



Model : Power-Xtra ICR26650 Li-ion 3.7V 4000mAh Rechargeable Battery

Ver:1.0

NO: 900.600.503.124

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# **SPECIFICATION OF PRODUCT**

for Lithium-ion Rechargeable Cell  
Model :ICR26650 4000mAh

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1.0 Nominal Specifications			2.0 Outline Dimensions
Item	Specification		<p>Max 26mm</p> <p>Max 65.5mm</p>
Model	ICR26650		
Nominal Capacity (0.2C5A)	4000 mAh		
Nominal Voltage	3.70V		
Charging Voltage	4.2V		
Discharge Cut-off Voltage	2.75V		
Max. Charge Current	1 C5A		
Max. Discharge Current	1.5 C5A		
Cell Dimension	Diameter	26.0±0.2 mm	
	Height	65.5±0.2 mm	
Cell Weight(Approx.)	90g		
Initial internal impedance Max, at 1000Hz.)	≤50 mΩ (Charged)		
Charging Current (CC/CV)	Rapid charge	0.5 C5A×4hrs	
	Standard charge	0.2 C5A×8hrs.	
Operating Temperature	Charge	0°C~60°C (32oF~113oF)	
	Discharge	“-20°C~75°C (-4oF~140oF)	
	Storage	“-20°C~45°C (-4oF~113oF)	

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### 3. Appearance

There shall be no such defects as scratch, rust, discoloration, leakage which may adversely affect commercial value of the cell.

### 4. Standard Test Conditions

#### 4.1 Environmental Conditions

Unless otherwise specified, all tests stated in this specification are conducted at temperature  $25 \pm 5$

$^{\circ}\text{C}$  and humidity  $65 \pm 20\%$

#### 4.2 Measuring Equipment

(1) Ammeter and Voltmeter: The ammeter and voltmeter should have an accuracy of the grade 0.5 or higher.

(2) Slide caliper: The slide caliper should have 0.01 mm scale.

(3) Impedance meter: The impedance meter with AC 1kHz should be used.

### 5. Characteristics

#### 5.1 Standard Charge

This "Standard Charge" means charging the cell with charge current 0.2C5A and constant voltage 4.2V at  $25^{\circ}\text{C}$  for 3hours.

### 6.2 Standard Discharge Capacity

The standard discharge capacity is the initial discharge capacity of the cell, which is measured with discharge current of 0.2C5A with 2.75V cut-off at  $25^{\circ}\text{C}$  within 1hour after the standard charge.

NO.	Item	Relative Capacity	Test Method
6.2.1	Discharge Rate Capabilities	A) 0.2C5A $\geq 100\%$ B) 0.5C5A $\geq 95\%$ C) 1.0C5A $\geq 90\%$ D) 2.0C5A $\geq 80\%$	Discharge capacity is measured with the various currents in under table and 2.75V cut-off after the standard charge.
6.2.2	Temperature Dependence of Discharge Capacity	A) $60^{\circ}\text{C} \geq 95\%$ B) $0^{\circ}\text{C} \geq 85\%$ C) - $10^{\circ}\text{C} \geq 70\%$ D) - $20^{\circ}\text{C} \geq 60\%$	Capacity comparison at each temperature, measured with discharge constant current 0.2C5A and 2.75V cut-off after the standard charge .
6.2.3	Cycle Life	$\geq 80\%$	Each cycle is an interval between the charge (charge current 0.5C5A) with 2.5h or 0.05C cut-off and the discharge (discharge current 0.5C5A) with 2.75V cut-off. Capacity after 299cycles and plus 1 day, measured under the same condition.
6.2.4	Storage Characteristic s	Capacity retention(after the storage) $\geq 85\%$	Capacity after storage for 30days at $25^{\circ}\text{C}$ measured with discharge current 0.2C5A with 2.75V cut-off at $25^{\circ}\text{C}$ .

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## 7. Safety

No.	Item	Criteria	Test Method
7.1	Overcharge Test	No fire, and no explosion.	Test method: To charge the standard charged cell with 5V and 3C5A at 25°C for 2.5 hours.

## 8. Mechanical Characteristics

No.	Item	Criteria	Test method
8.1	Vibration Test	No leakage	Cell(as of shipment) is vibrated along 2 mutually perpendicular axes with total excursion of 1.6mm and with frequency cycling between 10Hz and 55Hz by 1Hz/min.
8.2	Drop Test	No leakage	Cell(as of shipment or full charged) drop onto the oak-board (thickness: 30mm) from 1.5m height at a random direction 6 times.

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## 9. Warranty

Power Xtra will be responsible for replacing the cell against defects or poor workmanship for 15months from the date of shipping. Any other problem caused by malfunction of the equipment or mix-use of the cell is not under this warranty. The warranty set forth in proper using and handling conditions described above and excludes in the case of a defect which is not related to manufacturing of the cell.

### ■others

Keep the battery away from babies and children to avoid any accidents such as swallow.

If younger children use the battery, their guardians should explain the proper handling method and precaution before using.

Before using the battery, be sure to read the user's manual and precaution of it's handling. Before using charger, be sure to read the user's manual of the charger.

Before installing and removing the battery from application, be sure to read user's manual of the application.

Replace the battery when using time of battery becomes much shorter than usual. Cover terminals with insulating tape before proper disposal.

If the battery is needed to be stored for an long period, battery should be removed from the application and stored in a place where humidity and temperature are low.

While the battery is charged, used and stored, keep it away from object materials with static electric charges.

### Safety Handling Procedure for the Transporter

■Quarantine : Packages that are crushed, punctured or torn open to reveal contents should not be transported. Such packages should be isolated until the shipper has been consulted, provided instructions and, if appropriate, arranged to have the product inspected and repacked.

■Spilled Product : In the event that damage to packaging results in the release of cells or batteries, the spilled products should be promptly collected and segregated and the shipper should be contacted for instructions.

### Design of positioning the battery pack in application and charger

To prevent the deterioration of the battery performance caused by heat, battery shall be positioned away from the area where heat is generated in the application and the charger.

### Design of the Battery Pack

Be sure adopting proper safe device such as PTC specified type or model in Cell Specification. If you intend to adopt different safety device which is not specified in Cell Specification, please contact Power-xtra.com to investigate any potential safety problem.

Be sure designing 2nd protective devices such as PTC & PCM at the same time to protect Cell just in