

LITHIUM IRON PHOSPHATE

LEAD ACID REPLACEMENT
FROM ULTRALIFE



ULTRALiFE®

Ultralife Corporation serves its markets with products and services ranging from power solutions to communications and electronics systems. Through its engineering and collaborative approach to problem solving, Ultralife serves government, defence, medical and commercial customers across the globe.

Headquartered in Newark, New York, the Company's business segments include: Battery & Energy Products and Communications Systems. Ultralife has operations in North America, Europe and Asia.

ULTRALIFE

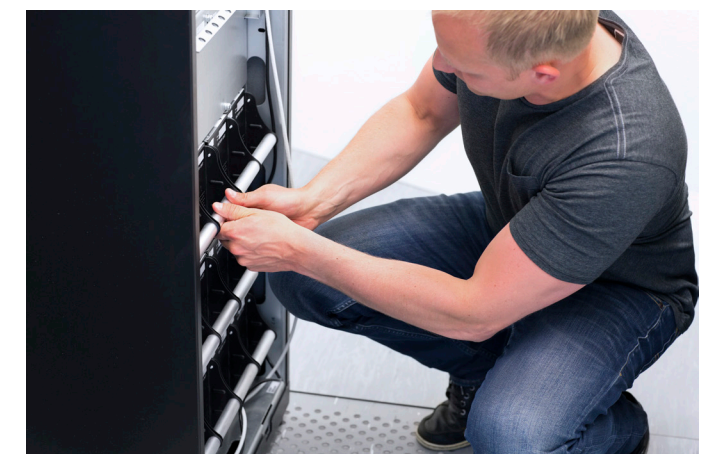


LEAD ACID REPLACEMENT LIGHT, COST EFFECTIVE, LESS SPACE

THE NEXT-GENERATION IS HERE TODAY...

ULTRALIFE Lithium Iron Phosphate (LiFePO4) batteries are the modern replacement for traditional lead acid batteries in a myriad of mission critical applications. With lower weight, higher energy, longer life, electronic protection and safety certification, ULTRALIFE LiFePO4 batteries outperform Lead Acid on almost every measure.

If you are looking to replace your old lead acid battery system or need a power source for your new device, ULTRALIFE LiFePO4 batteries couple next-generation performance with off the shelf availability.



“
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GOVERNMENT
& DEFENSE



MEDICAL



SAFETY &
SECURITY



ENERGY



INDUSTRIAL

THE CLEAR CHOICE

ULTRALIFE Lithium Iron Phosphate chemistry is the clear choice for batteries which must operate for many years without the need for servicing or replacement. The similar charging voltage means that ULTRALIFE LiFePO4 batteries can usually be transplanted into existing lead acid applications without modification.

When it comes to maintenance the ULTRALIFE LiFePO4 batteries out perform traditional Lead Acid batteries on nearly every measure; they never require topping with water, they don't require gas extraction facilities and their service life is usually 5 to 7 years, compared with around 2 years for Lead Acid batteries.

The ULTRALIFE LiFePO4 batteries are an affordable solution to many issues, especially in remote locations, while providing a much lower "total cost of ownership" solution over traditional Sealed Lead Acid (SLA) - when you also factor in the logistics and labor to replace SLA every 1-2 years, Lithium Iron Phosphate is an all-round winner.

The inclusion of fuel gauging on products such as the URB12400-U1-SMB now means the battery can accurately communicate its state of charge to your device, enhancing the user experience.

