

# URB12400-U1-SMB

## Technical Datasheet



**LITHIUM POWER**

### Li-Ion LFP Benefits over SLA

- Uniform voltage during discharge
- No need to provide trickle charging to retain battery's charge
- Significantly lighter weight for the same amount of energy
- Battery does not become gaseous during use
- Nominal voltage is maintained over a wider temperature range

### Features

- Can be properly charged using a 2 phase SLA charger
- IEC 62133, 2nd edition compliant
- Designed to work with industry standard inverters used on medical carts
- SMBus communication interface

### Applications

- Medical carts
- Scooters / wheelchairs
- UPS battery replacement
- Solar power battery
- Robotics & motor bots

### Accessories

- UCA0152 installation cable

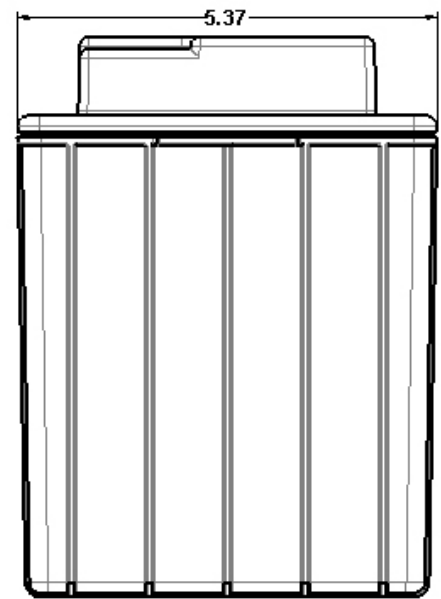
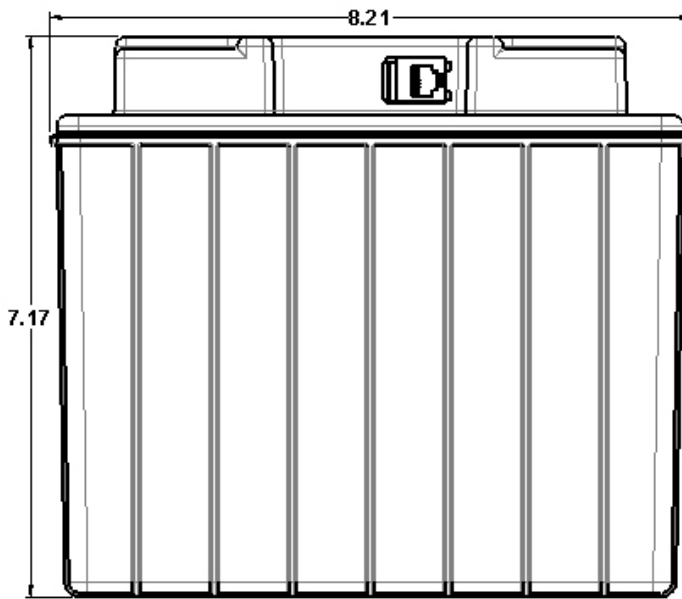
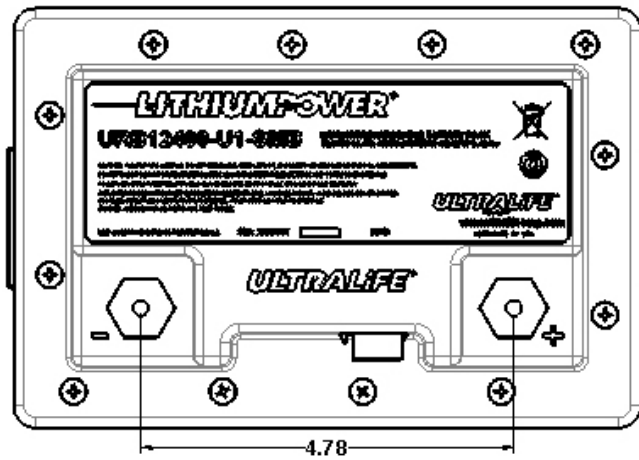
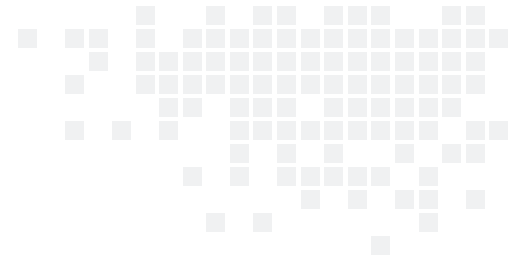
### Technical Specifications

