

LI-ION POWER TECHNOLOGY CO.,LTD.

3.2V 60AH

——LPT60AF

TECHNICAL DATA SHEET

6000 life cycles
3C Continuous
10C Peak

MSDS
UN38.3

TECHNICAL PARAMETERS

1. Typical Capacity

61.5Ah (Temperature:23±2°C 0.3C discharge capacity)

2. Minimum Capacity

60Ah (Temperature:23±2°C, 0.3C discharge capacity)

3. Internal Impedance

≤0.8mΩ, By AC 1 KHZ

4. Nominal Voltage

3.2V

5. Cell Weight

≤1.7kg (including package)

6. End-of-charge Voltage

3.65V (At CC mode)

7. End-of-discharge Voltage

2.2V

8. Charge Method

0.5C CC/CV

9. Max. Pulse Discharge current

600A (Pulse Current width: 10C Under 10 Seconds)



size: 36*130*190mm

with endcaps: 38.5*134*194mm

TECHNICAL PARAMETERS

10. Max. Continuous Discharge Current

180A (Continuous Discharge current: Under 3C)

11. Max. Pulse charge current

120A (Pulse Current width: 2c Under 10 Seconds)

12. Standard charge current

30A (0.5C)

13. Cycle Life

≥2500 cycles (30A Continuous Charge & Discharge ,100% DOD, Rest Capacity over 80%)

14. Operating Temperature Range

Charging Temperature: 0 ~ 50°C (Recommended temperature range for long term storage is 0 ~ +50°C)

Discharging Temperature: -20 ~ 50°C (Recommended temperature range for long term storage is -20 ~ +50°C)

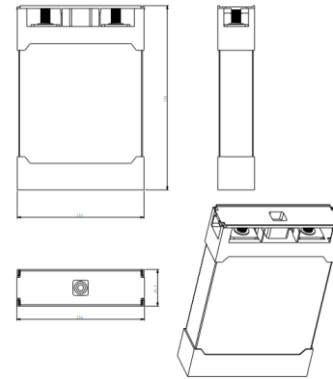
Storage Temperature: -10 ~ 45°C (Recommended temperature range for long term storage is -10 ~ +45°C)

15. Shelf Life

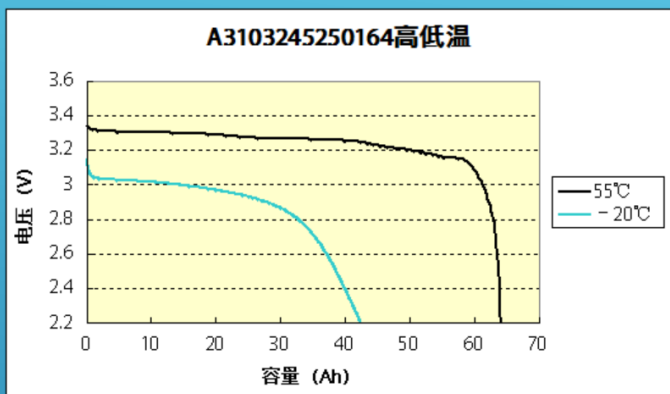
3 years (Typical value from ship state)

16. Appearance

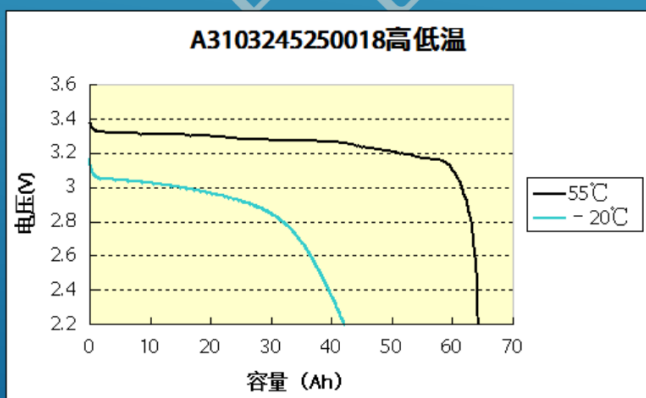
Without break, scratch, distortion, contamination, leakage and so on



TECHNICAL CURVES



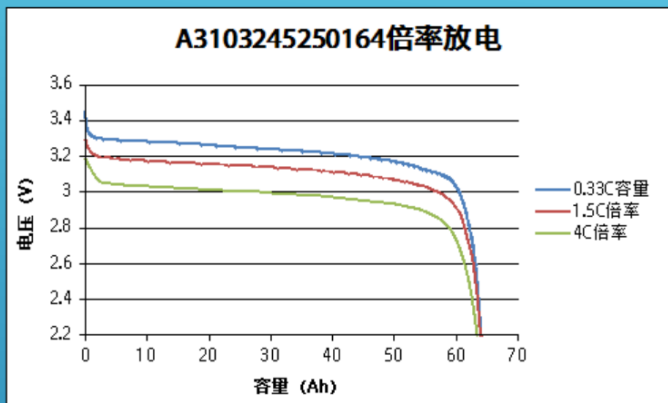
| | | |
|-----------|----------|----------|
| Temp | 55°C | - 20°C |
| Capacity | 64.04 Ah | 42.41 Ah |
| Retention | 106.7% | 70.68% |



