
	<b>Akku Tronics New Energy Technology Co., Limited</b> TEL:0086-755-85290393 FAX:0086-755-86578846	Type: ICR18650-26
		REV: 1.0
		Date: 2015-02-01

## Specification Approval Sheet

**Model : ICR18650-26**  
**Type : Li-ion battery**  
**Specification : 3.7V/2600mAh**


<b>signed by client</b>	
<b>Confirmed</b>	
<b>Checked</b>	
<b>Approved</b>	

<b>signed by manufacturer</b>	
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## 1. Battery type and scope

This Specification Approval Sheet is for rechargeable Li-ion battery provided by Akku Tronics New Energy Tech. Co., Ltd.

## 2. Basic characteristics of the battery

S/N	Details	Parameters		Remarks		
1	Rated voltage	3.7V				
2	Rated capacity	2600mAh		@ 0.2C to 3V		
	Minimum capacity	2550mAh				
3	Charge	Limited voltage	4.2V			
		Mode	C.C/C.V			
		Recommended current	520mA	0.2C		
		End-of-charge current	52mA	0.02C		
		Max. current	2600mA	1C		
4	Discharge	Limited voltage	3.0V			
		Standard current	520mA	0.2C		
		Quick current	5200mA	2C		
		Max. current	7800mA	3C		
5	Operating temperature	Charging	0~45°C			
		Discharging	-20~60°C			
6	Storage temperature	-5°C~35°C		Charge to around 50% status of charge (SOC)		
7	Storage humidity	≤75% RH				
8	Weight	46.5±2g				
9	Initial Impedance	Max. 55mΩ				
10	Max. dimension	D18.5mm x H65.5mm				
11	Cycle life	300 times		@0.5C capacity≥80%		
12	Temperature Dependence of Discharge Capacity @ 0.2C Discharge					
	Charge temperature	Discharge temperature				
	25°C	-10°C	0°C	15°C	25°C	40°C
	Relative Capacity	50%	80%	90%	100%	100%

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### 3. General Performance

S/N	Inspection item	Standard	Testing Method
1	0.2C rate discharge capacity	Discharge Time $\geq$ 300min	Full charge at $20\pm 5^{\circ}\text{C}$ , rest for 30 min, then discharge at the same temperature with 0.2C to 3.0V.
2	Cycle life	Cycle life $\geq$ 300	At $20\pm 5^{\circ}\text{C}$ , charge battery with 0.5 C to 4.2V and then charge it with constant voltage to the current less than 0.02C. Stop charge and idle for 0.5~1 hour. Then discharge it with 0.5 C to cut-off voltage. Idle for 0.5~1 hour, do next charge and discharge cycle. Repeat these steps. Stop it until the continuous two cycle discharge time is less than 4 hours.
3	Capacity Retention	Discharge Time $\geq$ 240min	After full charge, store at $20\pm 5^{\circ}\text{C}$ for 28 days, then discharge with 0.2C to 3.0V.


### 4. Environment Performance

S/N	Inspection item	Standard	Testing Method
1	Discharge at high temperature	Discharge Time $\geq$ 54min	After standard charging, rest the cells 4h at $60\pm 2^{\circ}\text{C}$ , then discharging at 1C to voltage 3.0V, recording the discharging time.
2	Discharge at low temperature	Discharge Time $\geq$ 210min	After standard charging, rest the cells for 16h at $-20\pm 2^{\circ}\text{C}$ , then discharging at 0.2C to voltage 3.0V, recording the discharging time.
3	Thermal shock	No fire, no smoke	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.

### 5. Safe Characteristics

S/N	Inspection item	Standard	Testing Method
1	Over charge testing	No fire, no smoke	At $20\pm 5^{\circ}\text{C}$ , charging cells with constant current 2C to voltage 5.0V, Stop test till cells temperature $10^{\circ}\text{C}$ lower than max temperature.
2	Over discharge testing	No fire, no smoke no leakage.	At $20\pm 5^{\circ}\text{C}$ , According to the requirements of standard charge, the cells will be discharge to cut-off voltage, then connect with external load of 30 ohm for 24 hours.

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3	Short-circuit testing	No fire, no smoke	At $20 \pm 5^{\circ}\text{C}$ , After standard charging, connect cells positive and negative by wire which impedance less than $80 \pm 20\text{m}\Omega$ , keep 6h.
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## Attentions

### Danger

To prevent battery from weeping, fever, exploding, please obeys the rules as follows:

Do not immerse the battery into the water or the sea, Guard against Damp;

Do not approach the heat source, like fire or heater;

Please use the appointed charger when charging;

Do not transposition the +.- poles of the battery to charge;

Do not direct-connected the battery to alternating current power supply, or auto-ignition of the vehicle;

Do not discard the battery to the fire or hyperpyretic objects;

Do not use the conductor to lead the short circuit of the + -poles of the battery. Do not put the battery with metallic conductors to transport or store, like necklace, hairpin and so on;

Do not beat or throw the battery;

Do not impale the battery with needle or some other sharp things, do not strike it with weight;

As installed safety device in the battery, please do not resolve or change any other sections of the battery to protect the inherent safety functions.

### Warnings

Do not put the battery to the microwave oven or pressure tank;

Do not use the battery with some chemical batteries (like dry battery) or different capacities and brands battery together, if the battery emits the smell, heat, changes color, be out of shape or appears any other abnormal phenomena during the charging or stored procedures, please get out the battery from the device or charger and stop using;

If cannot recharge within the charging period, please not continue charging;

Put the battery to where the kids can not touch, if the kids swallow the battery, please seeing the doctor soon;

If the electrolyte of the battery into the eyes, do not rub, should wash the eyes first, then see the doctor.


### Announcements

Do not put the battery under the high temperature places (like sunshine irradiation or car in the hot weather), or it will catch fire for the heat, reduce the performance and loss the life;

To ensure the safety, the battery should install the safety device, please not use when the static electricity is more than

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we need when produce, or the safety device will lose efficacy and lead the overheating, fracture, exploding and catching fire;

Please use the battery in normal as follows, or it will be overheating, caught fire, reduced performance and shorten the life;

Environment condition

(Temperature) Charging: 0~+45°C

Discharging: -20~+60°C

Store within 30 days: -20~+35°C

Store within 90 days: -20~+30°C

If the kids use the battery, they should use as the operation instruction manual and guarantee that it must be use in normal at any time;

If the battery weeps, the electrolytes stick on the skin or cloth, use the water to wash or running water to wash

To insure not install the battery wrong or wastage of the battery, please read the instruction carefully to install and dismounting;

If the battery will not be used for a long time, please take out of the battery from the device and store in dry and shady places;

If there is sludge on the surface of the battery, please wipe up clean before using, or it will lead bad contact with the device.

## ! Special Notice

Keep the cells in **50% charged state** during long period storage. We recommend to charge the battery up to 50% of the total capacity every 3 months after receipt of the battery and maintain the voltage 3.7V~4.0V. And store the battery in cool and dry place.