

Rechargeable Lithium-ion Battery Specification Approval

可充电锂离子电池规格书

Customer P/N 客户编码:

Product Model 产品型号:

BP26105-12S2P

Nominal capacity 标称容量:

21800mAh

Product Type 产品类型:

Lithium-ion

Effective date 生效日期:

2025-06-14

Prepared by 制作	Checked by 审核	Approved by 批准
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Customer Approved 客户承认 (Stamp) (盖章)	Test by 测试	Checked by 审核	Approved by 批准

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修改记录

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1. Scope 概述

The specification shall be applied to Lithium-ion rechargeable cells which is manufactured by Dongguan Blue Power Technology Co., Ltd.

此产品规格书适用于东莞市蓝电新能源科技有限公司制造的可充电锂离子电池。

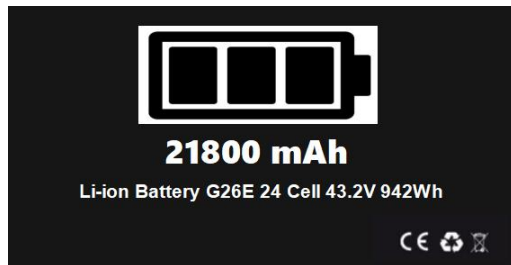
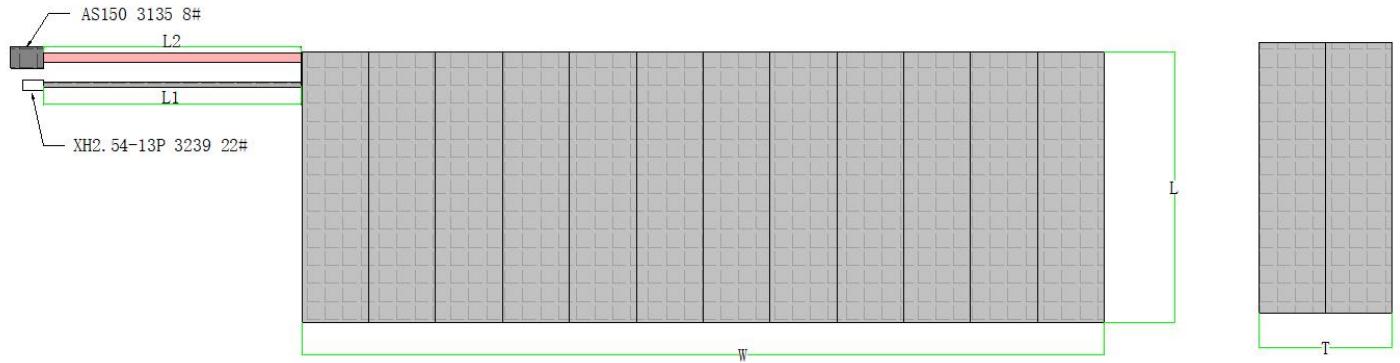
2.Reference standard 参考标准

GB/T 18287-2013、IEC/EN61960、UL1642。

3. Product basic information 产品基本信息

Items 项目	Parameter 参数	
Battery model 电池型号	BP26105-12S2P	
current voltage 标称电压	43.2V	
Minimum capacity 最小容量	21800mAh	0.2C discharge 放电
Fully charge voltage(FC) 满充电压 (FC)	50.4V	
Fully discharge voltage(FD) 满放电压(FD)	30.0V	
Standard charge current 标准充电电流	21.8A	
Max charge current 最大充电电流	116A	
Standard discharge current 标准放电电流	21.8A	
Maximum continuous discharge current 最大持续放电电流	130.8A	
Instantaneous discharge current 瞬间放电电流	220A≤10s	
Weight 重量	Appr: 约3500g	
Shipment voltage 出货电压	≥40.8V	
Battery pack impedance 电池内阻	≤30mΩ	
Operating temperature 使用温度	Charging: -10°C ~ 65°C	
	Discharging: -35°C ~65°C	
Storage temperature 存储温度	0~25°C	Less than 12 months 少于12个月
	0~45°C	Less than 3 months 少于3个月
	20±5°C is the recommended storage temperature	
Visual Inspection 外观	There should not be any remarkable scratches, cracks, bolts, cauterization, deformations, swelling , leakage and so on on the surface of the battery. 电池表面禁止出现诸如撕裂、腐蚀、变形、气鼓、漏液等损害商业价值的不良现象。	