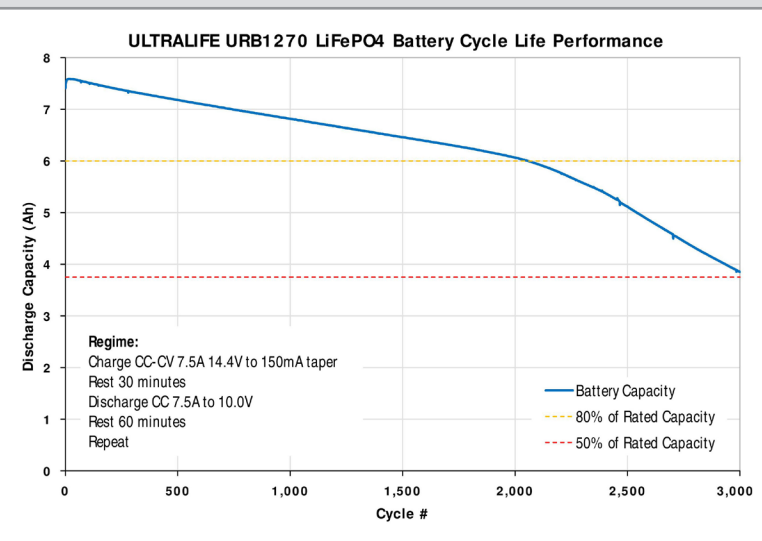
6.4V

12.8V

25.6V



“ LiFePO4 batteries can last for up to 2,000 cycles ”



SUCCESSFUL APPLICATIONS

- Oil/Gas Automation and Measurement
- Oil/Gas Production
- Automated Gate Operators
- Automated Range Target Systems
- Commercial Aerator Systems
- Commercial Livestock Feeder Systems
- Industrial Vehicle/Equipment Starter Applications
- Recreational Vehicle Back-up Power Supply
- Marine Starter and Auxiliary Power Supply System
- Solar Regenerated Back-up Power Supply
- Data Centre Back-up Power Supply
- Scooters / Wheelchairs
- Robotics
- Medical Carts
- UPS Replacement
- Solar Battery
- Fire & Emergency/Heavy Goods/Speciality Patrol Vehicles
- Floor Cleaning Machines
- Automated Ticket Machines

Contact Ultralife for your next project. Our engineering team is ready to assist.

BENEFITS AT A GLANCE

ULTRALIFE LIFEPO4 BATTERIES...

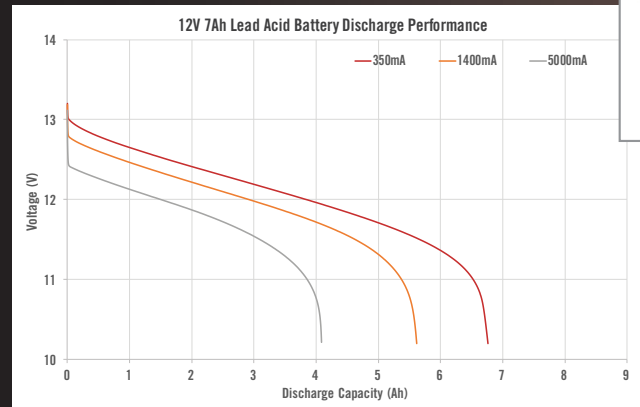
- Three times lighter than Sealed Lead Acid. Same capacity; 33lbs compared to 100lbs.
- Built-in protection to ensure the battery operates correctly and safely for a long life.
- Fully cycle from 100% charged to 100% discharged. Up to 2,000 cycles compared to 300 to 500 for Sealed Lead Acid.
- Building Blocks - connect in series or parallel to customize voltage or capacity.
- Charge with any 2 stage charger designed for use with Lead Acid batteries.
- Remain charged whilst in storage. Only need to be checked every 6 months.
- Mount in any direction.
- Require no physical maintenance.
- Fully certified for transportation and for commercial/ industrial applications.
- Active cell balancing controls to maximize capacity on every discharge cycle.
- Service life up to 7 years in commercial and industrial applications.



ULTRALIFE LiFePO4 VS LEAD ACID

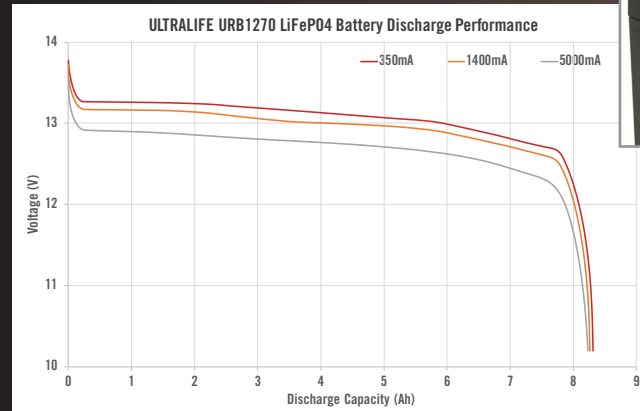
This practical example shows the outstanding performance of ULTRALIFE LiFePO4 batteries compared to traditional lead acid batteries.

