



# Li-ion Button-Cell Battery

VER:

DATE:

## Rechargeable 3.0V Li-ion Button Battery Specification

50mAh

Model: [LIR2430](#)

| Prepared By/Date | Checked By/Date | Approved By/Date |
|------------------|-----------------|------------------|
|                  |                 |                  |

### Important Notice

These data sheets contain information specific to batteries manufactured at the time of its publication.

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## 1. SCOPE

This specification describes the related technical standard and requirements of the rechargeable Li-ion battery pack supplied by Xtra-Power Battery.  
Battery produced with the [LIR2430](#) cell will meet the specification.

## 2. BATTERY SPECIFICATION

| ITEMS            | SPECIFICATION                           |                       | REMARK          |
|------------------|-----------------------------------------|-----------------------|-----------------|
| Model            | <a href="#">LIR 2430</a>                |                       |                 |
| Constant Voltage | 3.0V                                    |                       |                 |
| Capability       | Typical                                 | <a href="#">55mAh</a> | @0.2C Discharge |
|                  | Minimum                                 | <a href="#">50mAh</a> |                 |
| Dimensions       | <a href="#">Φ24.5(+0.3)*3.0(+0.3)mm</a> |                       | Bare cell       |
| Weight           | <a href="#">3.5(±0.2)g</a>              |                       |                 |

## 3. STANDARD TESTING CONDITIONS (No Load)

| ITEMS                   | REGISTER                                                                   |                           |
|-------------------------|----------------------------------------------------------------------------|---------------------------|
| Standard charge         | CC/CV model, constant voltage3.8V, constant current0.2C, end current 0.01C |                           |
| General charge.         | CC/CV model, constant voltage3.8V, constant current0.5C, end current0.01C  |                           |
| Apacer charge           | CC/CV model, constant voltage3.8V, constant current 1C, end current 0.01C  |                           |
| Standard discharge      | Constant current 0.2C, end voltage2.5V                                     |                           |
| General discharge       | Constant current 0.5C, end voltage 2.5V                                    |                           |
| Apacer discharge        | Constant current 1C, end voltage 2.5V                                      |                           |
| Environment temperature | Charge                                                                     | 0 -- +45℃                 |
|                         | Discharge                                                                  | -20℃ -- +60℃              |
|                         | Storage temperature                                                        | One month -20℃ -- +55℃    |
|                         |                                                                            | Three months -20℃ -- +45℃ |
|                         |                                                                            | One year -5℃ -- +30℃      |
|                         | General temperature                                                        | 20℃ ±5℃                   |
|                         | Atmospheric pressure                                                       | 86 -- 106Kpa              |
|                         | Relative humidity                                                          | 45% -- 85%                |

|                                                                                   |                            |       |
|-----------------------------------------------------------------------------------|----------------------------|-------|
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#### 4. APPEARANCES

| ITEMS      | TEST CONDITION       | REQUIRE                                                                                                                                   |
|------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| APPEARANCE | Under light lamp 40W | Shall be free noticeable flaws breaks, age, Discoloration, deformation, uneven, and other Defects which impair the value of the commodity |

#### 5. ELECTRICAL CHARACTERISTICS

| ITEMS            | TEST CONDITION                                                                                                                                                                 | REQUIRE                                    |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| Complete Charge  | The battery is charged with constant current 0.2CmA and constant voltage 3.8v until the charging current is less than 0.01CmA. The longest charging time is less than 8 hours. |                                            |
| Initial capacity | The capacity measured after the battery is discharged with constant current 0.2C until the voltage reaches 2.5V cut-off in one hour after complete charge.                     | 55mAh                                      |
| Cycle life       | The capacity measured after 500 cycles of complete charge and discharge at 0.2C current to 2.5V cut-off.                                                                       | Capacity more than 70% of Initial capacity |
| Impedance        | Internal resistance measured at 1KHz after complete charge.                                                                                                                    | $\leq 2000m\Omega$                         |

#### 6. TEMPERATURE ADAPABILITY

| ITEMS                      | TEST CONDITION                                                                                                                                                                        | REQUIRE                                                          |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|
| High temperature discharge | After complete charge, at 60°C , discharging current 0.2C to 2.5V-END discharge.                                                                                                      | No explosion, fire, or smoke. Discharge efficiency $\geq 85\%$ . |
| High temperature exposure  | After relative charge, all batteries being tested are stored in chamber of 150 °C for 10 min. After taking the batteries out of the chamber, all the batteries are visually examined. | No explosion, fire, or smoke.                                    |
| Low temperature discharge  | After complete charge. At -20°C, discharging current 0.2CmA to 2.5V-END discharge.                                                                                                    | No explosion, fire, or smoke. Discharge efficiency $\geq 80\%$ . |

## 7. DESTROY ADAPTABILITY

| ITEMS          | TEST CONDITION                                                                                                                                                                  | REQUIRE                                                                                  |
|----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Vibration Test | Subject to 1 hour 10-55Hz 3.5mm amplitude Vibration for any direction at shipment (complete packing) state. Then test discharge and rated charge at $25\pm 2^{\circ}\text{C}$ . | No explosion, fire or Smoke.<br>No leakage or damage                                     |
| Drop Test      | Drop test battery 1.2m above steel board of more than 10mm thickness. One time drop each for 6 surface, 4 ride direction of a battery pack                                      | No leakage or damage<br>No explosion, fire or Smoke. Discharge time Less than 50 minute. |

## 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.

# Li-ion Button-Cell Battery

VER:

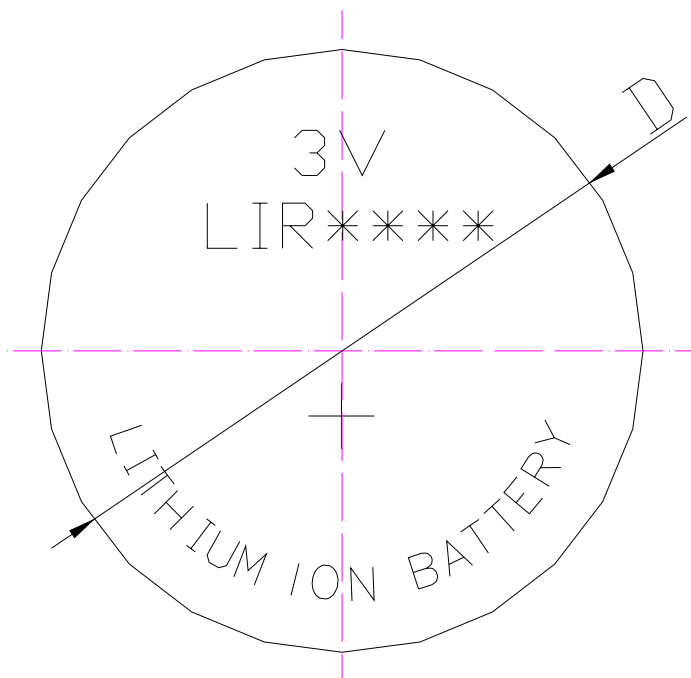
DATE:

Edition NO.

Date

Sign

Checked



|                   |          |         |                  |          |      |
|-------------------|----------|---------|------------------|----------|------|
| D                 | 24.5+0.3 | T       | 3.0+0.3          | UNIT     | mm   |
| Drawer            |          | Checked |                  | Approved | Date |
| <b>Xtra-power</b> |          |         | LIR 2430 DRAWING |          |      |
|                   |          |         | Drawing ID       |          |      |