锂离子电池规格书

PRODUCT SPECIFICATION

电池型号：SP-LFP200AHA

Cell Type: SP-LFP200AHA

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A/02	2018/07/16	14	优化、细化产品规格参数
A/03	2018/08/20	1	电池尺寸图修订
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A/06	2023/07/20	7	技术参数、电性能测试标准修订

Contents 目录

1. SCOPE 适用范围

The product specification contains the performance indexes, technical requirements and safety issue of the Prismatic Lithium-ion battery200Ah to be supplied to the customer by Sinopoly battery limited。

本规格书规定了由中聚电池有限公司生产的 200Ah 方型锂离子电池的性能指标、技术要求及安全注意事项。

2. DESCRIPTION AND MODEL 型号及说明

SP - LFP - 200AHA

①　②　③ ④

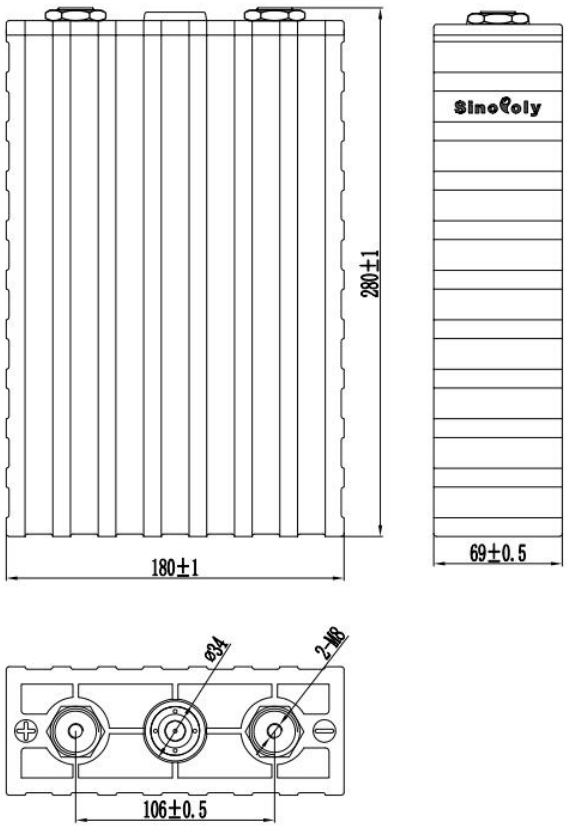
①"SP"表示中聚（SinoPoly）

②"LFP"表示电池正极材料是 $LiFePO_4$ 的方形电池

③"200Ah"表示单体电池的标称容量 200Ah

④"A"表示同一型号产品的不同类型，分别以 A、B、C……区分

3. CELL SIZE 电池尺寸



4 Product Performance 产品性能

4. 1 Technical Parameters 技术参数

Item 项目	Specification 标准	Remark 备注
Product Model 产品型号	SP-LFP-200AHA	
Nominal Capacity 标称容量	200Ah	
Nominal Voltage 标称电压	3.2V	
Weight 重量	5.5±0.2Kg	
Internal Impedance 交流内阻	≤0.3mΩ	AC1kHz，20%-50%SOC

Cycle Life 循环寿命		≥5500 cycles	0.33C charge/0.33Cdischarge，80% DOD，Capacity Retention≥80%
Self-discharge rate 自放电率		≤1%/month	25℃，1month
Dimension 规格	Length 长	280±1mm	
	Width 宽	180±1mm	
	Thickness 厚	69±0.5mm	
Charge 充电	Standard Current 标准电流	200A	CC&CV
	Max. Current 最大电流	3C(600A)	
	Limited Voltage 限制电压	3.65V	
	End Current 截止电流	10A	0.05C
Discharge 放电	Standard Current 标准电流	200A	
	Max. Current 最大电流	3C(600A)	Maximum Constant Discharging Current 最大持续放电电流
	End Voltage 截止电压	2.5V	
Instant discharge （Long Pulse） 瞬间放电（长脉冲）	Max. Current 最大电流	4C(800A)	Maximum duration: 180s 最长时间为 180s
Instant discharge （Short Pulse） 瞬间放电（短脉冲）	Max. Current 最大电流	10C(2000A)	Maximum duration:30s 最长时间为 30s
Operation Temperature 工作温度	Charge 充电	0℃～45℃	Refer to section 4.2 参考第 4.2 节
	Discharge 放电	-40℃～55℃	Refer to section 4.3 参考第 4.3 节
Storage Temperature 存储温度	Standard Storage Temperature 标准储存温度	-20℃~25℃	
	Absolute Storage Temperature 绝对储存温度	-20℃~45℃	
Storage Humidity 存储湿度		15%~90%	RH

