

# **Technical Datasheet**





### **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
- Nominal voltage is maintained over a wider temperature range

### **Features**

- · Integrated carry handles
- Can be properly charged using a 2 phase SLA charger
- · IEC62133, 2nd edition compliant

### **Applications**

- · Scooters / wheelchairs
- · UPS battery replacement
- · Solar power battery

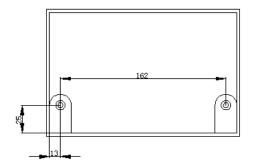
Constant Voltage Charge at 23°C	Voltage Regulation	Initial Current	Maximum Current
Standby Use	13.6V	7.6A	38A
Cycle Use	14.4V	19A	38A

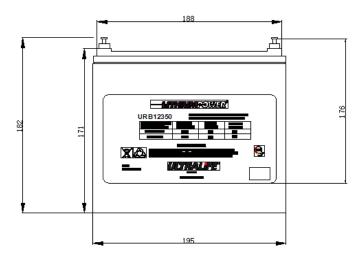
(limiting the current to 7.6A) and hold indefinitely to maintain the battery in a continuous standby state-of-charge of between 70-90%.  Safety  Material Safety Datasheet - MSDS00152 Refer also to Safety Guide UBM-5112  Certification  IEC621333-2(CB ref: FI-48789) SGS NA listed Mark(UL2054) UN38.3				
Chemistry         Lithium Iron Phosphate (LFP)           IEC Designation         4lFpR27/66-10           Average Voltage         12.8V           Nominal Capacity¹         38.0Ah           Voltage Range         10.0V - 14.4V           Max. Continuous Discharge²         250 ± 10A           Energy¹         486Wh           Energy bensity         115Wh/kg, 120Wh/l           Weight         Approx. 4.7 ± 0.1kg           Cycle Life²         21500 cycles           Operating Temperature         0°C to 45°C charging           0°C to 45°C charging         0°C to 45°C charging           Storage Temperature         0°C to 40°C           Internal Resistance         35mΩ           Self-Discharge @ 23°C         5% per month           Memory Effect         None           Exterior/Housing         Hard plastic, ABS           Terminals/Connector         M6 Screw Terminals           Size         Length:         195 ± 2mm (7.71in)           Width:         127 ± 2mm (5.0in)           Height:         1711 ± 2mm (6.73in)           Width:         127 ± 2mm (5.0in)           Height:         171 ± 2mm (6.73in)           Over Charge:         2.90V (per cell)           Over Charge: <th>Technical Specification</th> <th></th> <th></th>	Technical Specification			
IEC Designation	Part No.	URB12350		
IEC Designation	Chemistry	Lithium Iron Phosphate (LFP)		
Average Voltage         12.8V           Nominal Capacity¹         38.0Ah           Voltage Range         10.0V - 14.4V           Max. Continuous Discharge²         250 ± 10A           Energy¹         486Wh           Energy Density         115Wh/kg, 120Wh/l           Weight         Approx. 4.7 ± 0.1kg           Cycle Life³         >1500 cycles           Operating Temperature         -20° C to 60° C discharging 0° C to 45° C charging           Storage Temperature         0° C to 40° C           Internal Resistance         ≤35mΩ           Self-Discharge @ 23° C         <5% per month           Memory Effect         None           Exterior/Housing         Hard plastic, ABS           Terminals/Connector         M6 Screw Terminals           Size         Length: 195 ± 2mm (7.71in) Width: 127 ± 2mm (5.0in) Height: 171 ± 2mm (6.73in)           Communications         None           State of Charge Indicator         None           Protection         Over Current: 250 ± 30A (5-20ms)           Over Discharge: 2.00V (per cell)         Over Current: 250 ± 30A (5-20ms)           Over Current: 250 ± 30A (5-20ms)         Over Current: 65 ± 5°C           Charging         Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.4V. Limit	IEC Designation	. ,		