<b>Part No.</b>	URB12400-U1-SMB	
<b>Chemistry</b>	Lithium Iron Phosphate (LFP)	
<b>IEC Designation</b>	4IFR27/66-12	
<b>Average Voltage</b>	12.8V	
<b>Nominal Capacity<sup>1</sup></b>	38.4Ah	
<b>Voltage Range</b>	10.0V - 14.6V	
<b>Max. Continuous Discharge</b>	20.0A	
<b>Max. Pulse Discharge<sup>2</sup></b>	110.0A	
<b>Energy<sup>1</sup></b>	492Wh	
<b>Energy Density</b>	91Wh/kg, 93Wh/l	
<b>Weight</b>	Approx. 5.44 ± 0.2kg (12.0 ± 0.4lbs)	
<b>Cycle Life<sup>3</sup></b>	>2000 cycles	
<b>Operating Temperature</b>	-20°C to 60°C discharging; 0°C to 45°C charging	
<b>Storage Temperature</b>	-40°C to 60°C	
<b>Internal Resistance</b>	≤35mΩ	
<b>Self-Discharge @ 23°C</b>	<5% per month	
<b>Memory Effect</b>	None	
<b>Exterior/Housing</b>	Hard plastic, PC	
<b>Terminals/Connector</b>	¼-20 screw terminals	
<b>Size</b>	Length:	208.5 ± 2mm (8.21in)
	Width:	136.4 ± 2mm (5.37in)
	Height:	182.1 ± 2mm (7.17in)
<b>Communications</b>	Physical layer:	SMBus
	Protocol:	SBD v1.1 partial compliance <sup>5</sup>
<b>State of Charge Indicator</b>	None	
<b>Protection</b>	Overcharge:	3.75V (per cell)
	Over Discharge:	2.50V (per cell)
	Over Current:	210 ± 5A (>800ms)
	Over Temperature:	65 ± 5°C
	Short Circuit; Cell Imbalance	
<b>Charging</b>	Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.6V. Limit the current to the recommended rate of 8.0A and hold 14.6V until the current declines to 0.8A. Maximum charge rate is 20.0A.	
	Alternatively, you may apply a maximum charge voltage of 13.6V (limiting the current to 8.0A) and hold indefinitely to maintain the battery in a continuous standby state-of-charge of between 80-90%.	
<b>Safety</b>	Material Safety Datasheet - MSDS00152 Refer also to Safety Guide UBM-5112	
<b>Certifications</b>	UN 38.3; IEC 62133:2012	
<b>Transportation</b>	Class 9 International and within U.S. <sup>4</sup> Excepted when shipped by motorcar or rail within U.S.	
<b>Harmonized Tariff Schedule</b>	8507.60.0000	
<b>Compatibility</b>	Qualified for use with medical cart inverters from TrippLite and Ametek Powervar (see page 2 of this document for details)	

### Notes

1. Using a C/5 discharge rate at 25°C.
2. Maximum pulse width of between 800ms and 15ms.
3. Number of consecutive C/5 rate discharges and recommended charges at 25 ± 5°C until the battery reaches 80% of initial capacity.
4. Transportation regulations, classifications and lithium content are available on the Ultralife website.
5. Contact Ultralife for a complete list of available SBS fields and commands.

