

**SHENZHEN PENGCHENG
NEW ENERGY TECHNOLOGY CO., LTD**

Product Specification

Model : PC-SSL12 -026-02-N

1. Scope

This product specification describes the requirements for the rechargeable Lithium-ion battery pack with protection circuit for detecting function of over-charge, over-discharge, over current etc. which be manufactured and supplied by Shenzhen PCHNE Technology Co., LTD.,

2. Product Description

2.1 Cell type : 18650 cell with 2200mAh

2.2 Battery type : 3S12P battery with PCM

3. Battery Pack Basic Characteristic

No.	Item	Specification	Notes
1	Cell Type	18650-2200mAh	
2	Array Mode	3S12P	
3	Nominal Capacity	26Ah at 23±2°C	Standard charge/discharge
4	Minimum Capacity	26.4Ah	
5	Nominal Voltage	11.1V	
6	Energy	332.64Wh at 23±2°C	
7	AC Impedance	≤100mΩ	At 1kHz @100%SOC
8	Charging Voltage	12.6±0.10V	4.2V per cell
9	Discharge End Voltage	8.25±0.10V	2.75V per cell
10	Standard Charging Current	10A	
11	Max. Charge Current	10A	
12	Standard Discharging Current	10A	
13	Max. Discharge Current	15A	

14	Overcharge Protection Threshold	4.25V per Cell	Release condition 4.05V/cell			
15	Over Discharge Protection Voltage Threshold	2.5V per Cell	Release condition 2.5V/cell			
16	Short Circuit Current Protection Function	Yes	Exterior short circuit			
17	Cycle Life	≥ 700 cycles	With 70% initial capacity			
18	Operating Temperature	0°C ~ 45°C	Charging Operating			
		-20°C ~ 60°C	Discharging Operating			
19	Storage Characteristic	1 month	Temperature : -20°C ~ 45°C			
		3 months	Temperature : -20°C ~ 40°C			
		One year	Temperature : -20°C ~ 25°C			
20	Relative Humidity for Storage	<75%RH				
21	Charge Retention and Capacity Recovery Characteristic	Charge Retention Rate $\geq 90\%$ and Capacity Recovery Rate $\geq 95\%$.	Storage the battery for 28d at 25±2°C after fully charge with standard charge method.			
22	Discharge Capacity at Different Temperature after Standard fully Charging.	Discharge Temperature	-20°C	0°C	23°C	60°C
		Discharge Capacity (2A)	$\geq 50\%$	$\geq 80\%$	100%	$\geq 97\%$

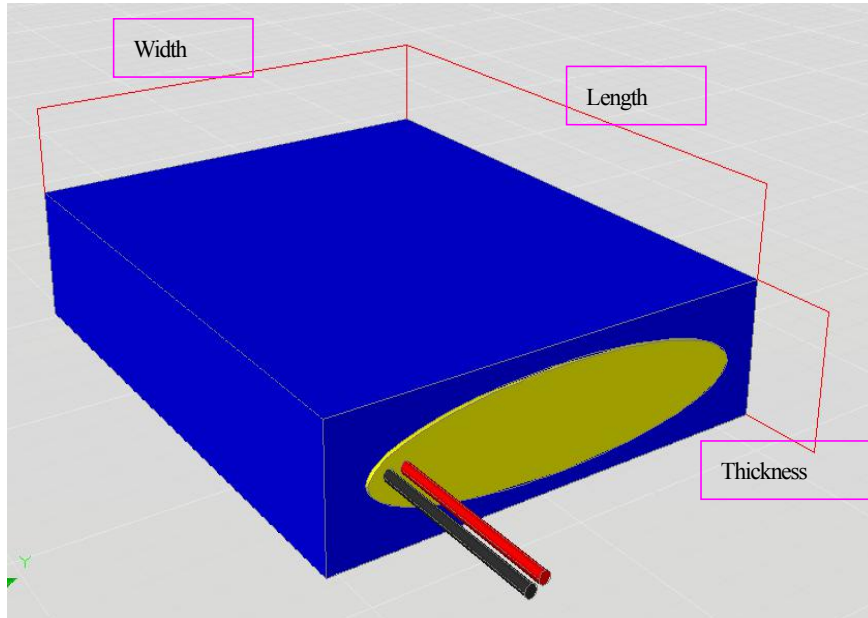
4. Battery Mechanical Characteristics

No.	Item	Specification	Test Method and Condition
1	Vibration Test	No explosion, No leakage and No fire.	After standard charging, fixed the cell to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz an 55Hz, the excursion of the vibration is 1.6mm. The cell shall be vibrated for 30 minutes per axis of XYZ axes.
2	Drop Test	No explosion, No leakage and No fire.	After standard charging, the battery is to be dropped from a height of 1 meter twice onto concrete ground.