4. Battery Outline Drawing 电池外形尺寸示意图



正面

Model	BP26105-12S2P
Nominal	Li-ion 43.2V, 21800mAh, 942Wh
Voltage	Fully charge voltage 50.4V Fully discharge voltage 30.0V
Current	Max charge current 116A Max discharge current 220A
Warning language : Do not disassemble, impact, squeeze or put into fire. If severe swelling occurs, do not continue to use. Do not place in high temperature environments. Do not use after immersion in water.	

背面

标签尺寸：长 90mm*宽 50mm*厚 0.1mm

4.1 组合电池尺寸

PACK thickness (T)	PACK width (W)	PACK length (L)	Wire length (L1)	Length (L2)
MAX:57.0	Max:325.0	Max:120	100±5	100±5
UNIT 单位： mm				

4.2 BOM (Bill of materials) 电池物料清单

NO.	Material Name 零件名称	Specification 规格型号	Qty 用量	Remark 备注
1	电芯	INR26105 10900mAh 6C	24	RoHS
2	端子线	AS150 3135 8#	1	RoHS
3	端子线	XH2. 54-13P 3239 22#	1	RoHS
4	镍带	铜镍复合	13	RoHS
5	黑色 PVC 膜	电池专用	2	RoHS
6	标签	电池专用标签	2	RoHS
7	青稞纸	电池专用	8	RoHS

5. Testing requirements 测试要求

5.1 Battery test environment 电池试验环境

Temperature 温度: $23\pm 2^{\circ}\text{C}$

Relative humidity 相对湿度: $60\pm 20\%$ RH

Atmospheric pressure 大气压力: $86\sim 106\text{ KPa}$

5.2 Measuring instrumentation requirements 测量仪表要求

Voltage instrumentation requirements: Measuring the voltage meter accuracy no less than 0.5 magnitude

电压仪表要求: 测量电压的仪表的精确度不低于 0.5 级

Current instrumentation requirements: Measuring the current meter accuracy no less than 0.5 magnitude

电流仪表要求: 测量电流的仪表精确度不低于 0.5 级

Time instrumentation requirements: Measuring the time meter accuracy no less than 0.1%

时间仪表要求: 测量时间的仪表精确度不低于 0.1%

Temperature instrumentation requirements: Measuring the temperature meter accuracy no less than 0.5°C

温度仪表要求: 测量温度的仪表准确度不低于 0.5°C

Impedance instrumentation requirements: Measuring impedance should by sinusoidal alternating (1 KHZ) test

内阻仪表要求: 测量内阻应由正弦交变(1KHZ)进行测试

6. Battery charge/discharge definition 电池充/放电定义

6.1 Fully charge voltage(FC) 满充电压 (FC): 50.4V

6.2 Fully discharge voltage(FD) 满放电压(FD): 30.0V

6.3 Standard Charge 标准充电

Charging the battery initially with constant current at 0.2C and then with constant voltage at FC till charge current declines to 0.02C.

先以0.2C恒流充电, 当电芯电压达到满充电压后, 改为恒压充电直到充电电流小于或等于0.02C。

7. Common performance 常规性能

No.	Items 项目	Test Method 测试方法	Criteria 标准
1	Cycle performance 循环性能	At standard testing condition, constant current 0.5C charge to FC, then constant voltage charge to current declines to 0.01C, rest 10min, constant current 0.5C discharge to FD, rest 10min. Repeat above steps till continuously discharging capacity higher than 80% of the initial capacities of the battery. 在标准测试环境下, 先用 0.5C 恒流充电至 FC, 再恒压 FC 充电直至充电电流 $\leq 0.01\text{C}$, 搁置 10 分钟, 再用 0.5C 电流放电至 FD; 又搁置 10 分钟, 重复以上步骤, 直到放电容量是初始容量的 80%。	Cycle Life ≥ 1000 times 循环寿命 ≥ 1000 次