Nominal Capacity¹         38.0Ah           Voltage Range         10.0V - 14.4V           Max. Continuous Discharge²         250 ± 10A           Energy¹         486Wh           Energy Density         115Wh/kg, 120Wh/I           Weight         Approx. 4.7 ± 0.1kg           Cycle Life³         >15500 cycles           Operating Temperature         0°C to 46°C clascharging 0°C to 45°C charging           O°C to 40°C         Internal Resistance           Sibrage Temperature         0°C to 40°C           Internal Resistance         ≤35mΩ           Self-Discharge @ 23°C         <5% per month           Memory Effect         None           Exterior/Housing         Hard plastic, ABS           Terminals/Connector         M6 Screw Terminals           Size         Length:         195 ± 2mm (7.71in)           Width:         127 ± 2mm (6.0in)           Height:         171 ± 2mm (6.73in)           Communications         None           State of Charge Indicator         None           Protection         Overcharge:         3.90V (per cell)           Over Discharge:         2.00V (per cell)           Over Current:         250 ± 30A (5-20ms)           Over Temperature:         65 ± 5°C	Average Voltage			
Voltage Range   10.0V - 14.4V		· <del>- · · ·</del> ·		
Max. Pulse Discharge²         250 ± 10A           Energy¹         486Wh           Energy Density         115Wh/kg, 120Wh/l           Weight         Approx. 4.7 ± 0.1kg           Cycle Life³         >1500 cycles           Operating Temperature         0°C to 45°C charging           O'C to 45°C charging         0°C to 49°C           Internal Resistance         ≤35mΩ           Self-Discharge @ 23°C         <5% per month           Memory Effect         None           Exterior/Housing         Hard plastic, ABS           Terminals/Connector         M6 Screw Terminals           Size         Length: 195 ± 2mm (7.71in)           Width: 127 ± 2mm (5.0in)         Height: 171 ± 2mm (6.73in)           Communications         None           State of Charge Indicator         None           Protection         Over Charge: 3.90V (per cell)           Over Discharge: 2.00V (per cell)         Over Current: 250 ± 30A (5-20ms)           Over Temperature: 65 ± 5°C         Short Circuit           Cell Imbalance         Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.4V. Limit the current to the recommended rate of 7.6A and hold 14.4V until the current declines to 760mA. Maximum charge rate is 38.0A.           Alternatively, you may apply a maximum charge rate is 38.0A.				
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Energy Density         115Wh/kg, 120Wh/l           Weight         Approx. 4.7 ± 0.1kg           Cycle Life³         >1500 cycles           Operating Temperature         -20°C to 60°C discharging 0°C to 45°C charging           Storage Temperature         0°C to 40°C           Internal Resistance         ≤35mΩ           Self-Discharge @ 23°C         <5% per month           Memory Effect         None           Exterior/Housing         Hard plastic, ABS           Terminals/Connector         M6 Screw Terminals           Size         Length: 195 ± 2mm (7.71in) Width: 127 ± 2mm (6.73in)           Width: 127 ± 2mm (6.73in)         Width: 127 ± 2mm (6.73in)           Communications         None           State of Charge Indicator         None           Protection         Overcharge: 3.90V (per cell)           Over Discharge: 2.00V (per cell)         2.00V (per cell)           Over Temperature: 65 ± 5°C         5°C           Short Circuit         Cell Imbalance           Charging         Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.4V. Limit the current to the recommended rate of 7.6A and hold 14.4V until the current declines to 760mA. Maximum charge rate is 38.0A.           Alternatively, you may apply a maximum charge voltage of 13.6V (limiting the current to 7.6A) and hold indefinitely to	_			
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Storage Temperature 0°C to 40°C Internal Resistance ≤35mΩ  Self-Discharge @ 23°C  Self-Discharge @ 23°C  Self-Discharge @ 23°C  Self-Discharge @ 23°C  Memory Effect  None  Exterior/Housing  Hard plastic, ABS  Terminals/Connector  M6 Screw Terminals  Size  Length: 195 ± 2mm (7.71in) Width: 127 ± 2mm (6.0in) Height: 171 ± 2mm (6.73in)  Communications  None  State of Charge Indicator  Protection  Over Current: 250 ± 30A (5-20ms) Over Current: 250 ± 30A (5-20ms) Over Temperature: 65 ± 5°C Short Circuit Cell Imbalance  Charging  Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.4V. Limit the current to the recommended rate of 7.6A and hold 14.4V until the current to the recommended rate of 7.6A and hold indefinitely to maintain the battery in a continuous standby state-of-charge of 13.6V (limiting the current to 7.6A) and hold indefinitely to maintain the battery in a continuous standby state-of-charge of between 70-90%.  Safety  Material Safety Datasheet - MSDS00152 Refer also to Safety Guide UBM-5112  Certification  IEC621333-2(CB ref: FI-48789) SGS NA listed Mark(UL2054) UN38.3  Transportation  Class 9 International and within U.S.⁴ Excepted when shipped by motorcar or rail within U.S.	-		~	
