LIFePO4 Battery

POW-50AH-12.8V

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 4000 cycles.

High Capacity and Endurance:

Supports up to 640W 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 50A, 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 200Ah, a total voltage of up to 51.2V, and a total energy of up to 10240Wh.

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	50Ah
Energy Density	640Wh
Dimensions (LxWxH)	228x138x226mm
Weight	6kg
Terminal Type	M6
Terminal Torque	8.5Nm
Case Material	ABS
BMS Built-in	Yes
Self-Discharging Per Month	<3%
Max in Parallel	4
Max in Series	4
Charging Voltage Range	10.8~14.4V
Recommend Charge Voltage	14V
Max Charge Voltage	14.4V
Max Continuous Current	50A
Recommend Discharge Voltage	11.2V
Max Discharge Voltage	10.8V
Max Continuous Discharge Current	50A
Cycle Life (0.2C, 25℃@80% DOD)	4000 Cycle
Discharge Temperature	-10~60℃
Charge Temperature	0~60℃
Storage Temperature	-30~50℃

BMS CHARACTERISTICS

Primary Charging Protection	Current: 60A	Delay Time: 1-1.5s
Second Charging Protection	Current: 90A	Delay Time: 0.5-1s
Primary Discharging Protection	Current: 100A	Delay Time: 400ms
Second Discharging Protection	Current: 120A	Delay Time: 40ms
Over Charge Voltage Protection	Voltage: 14.4V	Delay Time: 0.5-1.5s
Over Discharge Voltage Protection	Voltage: 8.4V	Delay Time: 0.5-1.5s
Temperature Protection	PCB Temperature	≥98℃
	Recover Temperature	≤80℃

POWMR
SHENZHEN HEHEJIN INDUSTRIAL CO.,LTD
www.powmr.com
E-mail: support@powmr.com
Tel/Fax +86 755-28219903
Add:Henggang Street, longgang District, ShenZhen,Guangdong, China

Constant Current Discharge Data (Amperes@25℃) (Cut off voltage 10.8V)

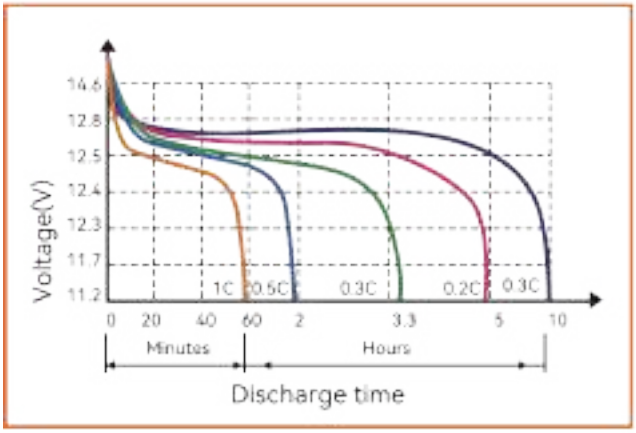
Discharging Time	1h	2h	3h	4h	5h	10h	20h
Discharging Current	50A	25A	16.6A	12.5A	10A	5A	2.5A

Constant Current Discharge Data (Watts@25℃) (Cut off voltage 10.8V)

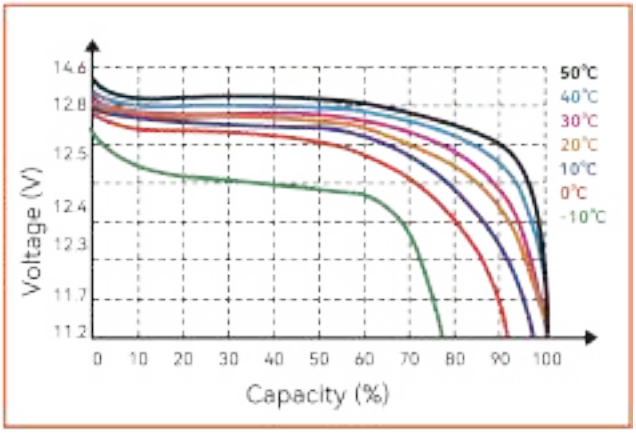
Discharging Time	1h	2h	3h	4h	5h	10h	20h
Discharging Power	640W	320W	213.3W	160W	128W	64W	32W

PERFORMANCE CURVE

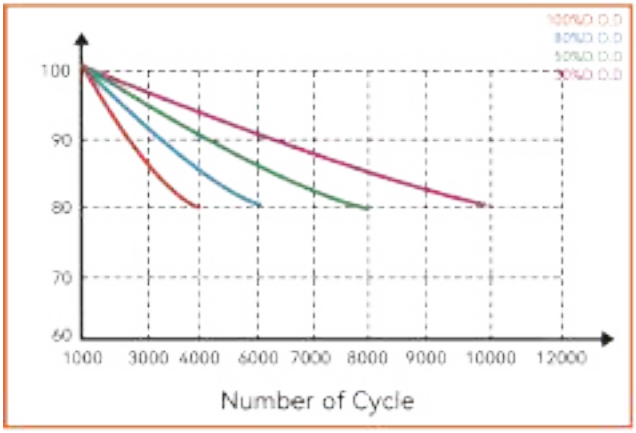
Discharge characteristics (25℃)



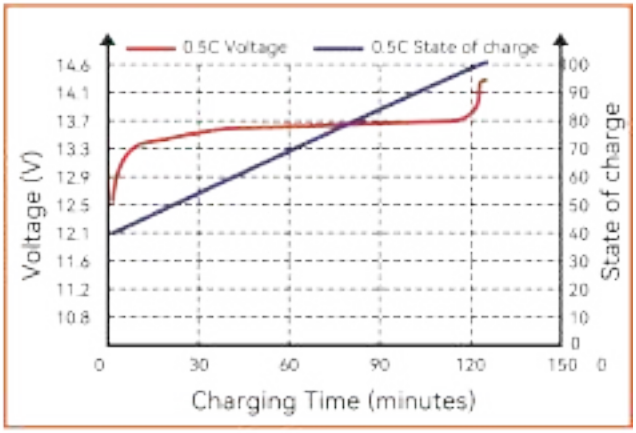
Different Temperature Discharge Curve (0.5C)



Different DOD Discharge cycle life Curve 0.2C 25℃



State of Charge Curve (0.5C,25℃)



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.

SHENZHEN HEHEJIN INDUSTRIAL CO.,LTD
www.powmr.com
Tel/Fax +86 755-28219903
E-mail: support@powmr.com
Add:Henggang Street, longgang District, ShenZhen,Guangdong, China