

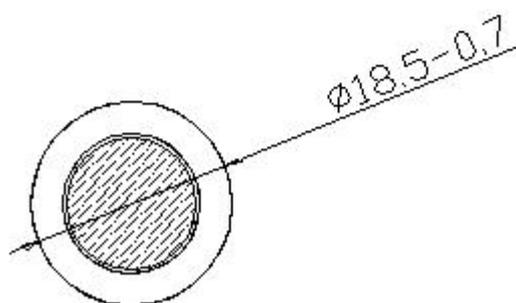
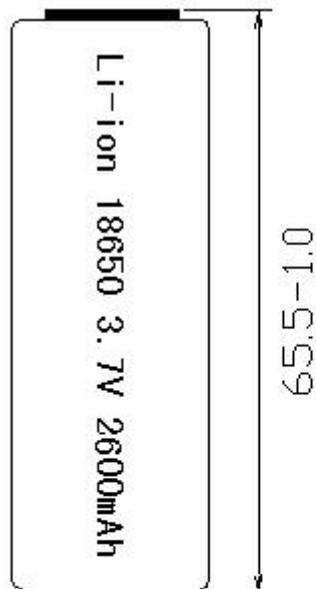
1 .Scope

This specification describes the basic performance, technical requirement, testing method, warning and caution of the Li- ion cylindrical rechargeable battery.

2. Model

ICR18650-26M

3. Appearance and Dimension:



4. Specification

NO.	Item	Specifications
4.1	Typical Capacity	2600mAh @ 0.2C Discharge
	Minimum Capacity	2580mAh @ 0.2C Discharge
4.2	Nominal voltage	3.7V
4.3	Standard Charge	CC/CV,0.2C, 4.20V
4.4	Standard Discharge	CC, 0.2C, 3.00V
4.5	End-of-charge Voltage	4.20V±0.05V
4.6	End-of-charge Current	0.02C (At CV mode)
4.7	End-of-discharge Voltage	3.00 V
4.8	Charging Time	8.0 hours (standard charge)
4.9	Quick Charge Current	2600mA (1.0C rate)
4.10	Quick Discharge Current	5200mA (2.0C rate)
4.11	Max Discharge Current	7800mA (3.0C rate)
4.12	Initial Impedance	Max: 55mΩ
4.13	Weight	Approx: 45±2g
4.14	Dimension	Diameter: max. 18.5mm Height: max. 65.5mm
4.14	Operating temperature	Charging: 0-45°C Discharging: -20-60°C
4.15	Storage temperature	-5-35°C
4.16	Storage Humidity	≤75% RH
4.17	Appearance	Without scratch, distortion, contamination and leakage
4.18	Standard environmental condition	Temperature : 25±2°C Humidity : 45-75% RH Atmospheric Pressure : 86-106 KPA

5 General Performance

No.	Item	Test Methods and Condition	Criteria
5.1	0.2C Capacity	After standard charging, rest battery for 10min, then discharging at 0.2C to voltage 3.0V, recording the discharging time.	≥ 300 min
5.2	Cycle Life	Constant current 0.5C charge to 4.2V, then constant voltage charge to current declines to 0.01C, rest 10min, then constant current 0.5C discharge to 3.0V, rest 10min. Repeat above steps till continuously discharging capacity 80% of the Initial Capacities of the Cells	≥ 300 times
5.3	Capability of keeping electricity	At $20 \pm 5^\circ\text{C}$, after standard charging, rest the battery 28 days, then discharge at 0.2C to voltage 3.0V, record the discharging time.	≥ 240 min

6 Environment Performance

No.	Item	Test Methods and Condition	Criteria
6.1	Discharge at high temperature	After standard charging, rest the cells 4h at $60 \pm 2^\circ\text{C}$, then discharging at 1C to voltage 3.0V, record the discharging time.	≥ 54 min
6.2	Discharge at low temperature	After standard charging, rest the cells for 16h at $-20 \pm 2^\circ\text{C}$, then discharging at 0.2C to voltage 3.0V, record the discharging time.	≥ 180 min
6.4	Thermal shock	Put the cells in the oven. The temperature of the oven is to be raised at $5 \pm 2^\circ\text{C}$ per minute to a temperature of $130 \pm 2^\circ\text{C}$ and remains 30 minutes.	No fire, no smoke

7 Safety Characteristic

No.	Item	Test Methods and Condition	Criteria
7.1	Over charge testing	At $23 \pm 5^\circ\text{C}$, charging cells with constant current 3C to voltage 5.0V, then with constant voltage 5.0V till current decline to 0. Stop test till cells temperature 10°C lower than max temperature.	No smoke or fire
7.2	Over discharge testing	At $23 \pm 5^\circ\text{C}$, according to the requirements of standard charge, the cells will be discharged to cut-off voltage, then connect with external load of 30 ohm for 24 hours.	No fire, no smoke, no leakage.
7.3	Short-circuit testing	At $23 \pm 5^\circ\text{C}$, After standard charging, connect cells anode and cathode by wire which impedance less than $50\text{m}\Omega$, keep 6hrs.	No smoke or fire

※ Above testing of safe characteristic must be with protective equipment.

8. CAUTIONS IN USE

To ensure proper use of the battery please read the manual carefully before using it.

Handling

- Do not expose to, dispose of the battery in fire.
- Do not put the battery in a charger or equipment with wrong terminals connected.
- Avoid shorting the battery
- Avoid excessive physical shock or vibration.
- Do not disassemble or deform the battery.
- Do not immerse in water.
- Do not use the battery mixed with other different make, type, or model batteries.
- Keep out of the reach of children.

Charge and discharge

- Battery must be charged in appropriate charger only.
- Never use a modified or damaged charger.
- Do not leave battery in charger over 24 hours.

Storage

- Store the battery in a cool, dry and well-ventilated area.

Disposal

- Regulations vary for different countries. Dispose of in accordance with local regulations.

9. Battery operation instruction

9.1 Charging

Charging current: can not surpass the biggest charging current in this specification.

Charging voltage: Do not surpass the highest parameter in this specification.

Charge temperature: The battery must carry on the charge in the specified ambient temperature scope.

Use constant current and constant voltage to charge; prohibit reverse charging. If the battery positive and negative ends contacted, it will short and damage the battery.

9.2 Discharging current

The discharging current can not surpass the biggest discharging current in this specification; the oversized current can cause battery capacity reduction and to cause the battery overheat.

9.3 discharge temperature

The battery discharge must carry on in the specified ambient temperature scope.

9.4 Storing the Batteries

Cell would be over-discharged by its self-discharge characteristics in case the battery is not used for long time.

In order to prevent over-discharging, the battery shall be charged periodically to maintain between 3.7V and 3.9V.

10. Period of Warranty

The period of warranty is one year from the date of shipment.

11. Other Chemical Reaction

Because batteries utilize a chemical reaction, battery performance will deteriorate over time if stored for a long period of time without being used. In addition, if the various usage conditions such as charge, discharge, ambient temperature, etc. are not maintained within the specified ranges, the life expectancy of the battery may be shortened or the device in which the battery is used may be damaged by electrolyte leakage. If the batteries cannot maintain a charge for long periods of time, even when they are charged correctly, this may indicate it is time to change the battery.

12. Note:

Any other items which are not covered in this specification shall be agreed by both parties.