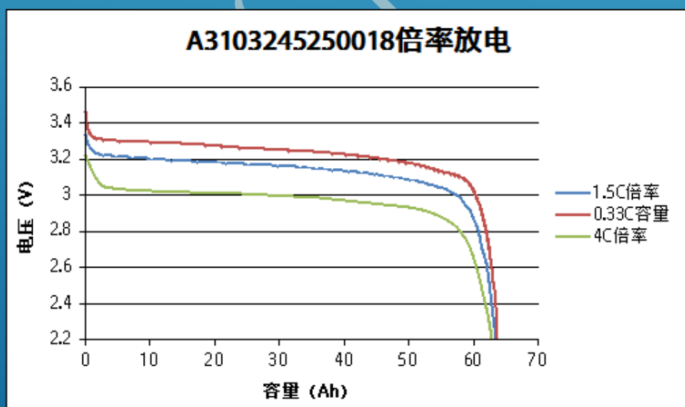
| | | |
|-----------|----------|----------|
| Temp | 55°C | - 20°C |
| Capacity | 64.13 Ah | 42.07 Ah |
| Retention | 106.88% | 70.11% |

A1 discharge curve under -20°C and 55°C

TECHNICAL CURVES



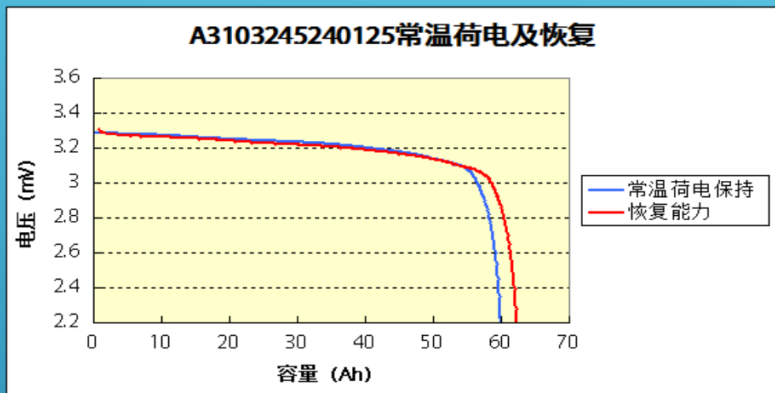
| Rate | 0.33C | 1.5C | 4C |
|-----------|----------|----------|----------|
| Capacity | 64.04 Ah | 63.96 Ah | 63.26 Ah |
| Retention | 106.73% | 106.6% | 105.4% |



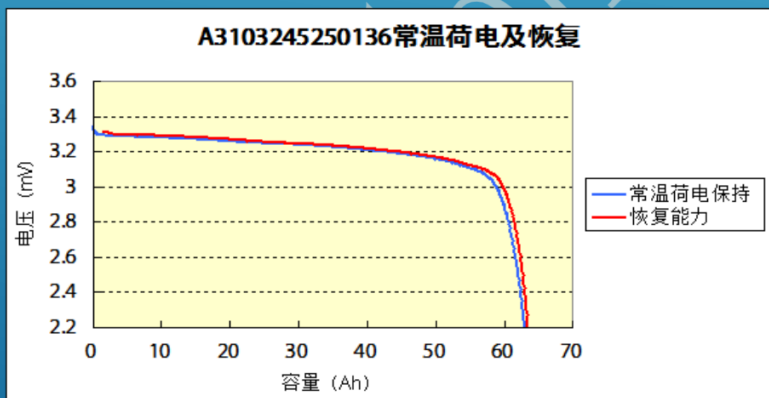
| rate | 0.33C | 1.5C | 4C |
|-----------|----------|----------|----------|
| Capacity | 63.78 Ah | 63.41 Ah | 62.78 Ah |
| Retention | 106.3% | 105.6% | 104.6% |