4. 1 Charging Model 充电模式

NO 序号	Parameter 参数	Values 规格	Remarks 备注
4.2.1	Standard	At room temperature,	charged to 3.65V at a constant current of 200A, and then,

	Charging Model 标准充电模式	changed continuously with constant voltage of 3.65V until the current was 10A. 室温下，以 200A 恒流持续充电至单体电池电压 3.65V，然后在 3.65V 下恒压持续充电直至电流降至 10A.	
4.2.2	StandardChargi ng Temperature 标准充电温度	25±2℃	Cell Temperature 电池温度
4.2.3	Absolute Charging Temperature 绝对充电温度	0℃～45℃	No matter what the charging model is, once the temperature of the cell is above the absolute charging emperature, charging should be stopped. 无论电池处在何种充电模式，一旦发现电池温度超过绝对充电温度范围，即停止充电。
4.2.4	Absolute Charging Voltage 绝对充电电压	Maximum 3.65V 最大 3.65V	No matter what the charging model is, including pulse charging, once the voltage of the cell is above the absolute charging voltage, charging should be stopped. 无论电池处在何种充电模式包括脉冲充电状态，一旦发现电池电压超过绝对充电电压范围，即停止充电。

4.2.5 不同温度下充电电流限制 Charging Current Limit at Different Temperature

Cell temperature range 电池温度范围	＜0℃	0-5℃	5-15℃	15-45℃	＞45℃
Maximum charging current allowed 允许最大充电电流	0.	0.1C	0.33C	3C	0

4.3 Discharging Model 放电模式

NO 序号	Parameter 参数	Values 规格	Remarks 备注
4.3.1	Standard Discharging Model 标准放电模式	At room temperature, discharged to 2.5V at a constant current of 200A. 室温下，以 200A 恒流持续放电至单体电池最小 2.5V。	
4.3.2	Maximum Constant Discharging Current 最大持续放电电流	600A	
4.3.3	Maximum Pulse Discharging Current（Long Pulse） 最大脉冲放电电流（长脉冲）	800A	Maximum duration: 180s 最长时间为 180s
4.3.4	Maximum Pulse Discharging Current（Short Pulse） 最大脉冲放电电流（短脉冲）	2000A	When battery temperature is below 50 ℃, the maximum discharge can last 30s 电池温度低于 50℃，且最长放电时间为 30s
4.3.5	Standard Discharging Temperature 标准放电温度	25±2℃	Cell Temperature 电池温度
4.3.6	Absolute Discharging Temperature 绝对放电温度	-40℃～55℃	No matter what the discharging model is, once the temperature of the cell is above the absolute discharging temperature, discharging should be stopped.

			无论电池处在何种放电模式，一旦发现电池温度超过绝对放电温度范围，即停止放电。

5 CONSTRUCTION 电池结构

A cell is made of cathode, anode, separator, plastic can and poles.

