



泰州佳仕凯新能源科技有限公司

Taizhou Jiashikai New Energy Co., Ltd.

产品规格书

Product Specifications

产品名称：圆柱形锂离子电芯

Product name: Cylindrical Li-ion Cell

产品型号：IFR32140-15Ah

Product model: IFR32140-15Ah





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版本 Version: A0

日期 Date: 2023.07.05

1、电芯的基本参数 Basic parameters of the battery

型号 Type	IFR32140-15Ah
正极材料 Cathode Material	LFP
标称电压 Nominal Voltage (V)	3.20V@0.5C
标称容量 Nominal Capacity (mAh)	Nom. 15000 Min. 14000
交流内阻 Internal Impedance (mΩ)	≤3
质量能量密度 Mass Energy Density (Wh/kg)	≥160
体积能量密度 Volumetric Energy Density (Wh/L)	≥360
尺寸 Dimension (mm)	33.2±0.2*140±0.2
重量 Weight (g)	295±5
充电截止电压 Charging Cut-Off Voltage (V)	3.65
放电截止电压 Discharging Cut-Off Voltage (V)	2.5
标准充电方式 Standard Charge	Charging Current 充电电流 0.5C (7500mA) Cut-Off Voltage 截止电压 3.65V Cut-Off Current 截止电流 750mA
最大充电电流 Max. Charging Current (A)	7.5 (0~ 20°C) 30 (20~ 30°C) 7.5 (30~ 45°C)
最大持续放电电流 Max. Cont. Discharging Current (A)	45
循环寿命 (次) Cycle Life (Times)	3000 次循环≥ 80% 首次容量 (25±2°C, 7.5A充电至 3.65V/0.75A, 7.5A 放电至2.5V) 3000 cycles ≥ 80% Initial Capacity (25±2°C, 7.5A Charge to 3.65V/0.75A, 7.5A Discharge to 2.5V)
工作温度范围 Operating Temperature Range (°C)	Charge 充电 0°C ~60 °C Discharge 放电 -20°C ~ 60°C
最佳存储温度 Optimal Storage Temperature (°C)	20 ~ 35



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2、测试条件 Testing Conditions :

- 2.1 除有特殊说明外，所有的测试均在温度：25℃±2℃；相对湿度：45%RH~95%RH；大气压力：86kPa~106kPa 条件下进行。

Unless otherwise specified, all tests described in this document are at standard temperature: 25 ± 2℃,

Humidity: (65 ± 20)% RH; atmospheric pressure: 86 kPa ~ 106 kPa

- 2.2 标准充电制度：常温 0.5C 恒流充电至 3.65V±0.05V，转恒压充电至电流 0.05C，停止充电。

Standard charge: Ambient temperature of 25 °C ± 2 °C under the conditions of 0.5C constant current to charge to 3.65V±0.05V, switch to constant voltage mode to charge until the charging current is less than or equal to 0.05C, charging stopped.

- 2.3 标准放电制度:常温 0.5C (7500mA) 恒流放电至 2.5V，停止放电。

Standard discharge: Ambient temperature of 25 °C ± 2 °C under the conditions of 0.5C (7500mA) constant current to discharge to 2.5V, discharging stopped.



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3 电芯性能 Electrical performance

不同温度放电性能 Discharge Performance At Different Temperatures	放电容量/标称容量 *100% Discharge capacity/Nominal capacity *100% -20℃≥70% -10℃≥75% 0℃≥85% 55℃≥95%
常温不同倍率放电性 Different Discharge Rate Performance At Ambient Temperature	放电容量/初始容量*100% Discharge capacity/Initial capacity *100% 2C: ≥98% 3C: ≥96%
常温荷电保持能力 Ambient Temperature Capacity Retention Test	剩余容量 ≥ 标称容量 *96% Residual capacity ≥ Nominal capacity *96% 恢复容量 ≥ 标称容量 *97% Recovery capacity ≥ Nominal capacity *97%
过充试验 Over-charge Test	不爆炸、不起火 No explosion, no fire
过放试验 Over-discharge Test	不爆炸、不起火 No explosion, no fire
挤压试验 Extrusion Test	不爆炸、不起火 No explosion, no fire
短路试验 Short Circuit Test	不爆炸、不起火 No explosion, no fire
跌落试验 Drop Test	不爆炸、不起火 No explosion, no fire
加热试验 Heating Test	不爆炸、不起火 No explosion, no fire



