

1. Specifications

No.	Item	General Parameter	Remark
1	Nominal Voltage	12.8V	
2	Rated Capacity	120Ah	at 0.2 C
3	Cycle Life	≥4000 cycles	Charge: CC@0.2C to 14.6V, then CV till current to 0.05C; Rest: 30min; Discharge: 0.2C to 10.0V; Temperature: 20±5°C; Higher than 70% of the Initial Capacity of the Cells;
4	Discharge Cut-off Voltage	10.0V	
5	Charging Cut-off Voltage	14.6V	
6	Cell Type	IFR 32650	Nickel plated steel
7	Recommend Charge Current	20A ~50A	0.2C~0.5C
8	Max. Charge Current	100A	1C
9	Max. Continuous Discharge Current	100A	Peak: 250A, @ <10s
10	Operation Temperature	Charge: 0~55°C	
		Discharge: -20~65°C	
		Storage: 0~45°C	
11	Self-discharge Rate	<3%/month	
12	Package	ABS Plastic case	
13	Weight	Approx.: 14Kg	
14	Dimension (L*W*H)	329*172*214mm(±2mm)	
15	Bluetooth function		

2. Product Structure Design

Product appearance (for reference only)



3. Test Conditions, Methods and Electrical Performance

3-1 Test conditions

All tests shall be done under temperature: 15°C~35°C, relative humidity: (RH) 25%~85%, air pressure: 86kPa~106kPa except special appointment.

3-2 Measuring apparatus

- a) Voltage is measured by D.C. voltmeter which precision is higher than 0.5 grade and self resistance is higher than 1kΩ/V;
- b) Current is measured by D.C. meter which precision is higher than 0.5 grade;
- c) Temperature is measured by thermometer which has proper measuring range and division value is lower than 0.5°C ;
- d) The timer used in measuring should be degressed in hour, minute and second, and should have degree of accuracy no more than ±1%

3-3 Standard charge

Charge the battery with DC stabilized power supply 14.6V, constant-current 0.2C(A) until current reach to 0.05C(A)

3-4 Standard discharge

After battery charged by (3-3) , discharge the battery with constant current 1C(A) until the battery reach to over discharge protection or total voltage reach to 10V;

3-5 Battery capacity

Discharge battery by (3-4) , and write down discharge time (hour), then capacity (Ah)=0.5C (A) * discharge time (hour);



3-6 Electrochemistry performance

Items	Test Method	Technical requirements
20°C discharge capacity	Battery charge with standard methods, discharge at 1C(A), write down discharge capacity	≥95% nominal capacity
55°C discharge capacity	Battery charge with standard methods, stored for 5h in 55°C±2°C, then discharge at 1C (A) to cut-off voltage, write down discharge capacity	≥95% nominal capacity
Charge retain ability and recover capability	Battery charge with standard methods, stored for 28d in normal temperature 7d in 55°C,	capacity retention rate≥80% capacity recover rate≥90%
Multiplying power discharge capacity	Battery charge with standard methods, discharge at 1C, write down discharge capacity	≥80% nominal capacity
Cycle life	Under the condition of 20°C±5°C, charge the battery in 0.5C(A); discharge at 1C (A) to terminal condition, repeat like this.Test the capacity every 25 times in standard charge and discharge, stop testing when the capacity is lower than 80%.	≥4000 cycles



4. Product Storage & Transportation

Storage	Transportation	Maintainance
<p>If the battery pack needs to be stored for a long time, charge the battery for 50% capacity (after discharge, charge by charger for 2~3h every 3 months).</p> <p>Battery pack and the charger should be stored in clean, dry and ventilating place, and should not be together with corrosive material, keep the battery away from fire and heat source.</p>	<p>Battery pack and charger should be transported after packaging, and should avoid severe vibrating, impacting , extrusion, and direct light and rain. They can be transported with automobile, train, ship and plane, etc.</p>	<p>a) The battery pack should be stored in 40%~60% state-of-charge.</p> <p>b) In the process of maintainance, don't assemble and disassemble the battery without permission, other wise, the performance of battery will descend.</p> <p>c) Don't disassemble the battery without permission.</p>

5. Warnings

- * Do not immerse the battery into water or seawater
- * Do not use, leave or charge battery near a heat source such as fire or heater.
- * Do not inversely connect positive and negative polar
- * Do not put the battery in fire or heat the battery.
- * Do not short-circuit the battery with wires or other metals.
- * Do not pierce the shell with nails or other sharp objects. Do not hammer or tread the pack.
- * Do not disassemble the pack and battery in any way.
- * Do not put the battery pack in microwave oven or pressure vessels.
- * Do not use the battery in extremely thermal environment, such as direct light or cars in hot day. Otherwise, the battery will overheats and the performance and life of battery will be influenced.
- * If the battery leaks or smells, move it away from open fire. The battery should be used after fully charged in the first use.
- * If the battery pack smells, fevers, is out of shape, color changes or any other abnormal phenomena which the battery can't be used, if the battery is being charged or used, please take it out of the charger or electrical equipment.
- * If the battery leaks and the electrolyte get into the eye, do not rub eye. Instead, rinse eye with clean water, and seek medical attention immediately.
- *Temperature will influence discharge capacity, if the temperature exceeds standard environment temperature (25±5°C) , discharge capacity will reduce.