5. Battery Safety Characteristics

No.	Item	Specification	Test Method and Condition
1	Short Circuit , 20°C	No explosion, No fire and he Temperature of the surface of battery is lower than 150°C	After standard charging and put the battery into a fume hood, and connect the Negative terminal and Positive terminal directly with a Cu wire (the wire's resistance should be lower than 50mΩ). Record the surface temperature of battery during the test and stop the test when the temperature decreases to about 10°C lower than the peak temperature during whole test. Note: this test is performed without PCM
2	Heating Test	No explosion, No fire	After standard charging and put the battery into oven convection or circulating air oven. The temperature of oven is to be raised with a rate of 5±2°C/min to a temperature of 130±2°C and last for 10 minutes.
3	Impact Test	No explosion, No fire	After standard charge, Place the battery on a flat surface. A 5 kg article is to be dropped from a height of 100cm onto the sample. The battery is allowed to sharp change.

6. Product Scheme and Characteristic



No.	Item	Specification	Notes
1	Product Size: Length	250±5.0mm	
2	Product Size: Width	210±3.0mm	
3	Product Size: Thickness	20±2.0mm	
4	Positive terminal type	UL 16#AWG	200mm
5	Negative terminal type	UL 16#AWG	200mm
6	Product Weight	1.87±0.1Kg	
7	Delivery Capacity	35%~55%SOC	

7. Storage Conditions

- ◆ When the battery pack to be long-term stored, charge the battery pack to about 60%SOC, store in dry and ventilated place, charge 5h for every 3 months with 2A current.
- ◆ The battery pack and charger should be stored in clean, dry and ventilated place, avoid contacting with corrosive materials and be away from fire and heat.

8. Product Responsibility

- ◆ PCHNE assume no responsibility for the accident of not operating in accordance with the specification.
- ◆ If the specifications, raw materials, production process or production control systems is changed, the change will vary depending on the quality and reliability of data written notice to the customer.

9. Battery Handling Precautions

- ◆ Don't immerse battery in water or allow it to get wet!
- ◆ Don't charge, use and store battery near a heat source such as fire heater! If the battery leaks or releases strange odor, pls remove it from place near fire place immediately. Fully charge the battery before first-time using.
- ◆ Don't reverse the positive and negative pole of battery!
- ◆ Don't throw the battery into fire or heat it!
- ◆ Don't short-circuit battery with wire or other metal objects!
- ◆ Don't nail, knock or trample the battery!
- ◆ Don't disassemble the battery in any way!
- ◆ Don't put the battery into microwave oven or pressure vessel!
- ◆ If the battery gives off odor, gets heat, deformation, discoloration or appears and abnormal behaviors, stop using it. Please remove the battery from electrical appliances and stop using it if the battery is being used or charged!
- ◆ Don't use battery in a very hot environment, such as under direct sunlight or in car on hot day. Otherwise, the battery will overheat which will affect battery performance and shorten battery life!
- ◆ If the battery leaks and electrolyte leakage enters into the eyes, don't rub, rinse with water immediately and seek immediate medical assistance. If not in time, eyes will be hurt!
- ◆ Ambient temperature will affect the discharge capacity of battery, if the ambient temperature is beyond the standard environment ($23\pm 2^{\circ}\text{C}$), the discharge capacity will be changed.

10. Special Considerations

- ◆ During charging process, if there has odor or unusual noise, please stop charging immediately.
- ◆ During discharging process, if there has odor or unusual noise, please stop discharging immediately.
- ◆ If there have above behavior during your using process, please contact the PCHNE, do not disassemble by yourself.