LEAD ACID



The chart shows the room temperature discharge performance of a 12V 7Ah lead acid battery from a leading manufacturer. The battery voltage drops steadily during discharge and fails to meet its rated capacity, even at a benign 350mA (0.05C) discharge rate. When the battery is subjected to higher loads of 1400mA (0.2C) and 5000mA (0.7C) the voltage drops is more severe and the delivered capacity is severely reduced. As delivered energy (Watt Hours) is calculated by multiplying Voltage (V) by Discharge Capacity (Ampere hours) the resulting 'area under the curve' is severely compromised at these higher discharge rates.

ULTRALIFE LiFePO4



By comparison, the ULTRALIFE LiFePO4 URB1270 is the same size as its lead acid equivalent but half of the weight. This battery exhibits a consistently flat voltage profile throughout its discharge until energy is depleted. This superior performance characteristic is maintained, even at higher discharge currents which means more energy is delivered. In the 5000mA load test, the URB1270 delivers more than twice the energy of the lead acid battery which proves its capability to outperform lead-acid in power demanding applications.

In this head to head test, the ULTRALIFE URB1270 LiFePO4 battery demonstrates its superior performance characteristics, performance which is repeated across the entire range of ULTRALIFE LiFePO4 batteries.

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ULTRALIFE LiFePO4 batteries are three times lighter than lead acid batteries of the same energy”

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TECHNICAL SPECIFICATIONS

BATTERIES	PART NUMBER	NOMINAL VOLTAGE	RATED CAPACITY	RATED ENERGY	APPROX DIM (L x W x H)	APPROX WEIGHT	TERMINALS/CONNECTORS	UN	CB	UL	
	URB6450	6.4V	5.4Ah	34.6Wh	70 x 48 x 100 (mm)	0.4Kg	F1 Faston Tabs	●	●		
	URB1270	12.8V	7.6Ah	97.3Wh	152 x 65 x 92 (mm)	1.0Kg		●	●	●	
	URB12200		20.0Ah	256.0Wh	181 x 76 x 165 (mm)	2.9Kg	M5 Screw Terminals	●	●	●	
	URB12350		38.0Ah	486.4Wh	195 x 127 x 171 (mm)	4.7Kg	M6 Screw Terminals	●	●	●	
	URB12550		55.8Ah	714.2Wh	256 x 132 x 200 (mm)	7.9Kg	M8 Screw Terminals	●	●		
	URB121000		100.0Ah	1,280.0Wh	340 x 170 x 210 (mm)	13.9Kg		●	●		
	URB12450-U1-SMB		45.6Ah	583.7Wh	209 x 136 x 182 (mm)	5.4Kg	1/4-20 Screw Terminals	●	●		
	URB-X5		21.6Ah	276.5Wh	121 x 76 x 317 (mm)	3.4Kg	Sub-flush gold-plated contacts	●		●	
	URB0025		5.6Ah	71.7Wh	108 x 64 x 69 (mm)	0.8Kg	Molex	●	●		
	URB24200		25.6V	20.0Ah	512.0Wh	195 x 132 x 180 (mm)	7.8Kg	M6 Screw Terminals	●	●	
	URB0023-01			64.8Ah	1,658.9Wh	446 x 438 x 103 (mm)	15.9Kg	5/16-24 Female Threaded Terminals	●		

CHARGERS	PART NUMBER	INPUT TYPE	NUMBER OF BATTERIES	WEIGHT	UL	CE	FCC	NSN	ADDITIONAL INFORMATION
	UCH0062 UCH0063	AC Line Adapter	1	0.5Kg	●	●	●		Connectors: UCH0062: LD-SAE-74275 UCH0063: Alligator clips
	UCA-X5-USB	USB-C/ USB-A	1	0.5Kg	Contact Us for a Certification Overview				For use with URB-X5 only: To power USB-C & USB-A compatible devices
	UCH-X5	AC Line Adapter	2	3.5Kg (Desk)/ 2.9Kg (Wall)	●	●			For use with URB-X5 only: Supplied in desk stand configuration with a bracket for wall mounting

- Specification details are correct at the time of printing.
- For the latest data please refer to published specifications which are available on our website at www.ultralifecorp.com
- Operator & regional variations may apply to the transport of Lithium Ion batteries. Check with your operator.

ULTRALiFE[®]

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