2	Retention Capability 荷电保持能力	After full charging, storing the battery 28 days with $20 \pm 5^{\circ}\text{C}$ condition, and then staying 1 hours with discharge current of 0.2C till FD. 电池满充电后, 在 $20 \pm 5^{\circ}\text{C}$ 的环境条件下存放 28 天, 搁置 1h 后以 0.2C 电流连续放电至 FD。	Capacity $\geq 85\%$ 容量 $\geq 85\%$
3	Constant temperature and Humidity 恒定湿热	After full charging, put the battery into the box that the temperature is $40 \pm 2^{\circ}\text{C}$ and the humidity ranges between 90~95% for 48hours, then put it at $23 \pm 2^{\circ}\text{C}$ for 2 hours, then discharge with current of 0.2C to FD. 满充电后将电池放入 $40^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 及相对湿度为 90~95% 的恒温恒湿箱中 48 小时后, 取出在 $23 \pm 2^{\circ}\text{C}$ 环境下搁置 2h, 再以 0.2C 电流放电至 FD。	No distortion, no rust, no leakage, no venting, no rupture, no fire, no explosion, the discharge time is not less than 3hrs. 不变形、不锈蚀、不泄漏、不泄气、不破裂、不起火、不爆炸、放电时间不低于 3h。
4	High Temperature Performance Test 高温放电性能	After full charging, put the battery into box with high temperature of $55 \pm 2^{\circ}\text{C}$ for 2h, then discharge with current of 1.0C to FD. 电池满充电后, 在 $55^{\circ}\text{C} \pm 2^{\circ}\text{C}$ 的高温箱中放置 2h, 然后以 1.0C 电流放电至 FD。	No distortion, no rupture, no fire, no smoke or leakage Discharge time $\geq 51\text{min}$ 不变形、不破裂、不起火、不冒烟、不漏液, 放电时间 $\geq 51\text{min}$ 。
5	Low Temperature Performance Test 低温放电性能	After full charging, put the battery into box with low temperature of $-10 \pm 2^{\circ}\text{C}$ for 16~24h, then discharge with current of 0.2C to FD. 电池满充电后, 在 $-10 \pm 2^{\circ}\text{C}$ 的低温箱中放置 16~24h, 然后以 0.2C 电流放电至 FD。	No distortion, no rupture, no fire, smoke or leakage Discharge time $\geq 3\text{h}$ 不变形、不破裂、不起火、不冒烟、不漏液, 放电时间 $\geq 3\text{h}$ 。