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4、质量保证 Quality assurance

自出货之日起, 电池保质期为 12 个月。在此期限内非佳仕凯公司电池制程原因, 而是客户非按照本规格书规定使用造成电池质量问题, 本公司不负责任; 对与电路、电池组、充电器搭配使用产生的问题, 本公司不负责任。

We offer 12 months warranty to the battery cell made by JIASHIKAI. Any use of product violating this specification or our company's brochures which lead to any cell damage or loss, we will not take the warranty responsibility and the consequent liability; If there is any problem comes from customer's circuit, battery packed or charger, our company will not take the warranty responsibility and the consequent liability.

5、储存与运输 Storage and transportation

5.1 储存电压为 3.2-3.3V, 电池若长时间未使用, 必须每 3 个月充放电一次。

Storage voltage range is 3.2-3.3V, we recommend to complete a charge and discharge cycle every 3 months.

5.2 电池在运输过程中为少于30%充电状态, 应避免剧烈震动、挤压、日晒与浸湿。

Suggested typical battery SOC for transportation is less than 30%, should avoid strenuous vibration, compression, direct sun light and high humidity.

6、电池使用时警告事项及注意事项 Battery handling precautions

为防止电池可能发生泄漏、发热、爆炸, 请注意以下预防措施:

Prevent battery cell from leakage, heating, explosion; please take the following precautions carefully.

警告 ! Warning:

- 严禁将电池浸入海水或水中, 保存不用时, 应放置于阴凉干燥的环境中。
Do not immerse the battery cell in sea water, water, or other oxidizing agents. Store cell in a dry environment within the recommended storage temperature range.
- 禁止将电池在热高温源旁, 如火、加热器等使用和留置。
Do not use or place the battery cell next to high temperature source like fire or heater.
- 充电时请选用锂离子电池专用充电器。
When charging the battery cell, use the appropriate Lithium ion battery charger only.
- 严禁颠倒正负极使用电池。
Do not charge or use battery cell with the positive and negative terminals reversed.
- 严禁将电池正负端直接插入电源插座。
Do not connect battery cell cathode to a power socket.
- 禁止将电池丢于火或加热器中。
Do not dispose the battery cell into fire or heater.
- 禁止用金属直接连接电池正负极短路。
Do not short circuit the battery cell.
- 禁止将电池与金属,如发夹、项链等一起运输或贮存。
Do not store or transport the battery cell together with metals like hairpin and necklace.
- 禁止敲击或抛掷、踩踏电池等。
Do not strike or drop battery cell.



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- 禁止直接焊接电池和用钉子或其它利器刺穿电池。
- Do not solder lead wires directly to the battery cell or pierce the battery cell with any sharp objects.

小心 ! Caution

- 禁止在高温下（炙热的阳光下或很热的汽车中）使用或放置电池，否则可能会引起电池过热、起火或功能失效、寿命减短。
Prohibited to use or store the battery cell at high temperatures (direct sun light or inside a car with high temperature), otherwise it will cause the overheating of the battery that may cause fire, cell defective or shortened battery lifetime.
- 禁止在强静电和强磁场的地方使用,否则易破坏电池安全保护装置,带来不安全的隐患。
Avoid to use the battery cell in a strong electrostatic and magnetic environment, otherwise the battery safety mechanism will be easily damaged that can lead to unsafe risks.
- 如果电池发生泄露,电解液进入眼睛,请不要揉擦,应用清水冲洗眼睛,并立即送医治疗,否则会伤害眼睛。
If the battery cell leaks and the electrolyte runs into the eyes, do not rub the eyes, apply sufficient clean water to wash the eyes, and send the patient to the hospital immediately.
- 如果电池发出异味,发热、变色、变形或使用、贮存、充电过程中出现任何异常,立即将电池从装置或充电器中移离并停用。
If the battery cell gives off odors, heated up, discolored or deformed during use, storage or charging, cut off the battery from the device or charger immediately.
- 如果电极弄脏,使用前应用干布抹净,否则可能会导致接触不良功能失效。
If the battery cell electrode is dirty, wipe it with a dry cloth before use, or it may cause functional failure because of poor contact.
- 废弃之电池应用绝缘纸包住电极,以防起火、爆炸。
For the battery cell disposal, wrap the electrode with insulating materials and pack it up properly to prevent fire and explosion.

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