



珠海市鹏辉电池有限公司
Great Power Battery Co.,Ltd

Product Specification

Battery Type: LIR 2450

Battery Specification: 3.7V/160mAh

Customer confirmation: _____

Note:1.Kindly please sign on the above and send it back to us if the sample is approved.
2.Kindly please contact us as soon as possible if the sample isn't approved. Thanks!

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| Document NO. | | Date | |
| Edition | | Page | 6 Page |
| Approved | | Checked | Design |
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1. SCOPE

This specification describes the related technical standard and requirements of the rechargeable Li-ion battery pack supplied by Great power Battery (Zhuhai) Co., Ltd. Battery produced with the LIR2450 cell will meet the specification.

2. BATTERY SPECIFICATION

| ITEMS | SPECIFICATION | | REMARK |
|------------------|--------------------------------|--------|-----------------|
| Model | LIR 2450 | | |
| Constant Voltage | 3.7V | | |
| Capability | Typical | 160mAh | @0.2C Discharge |
| | Minimum | 150mAh | |
| Dimensions | $\Phi 24.5(+0.2)*5.0(+0.3)$ mm | | Bare cell |
| Weight | 6.5(± 0.1)g | | |

3. STANDARD TESTING CONDITIONS (No Load)

| ITEMS | REGISTER | | |
|-------------------------|--|----------------|----------------|
| Standard charge | CC/CV model, constant voltage 4.2V, constant current 0.2C, end current 0.01C | | |
| General charge. | CC/CV model, constant voltage 4.2V, constant current 0.5C, end current 0.01C | | |
| Apace charge | CC/CV model, constant voltage 4.2V, constant current 1C, end current 0.01C | | |
| Standard discharge | Constant current 0.2C, end voltage 2.75V | | |
| General discharge | Constant current 0.5C, end voltage 2.75V | | |
| Apace discharge | Constant current 1C, end voltage 2.75V | | |
| Environment temperature | Charge | 0 -- +45°C | |
| | Discharge | -20°C -- +60°C | |
| | Storage temperature | One month | -20°C -- +55°C |
| | | Three months | -20°C -- +45°C |
| | | One year | -5°C -- +30°C |
| | General temperature | 20°C \pm 5°C | |
| | Atmospheric pressure | 86 -- 106Kpa | |
| Relative humidity | 45% -- 85% | | |



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 4.2v 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 2.75V cut-off in one hour after complete charge. | 160mAh |
| Cycle life | The capacity measured after 500 cycles of complete charge and discharge at 0.2C current to 2.75V cut-off. | Capacity more than 70% of Initial capacity |
| Impedance | Internal resistance measured at 1KHz after complete charge. | $\leq 1500m\Omega$ |

6. TEMPERATURE ADAPABILITY

| ITEMS | TEST CONDITION | REQUIRE |
|----------------------------|--|--|
| High temperature discharge | After complete charge, at 60°C , discharging current 0.2C to 2.75V-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 2.75V-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. 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 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

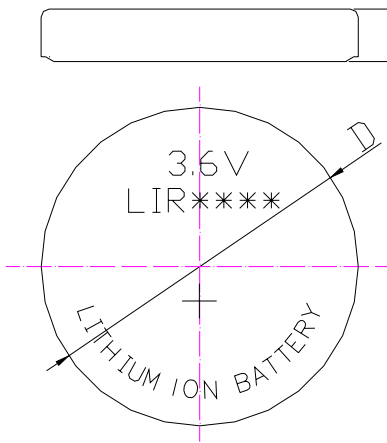
- Regulations vary for different countries. Dispose of in accordance with local regulations.



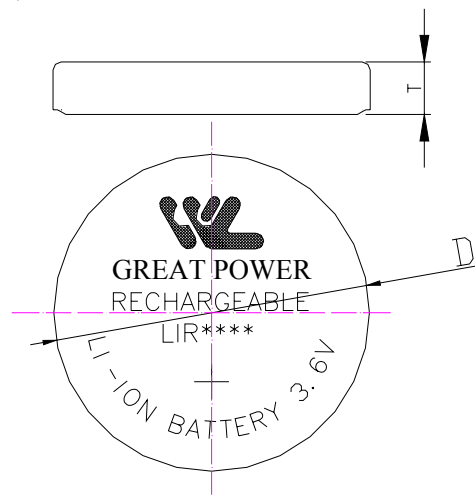
9. Dimension

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|--------------------|----------|---------|------------------|----------|------|
| D | 24.5+0.2 | T | 5.0+0.3 | UNIT | mm |
| Drawer | | Checked | | Approved | Date |
| GREAT POWER | | | LIR 2450 DRAWING | | |
| | | | Drawing ID | | |