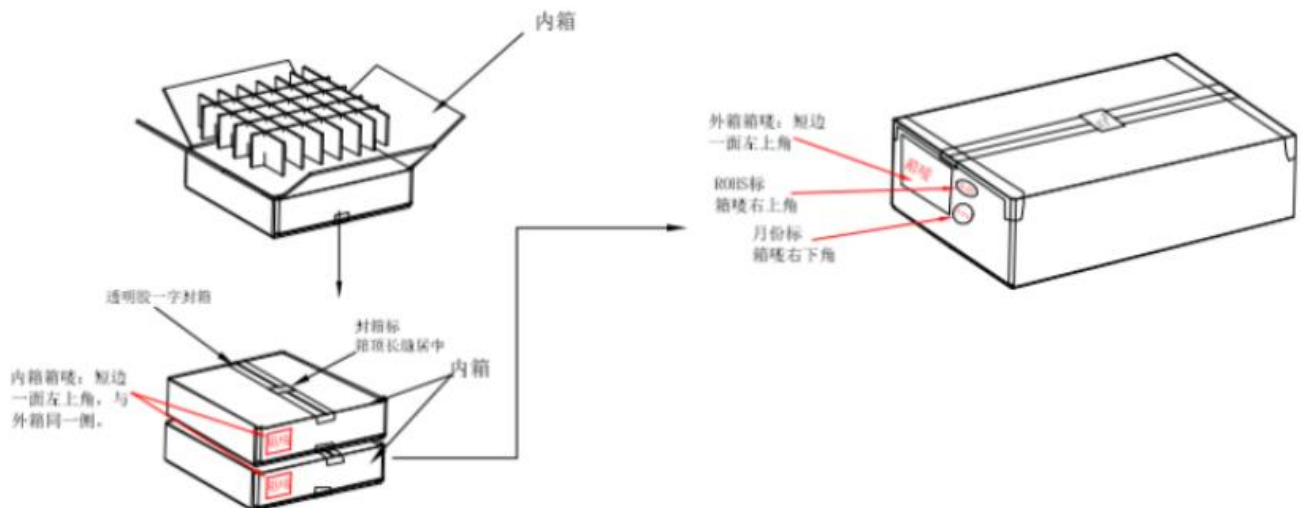
8. Safety performance 电池安全性能

1	Overcharge protection 过充保护	After the battery is fully charged, then charge the battery for 8 hours with a power which can provide 2 times more than nominal voltage and $2C_5A$ current. 电池充满电后, 用 $2C_5A$ 电流和 2 倍标称电压输出的电源继续充电 8 小时。	No fire, no explosion. The electrical properties of normal. 无起火、爆炸、电性能正常
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2	Over discharge protection 过放保护	After the battery is fully charged, discharge at $20\pm5^{\circ}\text{C}$ conditions with $0.2C_5A$ until the battery voltage drops to the over discharge voltage, then discharge with a 30Ω resistor for 24 hours. 电池满充电后，在 $20\pm5^{\circ}\text{C}$ 条件下，以 $0.2C$ 放电至终止电压后，外接 30Ω 负载放电 24h。	No fire, no explosion. The electrical properties of normal. 无起火、爆炸、电性能正常
3	Short protection 短路保护	After full charging, connect the positive and negative terminals of the battery with copper wire having a maximum resistance load of 0.1Ω at room temperature, the test is discontinued when the surface temperature lower than 10°C. 满充电后，将接有热电偶的电池置于通风橱中，短路正负极（线路总电阻不大于 0.1Ω），试验过程中，监视电池温度变化，当温度下降到比峰值低约 10°C 时，结束试验。	The battery shall no rupture, smoke, catch fire, or leakage. Battery Voltage $\geq 3.6V$ 电池外观应无明显损伤、冒烟、起火或漏液。 电池电压 $\geq 3.6V$。
4	Crush Test 挤压	After full charging, the battery is crushed between two flat plates. Applied force is about 13kN. 电池满充电后，在电池的正反面上各放 1 个平面，用 13KN 的压力作用与此两平面对电池进行挤压。	No explosion and no fire. 无起火、爆炸
5	Impact Test 重物冲击	After full charging, the battery is impacted between bar (15.8mm diameter) and 9.1Kg falling material (at a height of 61cm). Bar is laid across the center of the test sample. 电池满充电后，将直径为 15.8mm 的金属棒横放在电池的大面中间，将 9.1Kg 的重物在金属棒的上方 61cm 的高处自由落下冲击金属棒。	No explosion and no fire. 无起火、爆炸
6	Drop 自由跌落	After full charging, the battery is to be dropped from a height of 1.2 meter onto a thickness of 20mm board, dropped once in the positive and negative directions of three mutually perpendicular X, Y, Z axes. 电池满充电后，将其从 1.2 米高处自由跌落到 20mm 厚的硬木板上，从 X, Y, Z 正负方向每个方向自由跌落一次。	No leakage, no smoke, no fire, no explosion. 无漏液、冒烟、起火、爆炸

7	Vibration Test 震动	Fixed the fully charged battery to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz and 55Hz, the excursion of the vibration is 0.8mm. The battery shall be vibrated for 90 ~100 minutes per axis of XYZ axes. 电池按照振幅为0.8mm的谐振形式进行振动。振动频率在10和55Hz间以1Hz / min的速率变化，往复振动90~100min。电池应该在互相垂直的三个面进行测试。	No explosion, no fire. no leakage. 无起火、爆炸、漏液
8	Heating 热冲击	After full charging, put the battery in the baking oven and start , the temperature of the oven is to be raised at a rate of $5\pm2^{\circ}\text{C}$ per minute to a temperature of $130\pm2^{\circ}\text{C}$, remain for 30minutes at that temperature. 将电池满充电后，放置于热箱中，温度以 $(5\pm2^{\circ}\text{C}) / \text{min}$ 的速率升至 $130^{\circ}\text{C}\pm2^{\circ}\text{C}$ 并保温 30min。	No explosion and no fire. 无起火、爆炸

9. Package 包装图



10. Appendix 附录

Note(1):

Please be sure to take to comply with the specifications and the following precautions to use with batteries, did not follow the specifications for the operation caused any accidents, Dongguan Blue Power Technology Co., Ltd. will not accept any responsibility.

