0~55°C
Storage Temperature	-20~45°C

## BMS CHARACTERISTICS

Primary Charging Protection	Current: 105A	Delay Time: 20s
Second Charging Protection	Current: 200A	Delay Time: 2~3s
Primary Discharging Protection	Current: 110A	Delay Time: 30s
Second Discharging Protection	Current: 200A	Delay Time: 2~3s
Over Charge Voltage Protection	Voltage: 14.8V	Delay Time: 1~2s
Over Discharge Voltage Protection	Voltage: 10V	Delay Time: 1~2s
Temperature Protection	PCB Temperature	≥95°C
	Recover Temperature	≤85°C

## Constant Current Discharge Data (Amperes@25°C) ( Cut off voltage 10.8V)

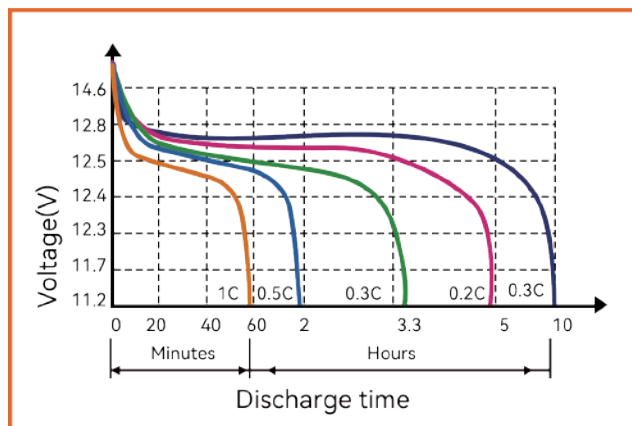
Discharging Time	1h	2h	3h	4h	5h	10h	20h
Discharging Voltage	100A	50A	33.4A	25A	20A	10A	5A

## Constant Current Discharge Data (Watts@25°C) ( Cut off voltage 10.8V)

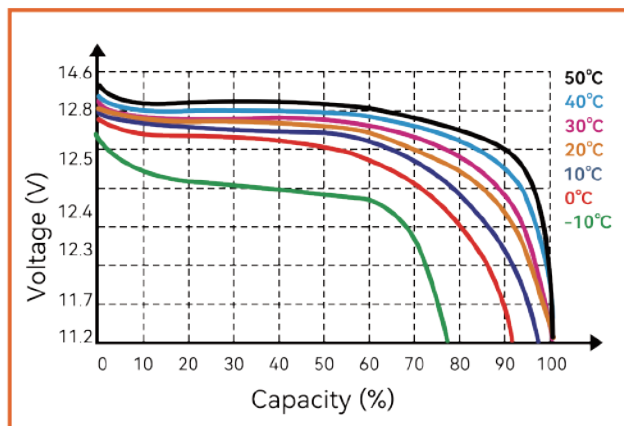
Discharging Time	1h	2h	3h	4h	5h	10h	20h
Discharging Voltage	1280W	640W	426.7W	320W	256W	128W	64W

## PERFORMANCE CURVE

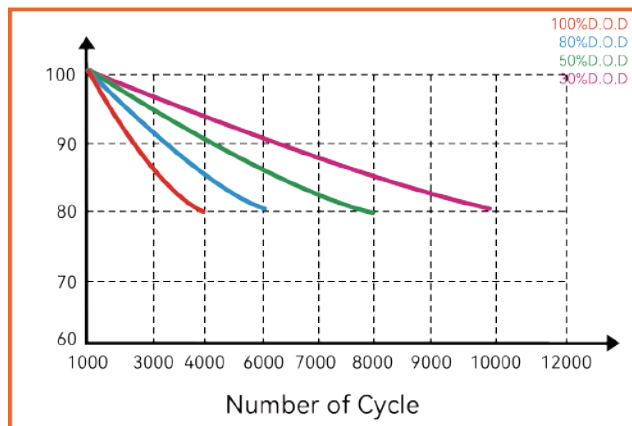
Discharge characteristics (25°C)



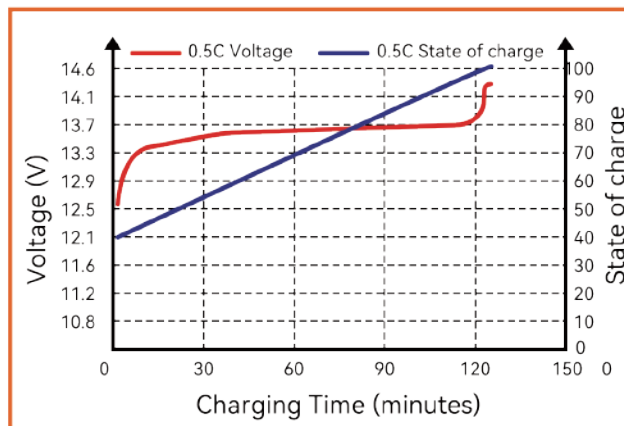
Different Temperature Discharge Curve (0.5C)



Different DOD Discharge cycle life Curve 0.2C 25°C



State of Charge Curve (0.5C, 25°C)



## Dimension



## Precautions

- Note 1:** Please always refer to the latest version of the technical manual published on our website to ensure safe and efficient operation.
- Note 2:** For parallel connections, fully discharge the batteries before connecting them in parallel, and then recharge them. For series connections, ensure the remaining capacity of each battery is the same.
- Note 3:** Parallel connections are intended only to extend backup time, not to increase output power.
- Note 4:** The company assumes no responsibility for any accidents caused by not following this user manual.