电池由负极、正极、隔膜、塑料壳体和极柱组成。

6 TEST CONDITION AND DEFINITIONS 测试条件和定义

6.1 Measuring Equipment 测试设备

6.1.1 Voltmeter 伏特计

Internal impedance>1000Ω/V.内阻>1000Ω/V

6.1.2 Ampere-meter 安培表

Total external resistance (ammeter and wire)<0.01Ω. 总外阻抗（安培表和线路）<0.01Ω

6.1.3 Slide caliper 游标卡尺

The slide caliper should have a scale of 0.02mm. 游标卡尺精度为0.02mm

6.1.4 Impedance meter 内阻测试仪

The impedance meter should be operated at AC 1kHz. 在1kHz交流条件下进行内阻测试

6.2 Unless otherwise specified, all tests shall be performed at 25°C±5°C and humidity of 15%~90%RH.

除特殊要求外，所有测试均在标准温度25°C±5°C和标准湿度15%~90%RH的条件下进行。

7 CHARACTERISTICS 电性能

Electrical Characteristics tests 电性能测试

Item	Test Instructions	Criteria
Discharge capacity 放电容量	Full charge at 4.2.1, rest for 1 hour, then discharge at the same temperature with 200A to 2.5 V 按照 4.2.1 的标准方式充满电，静置 1 小时，然后在相同的温度下用 200A 电流放电到 2.5V。	Discharge capacity≥Standard capacity 放电容量大于等于标称容量
Rate Discharge capacity 倍率放电容量	Full charge at 4.2.1, rest for 1 hour, then discharge at the same temperature with 600A to 2.5V. 按照 4.2.1 的标准方式充满电，静置 1 小时，然后在相同的温度下用 600A 电流放电到 2.5V。	Discharge capacity≥ 90%initial capacity 放电容量大于等于 85%初始容量
High temp. discharge capacity 高温放电容量	Full charge at 4.2.1, store at 55℃±2℃ for 5h, then discharge at the same temperature with 200A to 2.5 V. 按照 4.2.1 的标准方式充满电，在 55℃±2℃环境下静置 5 小时，然后在相同的温度下用 200A 电流放电到 2.5V。	Discharge capacity≥ 90% initial capacity 放电容量大于等于 90%初始容量
Low temp. discharge capacity 低温放电容量	Full charge at 4.2.1, store at -30℃±2℃ for 24h, then discharge at the same temperature with 200A to 2.0 V. Full charge at 4.2.1, store at -40℃±2℃ for 24h, then discharge at the same temperature with 200A to 2.0 V. 按照 4.2.1 的标准方式充满电，在-30℃±2℃环境下静置 24 小时，然后在相同的温度下用 200A 电流放电到 2.0V。 按照 4.2.1 的标准方式充满电，在-40℃±2℃环境下静置 24 小时，然后在相同的温度下用 200A 电流放电到 2.0V。	-30℃±2℃ Discharge capacity≥80%initial capacity -40℃±2℃Discharge capacity≥60%initial capacity -30℃±2℃放电容量大于等于 80%初始容量 -40℃±2℃放电容量大于等于 60%初始容量
Normal temperature Capacity Retention 常温荷电保持	A cell is full charge at 4.2.1,and stored in an ambient temperature of 25℃±5℃ for 28d,then discharged at 4.3.1. 电池按 4.2.1 规定充电结束后，在环境温度为 25℃±5℃条件下，将	Capacity retention:≥85% 容量保持率：≥85% Recovery ability of capacity：

Item	Test Instructions	Criteria
	电池搁置 28 天，再以 4.3.1 放电至终止电压。	≥90% 容量恢复率：≥90%
High temperature Capacity Retention 高温荷电保持	A cell is full charge at 4.2.1,and stored in an ambient temperature of 55℃±2℃ for 7d, under room temperature, put aside for 5h， then discharged at 4.3.1. 电池按 4.2.1 规定充电结束后，在环境温度为 55℃±2℃条件下，将电池搁置 7 天，在室温下搁置 5h 后，再以 4.3.1 放电至终止电压。	Capacity retention:≥85%容量保持率：≥85% Recovery rate of capacity≥90% 容量恢复率：≥90%
Storage performance 储存性能	Standard charge and then rest for 1h,then discharge for 30 minutes at 200A;storage for 28 days at 45℃±2℃, under room temperature, put aside for 5h,Standard charge again, under room temperature, discharge it at 200A to cut-off voltage 2.5V, Calculate retention capacity (in Ah). 电池标准充电后搁置 1h，以 200A 放电 30min，在 45℃±2℃储存 28 天,室温下搁置 5h，标准充电后，以 200A 放电至 2.5V，计算放电容量（以 Ah 计）。	Recoverable capacity≥ initial capacity *90％ 恢复容量≥初始容量*90%
Cycle Life 循环寿命	66A charge/66Adischarge， 80% depth of discharge, cycle for 5500 times .The discharge capacity shall be measured. 经 66A 充 / 66A 放，80%DOD 循环 5500 次后，测量电池容量。	Discharge Capacity≥ Initial capacity*80％ 容量≥初始容量 *80％