Internal Resistance   \$35mΩ   \$5% per month				
Self-Discharge @ 23°C   <5% per month	Storage Temperature	0°C to 40°C		
Memory Effect     None       Exterior/Housing     Hard plastic, ABS       Terminals/Connector     M6 Screw Terminals       Size     Length: Width: 127 ± 2mm (5.0in) Height: 171 ± 2mm (6.73in)       Communications     None       State of Charge Indicator     None       Protection     Overcharge: 3.90V (per cell) Over Discharge: 2.00V (per cell) Over Current: 250 ± 30A (5-20ms) Over Temperature: 65 ± 5°C Short Circuit Cell Imbalance       Charging     Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.4V. Limit the current to the recommended rate of 7.6A and hold 14.4V until the current declines to 760mA. Maximum charge rate is 38.0A. Alternatively, you may apply a maximum charge voltage of 13.6V (limiting the current to 7.6A) and hold indefinitely to maintain the battery in a continuous standby state-of-charge of between 70-90%.       Safety     Material Safety Datasheet - MSDS00152 Refer also to Safety Guide UBM-5112       Certification     IEC621333-2(CB ref: FI-48789) SGS NA listed Mark(UL2054) UN38.3       Transportation     Class 9 International and within U.S. * Excepted when shipped by motorcar or rail within U.S.	Internal Resistance	≤35mΩ		
Exterior/Housing	Self-Discharge @ 23°C	<5% per month		
Terminals/Connector  M6 Screw Terminals  Length: 195 ± 2mm (7.71in) Width: 127 ± 2mm (5.0in) Height: 171 ± 2mm (6.73in)  Communications  None  State of Charge Indicator  Protection  Over Charge: 3.90V (per cell) Over Discharge: 2.00V (per cell) Over Current: 250 ± 30A (5-20ms) Over Temperature: 65 ± 5°C Short Circuit Cell Imbalance  Connect the battery to a DC power source using correct polarity and apply a maximum voltage of 14.4V. Limit the current to the recommended rate of 7.6A and hold 14.4V until the current declines to 760mA. Maximum charge rate is 38.0A.  Alternatively, you may apply a maximum charge voltage of 13.6V (limiting the current to 7.6A) and hold indefinitely to maintain the battery in a continuous standby state-of-charge of between 70-90%.  Safety  Material Safety Datasheet - MSDS00152 Refer also to Safety Guide UBM-5112  Certification  IEC621333-2(CB ref: FI-48789) SGS NA listed Mark(UL2054) UN38.3  Transportation  Class 9 International and within U.S. Excepted when shipped by motorcar or rail within U.S.	Memory Effect	None		
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Certification  IEC621333-2(CB ref: FI-48789)  SGS NA listed Mark(UL2054)  UN38.3  Transportation  Class 9 International and within U.S. <sup>4</sup> Excepted when shipped by motorcar or rail within U.S.	Safety			
motorcar or rail within U.S.	Certification	IEC621333-2(CB ref: FI-48789) SGS NA listed Mark(UL2054)		
Harmonized Tariff Schedule 8507.60.0020	Transportation	Class 9 International and within U.S. <sup>4</sup> Excepted when shipped by motorcar or rail within U.S.		
	Harmonized Tariff Schedule	8507.60.0020		

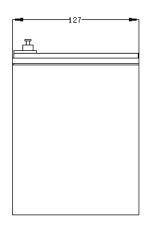
#### **Notes**

- (1) Using a C/5 discharge rate at 25°C.
- (2) Maximum pulse width of between 5ms and 20ms.
- (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 China website.

## **Dimensions**









#### **Bar Code Detail:**

(Example: 190401190412000001)

1st six digits (190401) = YYMMDD Cell Assembly Date

2nd six digits (190412) = YYMMDD Battery Pack Assembly Date

Final six digits (000001) = Battery Pack Serial Number