A2 rate discharge curve

TECHNICAL CURVES



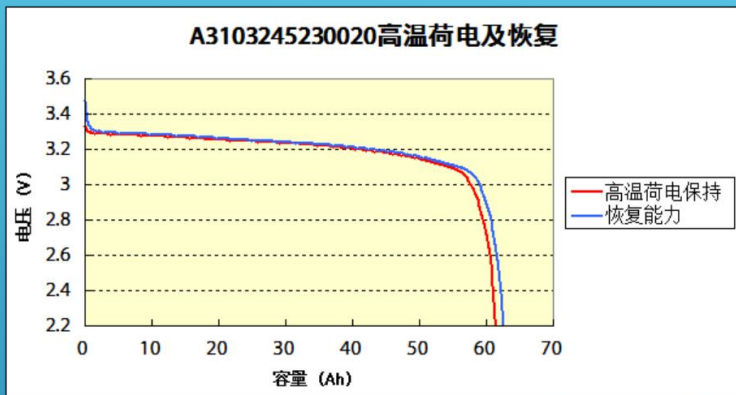
| Item | Capacity under normal temp. | Charge under normal temp. | recovery |
|-----------|-----------------------------|---------------------------|----------|
| Capacity | 62.38 Ah | 59.92 Ah | 62.19 Ah |
| Retention | 103.96% | 96.05% | 99.69% |



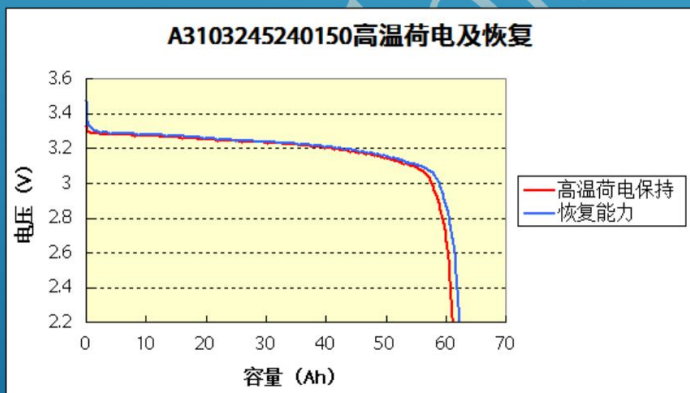
| Item | Capacity under normal Temp. | Charge under normal temp. | Recovery |
|-----------|-----------------------------|---------------------------|----------|
| Capacity | 63.7 Ah | 62.94 Ah | 63.4 Ah |
| Retention | 106.1% | 98.8% | 99.52% |

A3 Charge Retention and Recovery Ability under Normal Temp.

TECHNICAL CURVES



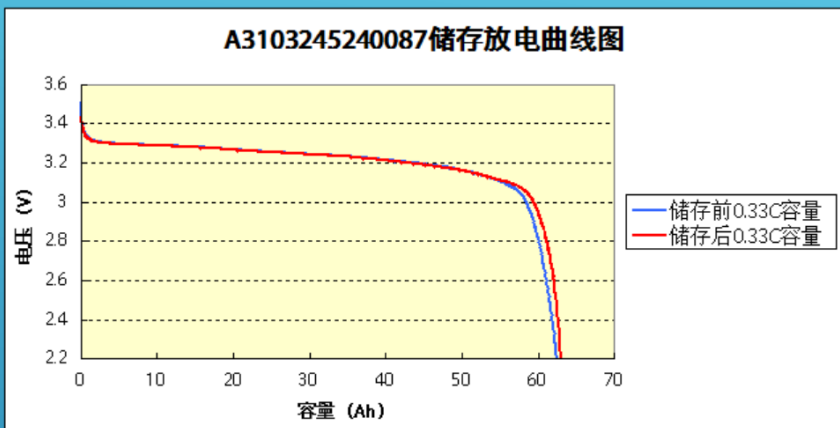
| Item | Capacity under normal temp. | Charge under high temp. | Recovery |
|-----------|-----------------------------|-------------------------|----------|
| Capacity | 63.28 Ah | 61.37 Ah | 62.43 Ah |
| Retention | 105.4% | 96.98% | 98.65% |



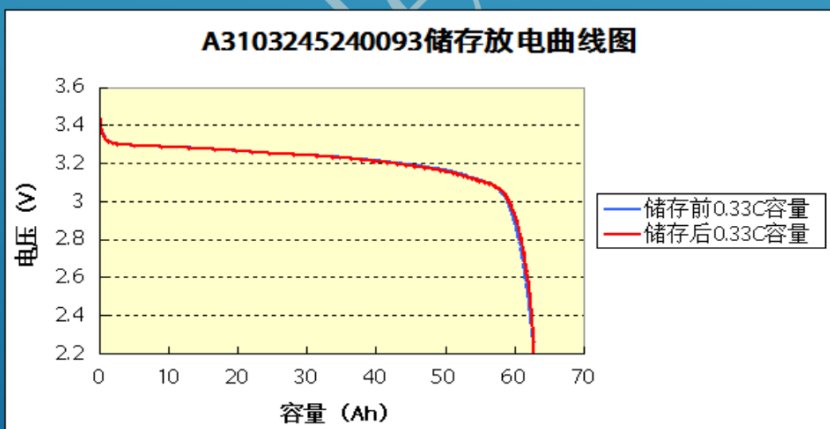
| Item | Capacity under normal temp. | Charge under high temp. | Recovery |
|-----------|-----------------------------|-------------------------|----------|
| Capacity | 62.98 Ah | 61.08 Ah | 62.11 Ah |
| Retention | 104.96% | 96.98% | 98.61% |

A4 Charge Retention and Recovery Ability under High Temp.