Environmental Test 环境测试

Item	Test Instructions	Criteria
High Temperature and High Humidity Test 高温高湿测试	Full charge at 4.2.1, store at 40℃±2℃(90%~95%RH) for 48h. After test, place at 25℃±5℃ for 2h and then discharge with 200A to 2.5V. 按照 4.2.1 的标准方式充满电，在 40℃±2℃(90%~95%RH)环境下静置 48 小时，然后在 25℃±5℃温度下静置 2 小时，用 200A 电流放电到 2.5V。	No leakage, no rust, no fire or explosion, Capacity retention:≥ 80% 不泄露、无腐蚀、不起火、不爆炸容量保持率：≥80%
Vibration Test 振动测试	Full charge at 4.2.1， then fasten the cell to the vibration test table. Do the linear sweep frequency vibration test as follows: a. Discharge current:1/3C; b. Vibration direction Single vibration up and down; c. Vibration frequency:10Hz-55Hz; d. Maximum acceleration:30m/s^2; e. Sweep cycle:10 times; f. Vibration time:3h. Observe whether there is abnormal phenomenon during the vibration test. 按照 4.2.1 的标准方式充满电后，将电池紧固到振动试验台上，按照下述条件进行线性扫频振动试验： a. 放电电流：1/3C；	No abnormal phenomena such as sharp variation of discharge current, abnormal voltage, deformation of battery case, leakage of electrolyte and so on.And keep the connection is reliable ,the structure is intact. 无放电电流锐变，电压异常，电池壳变形，电解液溢出等异常现象，并保持连接可靠、结构完好。

	b. 振动方向：上下单振动； c. 振动频率：10Hz-55Hz; d. 最大加速度：30m/s²;	
Item	**Test Instructions**	**Criteria**
	e. 扫频循环：10 次； f. 振动时间：3h。 振动试验过程中，观察有无异常现象出现。	

8 **SAFETY 安全性能**

Over discharge Test 过放测试	A cell is full charge at 4.2.1，discharged with 600A current for 90min, observing for 1h. 电池按照 4.2.1 方式充电，以 600A 电流放电 90min，观察 1h。	No leakage, no fire ,no explosion 不泄露、不起火、不爆炸
Overcharge Test 过充测试	Cells are charged at 4.2.1 until the monomer voltage reaches 1.5 times of the charging termination voltage,or the charging shall be stopped after the charging time reaches 1h , observing for 1h. 电池按照 4.2.1 方式充电至单体电压达到充电终止电压的 1.5 倍，或充电 1h 后停止充电，观察 1h。	No fire ,no explosion 不起火、不爆炸
Short-Circuit Test 短路测试	A cell is full charge at 4.2.1,short-circuited by connecting the positive and negative terminals with a resistance load of ≤5mΩ for 10 minutes, observing for 1h. 电池按照 4.2.1 方式充电，电池正负极之间用≤5mΩ的负载连接 10 分钟，观察 1h。	No fire ,no explosion 不起火、不爆炸
Heat 加热	Cells are charged at 4.2.1，put the cell into the incubator, the temperature is up from room to 130±2℃ at the speed of 5℃/min, and stop heating after lasting for 30 minutes, observing for 1h. 电池按照 4.2.1 方式充电，电池放入温箱中，以 5℃/min 速率由室温至 130±2℃，并保持 30min 后停止加热，观察 1h。	No fire ,no explosion 不起火、不爆炸
Drop 跌落	After standard charging, the cell drops with two terminals down from a height of 1.2m onto the cement floor freely, observing for 1h. 电池标准充电后，电池正负端子朝下，自 1.2 米高度处自由跌落至水泥地面上，观察 1h。	No leakage, no fire ,no explosion 不泄露、不起火、不爆炸
Crush 挤压	Standard charge； According to the following test conditions: Squeezing direction: Pressure perpendicular to the battery plates； Squeezing paper shape: half cylinder with 75mm	No fire ,no explosion 不起火、不爆炸

