



LITHIUM BATTERY POWER

## 24v 50Ah



### 24 Volt Lithium Ion Battery

LBP 24v 50Ah is a high-performing deep cycle, 24 volt battery, built on patented Lithium Iron Phosphate chemistry. The LBP24v50Ah features a built in automatic battery management system (BMS) that keeps the battery running at peak performance for maximizing cell cycle life. Designed as a "drop in replacement" LBP24V50Ah is plug and play battery for any application that currently uses a lead acid, gel or agm battery.

### Overview

The LBP24v50Ah is ideal for material handling or stationary energy storage applications. The module's inherent safety, long cycle life, and zero maintenance offers end-users another alternative to lead acid by replacing with this reliable lithium ion solution performing with at least twice the run-time and <70% of the weight of similarly sized SLA batteries.



The internal Battery Management System (BMS) operates seamlessly with any application. The battery system manages all battery module parameters in real-time.

### Features

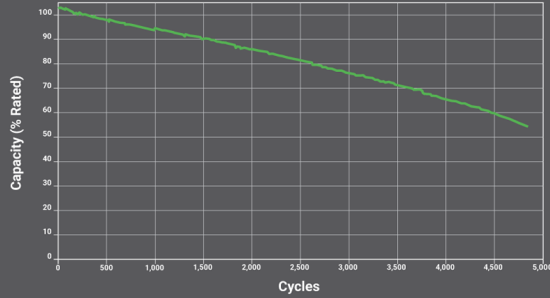
- >4000 cycles at 80% DOD
- Create systems 24 - 1000 V
- Series and/or parallel operation
- Automatic system cell balancing
- Temperature monitoring
  
- Exceptional voltage stability
- Rugged mechanical design
- Footprint of Group 31 lead acid case
- Maintenance-free
- No hydrogen generation or gassing
- **Stock available for quick delivery in US or worldwide.**

Specifications	
Nominal Voltage	25.6 V
Nominal Capacity @ 1C	50 Ah
Charge Voltage	28.8V - 29.0V
Charge Current	Recommended ≤ 25 A
	Max Continuous <sup>1</sup> 50 A
Discharge Voltage Minimum	20 V
Discharge Current Max Continuous <sup>1</sup>	50 A
Pulse Current 5 Sec	400 A
Weight	30.0 lb / 13.6 kg
Dimensions L x W x H (including terminals)	12.7"/323mm x 6.7"/171mm x 8.5"/215mm
BCI Group Number	Group 31
Terminals, Female-threaded	M8 x 1.25
DC internal resistance (max)	25 mΩ

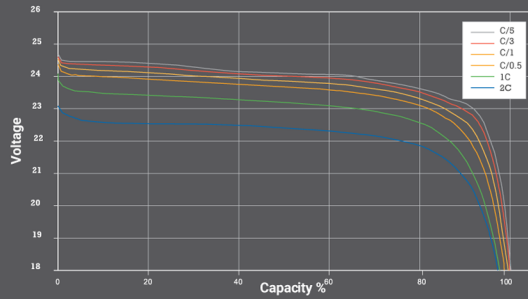
# Common Specifications

Operating Temperature	Charging: -10°C to 45°C Discharging: -20°C to 70°C
Storage Temperature	-40°C to 50°C
Operating Humidity	5% to 95%, non-condensing
Water/dust Resistance	IP56
Ingress Protection (IP) of Solids 5	Protected against harmful deposits of dust 
Ingress Protection (IP) of Water 6	Protected against strong jets of water 
Certifications	UL 1642 (cells) FCC Class B, CE
Shipping Classification	UN 3480, Class 9 UN 38.3

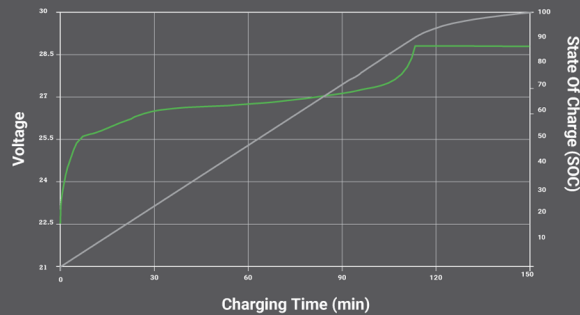
Discharge Cycle Life Performance at 25°C  
C/2 cycling (100%DOD)



Voltage Profiles at Various Rates 25°C Ambient Temperature



Typical C/2 Charging Voltage 25°C Ambient Temperature



# Battery Management System

All LBP modules include a Battery Management System (BMS). The BMS maintains all the batteries charge/dis-charge controls.

Parameters		Value
Voltage	Charging voltage cutoff	29.2±1%
Current	Maximal continuous charging current	≤100A
	Maximal continuous discharging current	≤100A
	Power consumption	<7W
Overcharge Protection	Over charge detection voltage	3.9V±0.025V
	Over charge detection delay time	0.96S~1.24S
	Over charge release voltage	3.8V±0.05V
Discharge Protection	Discharge cutoff voltage – Instant Recovery	2.5V±0.08V
	Over discharge detection voltage	2.0V±0.08V
Over Discharge Protection	Over discharge detection delay time	<180mS
	Over discharge release voltage	2.3V±0.1V
	Detection condition	Exterior short circuit
Short Circuit Protection	Detection delay time	230~500uS
	Release condition	Cut load, automatically recover
	Temperature protection	Over temperature protection

[www.LithiumBatteryPower.com](http://www.LithiumBatteryPower.com)

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Performance may vary depending on, but not limited to battery usage and application. If battery is used outside specifications, performance will diminish. All specifications are subject to change without notice. All information provided herein is believed, but not guaranteed, to be current and accurate.

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