TECHNICAL CURVES



| Item | Capacity before storage | Capacity after storage |
|-----------|-------------------------|------------------------|
| Capacity | 62.48 Ah | 62.95 Ah |
| Retention | 104.13% | 104.91% |



| Item | Capacity before storage | Capacity after storage |
|-----------|-------------------------|------------------------|
| Capacity | 62.84 Ah | 62.83 Ah |
| Retention | 104.73% | 104.72% |

A5 Storage Discharge Curve

▶ Shipment

- ▶ The Cell shall be shipped in voltage range of 3.2 ~ 3.4V or in accordance with customers' requirement. The remaining capacity before charging shall be changed depending on the storage time and conditions.

▶ Warranty

- ▶ The Warranty period of cell is made according to business contract, However, even though the problem occurs within this period, LPT won't replace a new cell for free as long as the problem is not due to the failure of LPT manufacturing process or is due to customer's abuse or misuse.
- ▶ LPT will not be responsible for trouble occurred by handling outside of the precautions in instructions. LPT will not be responsible for trouble occurred by matching electric circuit, cell pack and charger.
- ▶ LPT will be exempt from warrant any defect cells during assembling after acceptance.

▶ Precautions and Safety Instructions

- ▶ Lithium-ion rechargeable batteries subject to abusive conditions can cause damage to the cell and/or personal injury. Please read and observe the standard cell precautions below before using utilization. The customer is required to contact LPT in advance, if and when the customer needs other applications or operating conditions than those described in this document.
- ▶ LPT will take no responsibility for any accident when the cell is used under other conditions than those described in this Document.

▶ Standard cell Precautions

- ▶ a. Do not expose the cell to extreme heat or flame.
- ▶ b. Do not short circuit, over-charge or over-discharge the cell.
- ▶ c. Do not subject the cell to strong mechanical shocks.
- ▶ d. Do not immerse the cell in water or sea water, or get it wet..
- ▶ f. Do not disassemble or modify the cell.
- ▶ g. Do not handle or store with metallic like necklaces, coins or hairpins, etc.
- ▶ h. Do not use the cell with conspicuous damage or deformation.
- ▶ i. Do not connect cell to the plug socket or car-cigarette-plug.
- ▶ j. Do not make the direct soldering onto a cell.
- ▶ k. Do not touch a leaked cell directly.
- ▶ l. Do not use for other equipment.
- ▶ m. Do not use Lithium-ion cell in mixture.
- ▶ n. Do not use or leave the cell under the blazing sun (or in heated car by sunshine).
- ▶ o. Keep cell away from children.
- ▶ p. Do not drive a nail into the cell, strike it by hammer or tread it.
- ▶ q. Do not give cell impact or fling it.

▶ Cell Operation Instructions

▶ Charging

- ▶ a. Charge the cell in a temperature range of 0°C to + 50°C.
- ▶ b. Charge the cell at a constant current of 0.3C until 3.65V, and then at a constant voltage of 3.65V until 0.05C. Charge rates greater than 1C are NOT recommended. (C : Rated Capacity of cell)
- ▶ c. Use a constant current, constant voltage (CC/CV) lithium-ion (Li+) cell charge controller.
- ▶ d. Do not continue to charge cell over specified time.

▶ Discharging

- ▶ a. Recommended cut-off voltage to 2.2V. Recommended max continuous discharge current is 3C.
- ▶ b. For maximum performance, discharge the cell in a temperature range of -20°C to +50°C.

▶ Storage Recommendations

- ▶ In case of long period storage (more than 3 months), storage the cell at temperature range of -10 ~ +45°C, low humidity, no corrosive gas atmosphere, No press on the cell; After more than 3 months, the batteries need to be charged according to the standard charge and discharge process.



SHOT ON MI 8
AI DUAL CAMERA

2018/8/2 19:32



SHOT ON MI 8
AI DUAL CAMERA

2018/8/2 19:33

BATTERY PACKS MADE OF 3.2V 60AH CELLS



- ▶ HK HQ Office: BRIGHT WAY TOWER, NO.33 MONG KOK ROAD, KOWLOON, HONGKONG
- ▶ USA Office: 7427 South Main Street, Midvale, Utah 84047
- ▶ China Factory: No.8, Dongtin Lake Road, Economic and Development Zone, Qinhuangdao, China.

▶ **Welcome to Contact:**

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