	diameter, whose length is more than the size of cell, but is less than 1m. Squeezing speed: （5±1）mm/s； Squeezing level: Until the battery voltage becomes 0V or the deformation is to 30% or the squeezing force is 200kN , stop squeezing； observing for 1h. 电池（组）标准充电；按下列条件进行试验： ——挤压方向：垂直于蓄电池极板方向施压； ——挤压板形式：半径 75mm 半圆柱体，长度大于被挤压电池的尺寸，但不超过 1m； ——挤压速度：（5±1）mm/s； ——挤压程度：电压达到 0V 或变形量达到 30%或挤压力达到 200kN 后停止挤压，观察 1h。	
Needle puncture Performance 针刺性能	Cells are charged at 4.2.1,penetrate the cell(battery module) from the vertical direction throughout the inside plates with the φ6mm ~ φ10mm needle at (25 ± 5) mm/s speed (the steel nail stays in the battery) , observing for 1h. 电池按照 4.2.1 方式充电，电池标准充电后，放在支座上用φ6mm～φ8mm 的耐高温钢针以（25±5）mm/s 的速度从垂直于蓄电池极板的方向贯穿（钢针停留在蓄电池中）观察 1h。	No fire ,no explosion 不起火、不爆炸
Soaking in seawater 海水浸泡	Cells are charged at 4.2.1, the cell is submerged into 3.5(wt)% NaCl solution for 2h entirely. 电池按照 4.2.1 方式充电，电池完全没入 3.5% NaCl 溶液（质量分数）中 2h 水深应完全没过单体蓄电池。	No fire ,no explosion 不起火、不爆炸

9 PRECAUTIONS AND SAFETY INSTRUCTIONS 安全守则

The cell includes the flammable objects such as the organic solvent. If the handling is missed there will be possibility that the cell rupture flames or hot, or it will cause the damage to the cell and/or personal injury. Please observe the following prohibitive matters. And also, add the protection device the equipment for fear that the trouble would affect the cell by the abnormality of equipment. Please read and observe the standard cell precautions below before using utilization.

电池含有有机溶剂等易燃物质，如使用不当可能引起电池产热或起火，造成电池的损害或人身的伤害。请注意使用禁止事项，同时应增加保护装置以避免使用设备异常造成电池事故。在使用锂离子可充电电池以前，请仔细阅读以下的安全守则。

9.1 Customer is required to contacts Sinopoly in advance, if and when the customer needs other applications or operating conditions than those described in this specification.

客户需要将电池在该规格书说明以外的条件下操作或应用，请先咨询中聚公司相关事宜。

9.2 Sinopoly will take no responsibility for any accident when the cell is used under other conditions than those described in this specification.

在该规格书说明条件之外使用该电池而产生的事故，中聚公司不承担任何责任。

9.3 WARNING 警告

9.3.1 Charging 充电

a) Charging voltage must be set 3.65V/cell. Cell life will be shorten by charging voltage above 3.65V
电池充电电压设定为3.65V，充电电压高于3.65V会导致电池循环寿命缩短。

b) During the charging and discharging process of the battery pack, the maximum continuous discharge current is 2C. To optimize the battery life, it is recommended that the discharge depth of the battery pack is 50%-60% when it is used.
电池组在充放电过程中，持续放电电流最大为 2C；如要优化电池寿命，建议电池组使用时的放电深度为 50%～60%（DOD）。