## Dimensions



## Compatibility

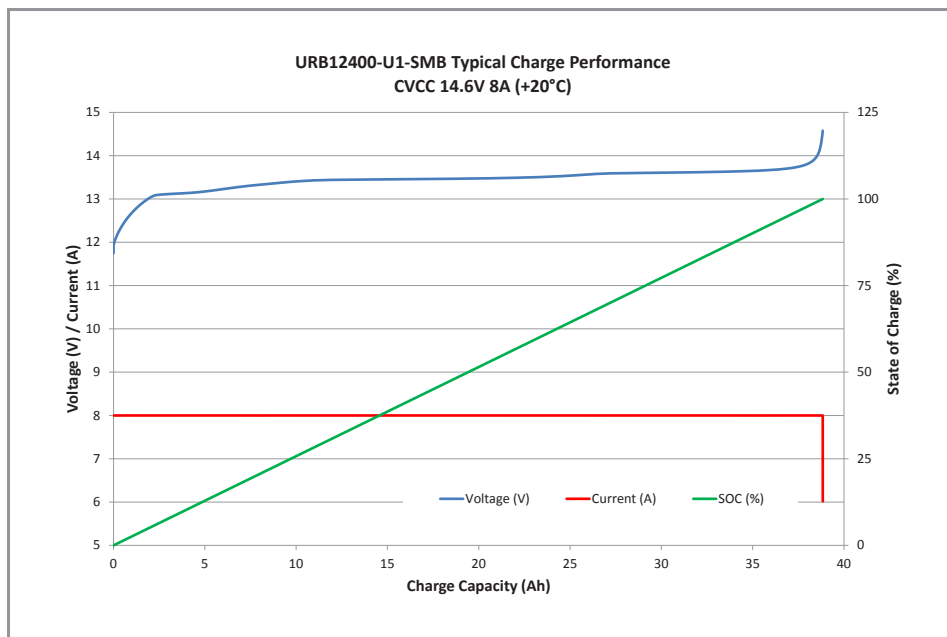
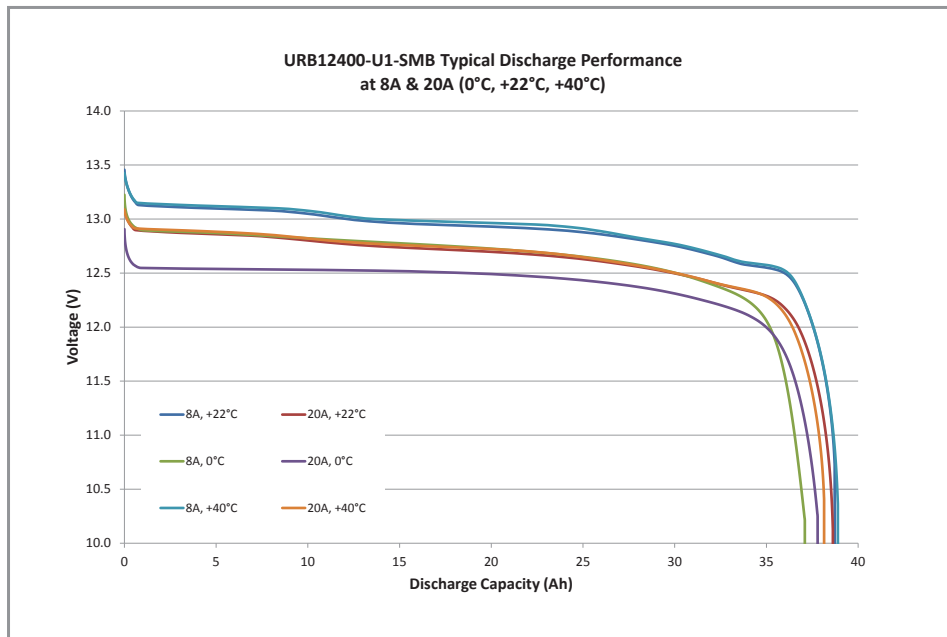
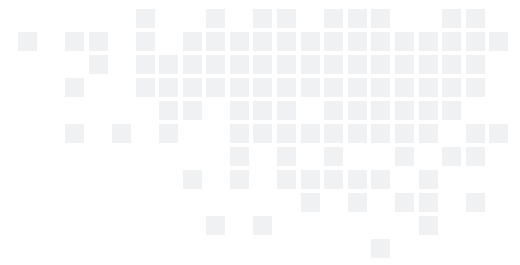
The Ultralife URB12400-U1-SMB is qualified for use with the following medical cart inverters:

- Triplite 'Power Modules' HC150SL, HCINT150SL or HC150ATD
- Ametek Powervar 'Mobile Power Managers' ABCE150-11M2 or ABCE150-22M2.

The Ultralife URB12400-U1-SMB is a direct replacement\* for the Valence Technology U1-12RT or U1-12RJ, the Inventus Power U1-40 or the Power-Sonic PSL-12450

\* Some legacy medical inverter systems may require a firmware update to fully utilize battery fuel gauging. When used in other, non-medical inverter systems please contact Ultralife for compatibility advice.

# Performance Graphs



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