声明一:

请您务必遵守本规格书和以下使用注意事项使用电池, 对于没有按照规格书进行操作所造成的任何意外事故, 东莞市蓝电新能源科技有限公司将不承担任何责任。

Note(2):

The customer is requested to contact Blue Power in advance, if and when the customer needs other applications or operating conditions than those described in this document. Additional experimentation may be required to verify performance and safety under such conditions.

声明二:

客户若需要将电池用于超出文件规定以外的设备, 或在文件规定以外的使用条件下使用电芯, 应事先联系蓝电新能源, 因为需要进行特定的实验测试以核实电芯在该使用条件下的性能及安全性。

10.1 Instructions and Safety Requirement 使用说明和安全规程

Please read the battery instructions and the label on its surface before use.

使用电池前, 请仔细阅读使用说明书和电池表面标识。

When in use, the battery shall be kept out of heat、high voltage and avoided children's touching. Do not drop the battery.

在使用过程中, 应远离热源、高压, 避免儿童玩弄电池, 切勿摔打电池。

Do not touch contacts together. Do not demolish or assembly the battery by yourself. Do not put the battery in the damp place to avoid danger.

切勿将电池正负极短路, 切勿自己拆装电池, 也勿让电池放在受潮处, 以免发生危险。

Please use 0.5C current to charge 60%~80% capacity after the battery placed 3 months.

电池每放置三个月, 请预先以 0.5C 充电 1 次, 即让电池具备 60%~80% 的电量。

When the battery was stored for a long period, put it well in its half capacity. Do not wrap it with conduct material to avoid the damage caused by the direct contact between the metal and battery. Keep the battery in day places.

长期不用时, 请将电池储存完好, 让电池处于半荷电状态。请用不导电材料包裹电池, 以避免金属直接接触电池, 造成电池损坏, 将电池保存阴凉干燥处。

Avoid charging near fire or in the sunlight, otherwise, it will cause internal protection circuit and its function lost or abnormal chemical reactions, which will lead to heating, smoking, distortion or burning.

避免在火源附近或阳光直射下充电, 否则会造成电池内部保护电路和功能丧失和发生不正常的化学反应, 电池

有可能发热、冒烟、变形或燃烧。

10.2 Warning 警告

Keep the battery out of children's reach and prevent them biting or swallowing the battery.

将电池远离孩童不能得到的地方，以避免孩童噬咬或吞咽电池，如果吞咽了电池，应迅速送医院处理。

Well disposed the disused battery. Do not put it into fire or water.

废弃电池请安全妥当处理，不要投入火中或水中。

The leak-out electrolyte will cause the skin uncomfortable. If it drops into eyes, do not rob the eyes but wash in time, and go to hospital for treatment.

渗漏的电解液会造成皮肤不适，万一电解液进入眼睛，尽快用清水冲洗，不可揉眼，并迅速送医院处理。

Do not insert the battery onto the charger for a long time If charging beyond the normal time, the battery is still in the charger, please stop charging. The abnormal charging will cause battery over-heated, distort, smoke or burning.

如果超过正常充电时间很长时间充电器仍在充电，应停止充电，不正常的充电有可能会使电池发热、冒烟变形或燃烧。

Do not allow damage the battery with the metals gouged, forged or dropped etc., otherwise, it will cause over-heated, distort, smoke or burning, even in danger.

禁止用金属凿入电池、锤打或摔打电池或其他方法破坏电池，否则会造成电池发热、冒烟、变形或燃烧，甚至会发生危险。

In use or during storage, battery found there has been high fever, leakage, odor, distortion and other anomalies, please stop using it immediately and stay away from the battery.

在使用或储存期间，如发现电池有出现高温发热、漏液、散发异味、变形及其它异常现象时，请立即停止使用并远离电池。

10.3 Guarantee period 保质期

Guarantee is one year since it is out of the factory.

保质期是自出厂之日起一年。

10.4 Others 其他事项

Any matters that this specification doesn't cover should be conferred between the customer and Blue Power.

任何本规格书中未提及的事项，需要经双方协商确定。