c) Use a constant current, constant voltage (CC/CV) lithium-ion (Li+) cell charge controller. Do not allow use the continuous charging method without voltage limit. Do not allow continue to charge cell over specified time. No reverse charging.
使用恒流恒压锂离子电池充电器，不允许使用无限压的持续充电方式。不允许超过标准时间持续充电。不可反向充电。

d) Avoid over-discharge state. When the battery voltage is lower than 2.0V, the internal battery may suffer permanent damage, now the quality assurance responsibilities of the product of Sinopoly failure. When the discharge cut-off voltage is lower than 2.5V, the energy consumption in the internal system minimize and prolong sleep time before recharging. Customers need to train users to re-charge in the shortest time, to prevent the battery into the over-discharge state.
避免电池达到过放状态，电池电压低于2.0V时，电池内部可能会遭到永久性的破坏，此时中聚公司的产品质量保证责任失效。当放电截止电压低于2.5V时，客户需在最短的时间内重新充电，防止电池进入过放状态。

9.3.2 Don’t use or expose the cell to extreme heat, flame, disposed in fire or water or get it wet. Do not allow modify or disassemble the cell. It will be dangerous, and may cause ignition, heating, leakage or explosion.
不允许使用或放置电池于过热，有火星的环境。不允许将其投入火中，水中或使其吸湿。不允许修理或拆解电池，存在引发电池起火、过热、漏液或爆炸的危险。

9.3.3 Do not allow short-circuit cell positive(+) and negative(-) terminals. Keep away from metal or other conductive materials. Jumbling the cells of direct contact with positive(+) and negative(-) terminals or other conductive materials may cause short-circuit. Do not allow reverse the positive (+) and negative (-) terminals for any reason.
不允许将电池混乱摆放，同时远离金属或导电材料，以避免正（+）负（-）极短路，不允许颠倒电池正（+）负(-）极使用。

9.3.4 Do not allow use the unspecified charger and breach charging requirement. Cell charged with unspecified condition maybe lead cell to be overcharged or abnormal chemical reaction. It causes the generating heat, smoke, rupture or flame.
不允许使用非规定充电设备和违反充电要求。非规定条件充电会引发电池过充电或异常化学反应，发生产热，冒烟，破裂或起火情况。

9.3.5 Do not allow overcharge, over-discharge, drive nail into the cell, strike it by hammer or tread it.
不允许过充、过放、针刺、锤击或践踏电池。

9.3.6 Do not allow give cell impact or drop, and not allow use the cell with conspicuous damage or deformation.
不允许撞击或投掷电池，不允许使用受到明显的损害或变形的电池

9.3.7 Do not allow connect cell to the plug socket or car-cigarette-plug.
不允许将电池与插座直接连接。

9.3.8 Do not allow use Lithium ion cell with the primary batteries or secondary batteries whose capacity or kinds or maker is different. If do that, the cell will be discharged or charged excessively in use. And it may cause the generating heat, smoke, rupture or flame because of the abnormal chemical reaction in cells.
不允许将锂离子电池与一次电池或不同厂家生产的二次电池混合使用，混合使用会造成电池充电或放电过度，引发电池由于非正常化学反应产热，冒烟，破裂或起火。

9.3.9 If the cell gives off an odor, generates heat, becomes discolored during use、charge or storage , immediately remove(Do not allow touch a abnormal cell directly) it from the device or cell charger and stop using it.
电池在使用、充电或储存过程中，出现释放气味、过度产热或变色等异常情况，立即将电池从使用设备或充电器取出（不允许直接接触异常电池）并停止使用。

9.3.10 Do not allow continue to charge cell over specified time. If the cell is not finished charging over regulated time, let it stop charging. Continue to charge, There is possibility that the cell might generate heat, smoke, rupture or flame.
电池不允许持续充电超过限定时间。如电池在限定时间内仍无法完成充电，要停止充电，继续充电有可能发生电池产热，冒烟，破裂或起火。

9.3.11 Do not allow get cell into a microwave or a high pressure container. It causes the generating heat, smoke, rapture or flame because of a sudden heat or damage of sealing condition of cell.
不允许将电池至于微波或高压容器内，突然高温或密封状态破坏会引起电池产热，冒烟，破裂或起火。

9.4 Precautions on Handling Lithium Ion Cells 电池使用方式

a) Under the same standard operating conditions (discharge rate, depth of discharge, and operating temperature), consistency of the capacity among all of the cells in the battery pack should be within ± 5% tolerance.
在放电率、放电深度、使用历程和使用温度相同的标准工况下，电池组中单体电池的容量一致性误差≤±5%

b) Inspect voltage and internal impedance before using.
使用前需检测电池电压及内阻。

c) Prismatic Lithium-ion battery200Ah use plastic cases. The plastic case can increase the safety under abuse usage. When our battery is stressed by an external force, penetrated by a nail or short-circuited, energy stored inside the battery can be released momentarily, without causing self-ignition and explosion. However, plastic cases are easier to be deformed due to changes of external environmental temperature; cell(s) must be bonded tightly during operation.
200AHA方形锂离子电池采用塑料外壳，可以提高锂离子蓄电池在滥用的情况下的安全性；当电池在受到外界强烈挤压、针刺或短路时电池内部聚集的能量能够瞬间释放，不会发生自燃烧、爆炸等安全事故的发生；但是塑料电池壳易受到外界环境温度的变化而发生轻微形变，因此要求客户在使用过程中一定要将电池组处于夹紧状态。

d) Do not allow use abnormal cell which has damages by shipping stress, drop, short or something else, and which gives off electrolyte odor.
不允许使用由于运输损伤，跌落，短路或其它原因造成破损或漏液电池。

e) Do not allow use or leave the cell under the blazing sun(or in heated car by sunshine).The cell may generate heat, smoke or flame. And also, it might cause the deterioration of cell's characteristics and cycle life.
不允许使用或将电池放在太阳光直射的地方（或阳光直接照射的车内）。这种情况会使得电池产热，冒烟或起火，也可能使得电池性能衰降及循环寿命缩短。

f) If the skin or cloth is smeared with liquid from the cell, wash with fresh water. It may cause the skin inflammation, see a doctor immediately.
如果电池流出液体接触到皮肤或衣服，使用清水清洗。有可能会引起皮肤炎症，请立即就医。

g) In order to monitor the voltage, current and temperature of the single cells of the battery pack in real-time and to effectively prevent overcharge, over-discharge and overheating of the cells, the battery pack must be configured with a battery management system (BMS),which has a complete and reliable performance and accurate data collection function.
为了实时监控电池组内单体电池的电压、电流和温度，有效防止发生电池过充、过放、过热现象，电池组必须配置功能完善、性能可靠、数据采集准确的电池管理系统（BMS）。

10 TRANSPORTATION 运输

The capacity of delivery cell is approximately at 40% -50%of charging. During transportation, keep the cell from acutely vibration, impacting, sunshine exposure, drenching. Shipping environment temperature should controlled at 0-45°C.

出货电池处于40%-50%SOC状态，运输过程应防止剧烈振动、冲击、日晒雨淋。运输过程中，环境温度应当控制在0-45ºC。

11 STORAGE 储存

Any storage, cell should be in a dry area and no corrosive gas and there is no press on the cell.

电池应在干燥无腐蚀性气体的环境下储存，不要让电池承受任何压力。

When stored within 1 month : -20°C ~45°C

储存期1个月 : -20°C ~45°C

When stored within 6 months : -20°C ~35°C

储存期6个月: -20°C ~35°C

When stored within 12 months : -10°C ~35°C

储存期12个月: -10°C ~35°C

12 CONSULTATION 技术咨询

12.1 Any obscurity, please contact us as following.

http://www.sinopolybattery.com

sales@sinopoly.cn

12.2 For the sake of safety assurance, please discuss the equipment design, its system and protection circuit of Lithium-ion cell with Sinopoly in advance. And consult about the high rate current, rapid charge and special application in other ways.

为了安全起见，如有设备设计，锂离子电池系统保护电路或高电流，快速充电和其它方面的特殊应用,请先咨询中聚公司相关事宜。