文件名称：NaFP71/173/204CY-200钠离子电芯规格书		受控印章	
文件编号：CY-QPS-RD003	版本：A3	第1页	共13页



产品规格书
Product specification

产　品　名　称：　方形钠离子电池

Product Name: Prismatic Na-ion cell

产　品　型　号：　NaFP71/173/204CY-200

ProductType: NaFP71/173/204CY-200

编制/日期 Designed/Date	审核/日期 Checked/Date	批准/日期 Approved/Date
	2026.05.21	

2026.09

江苏传艺钠电科技有限公司/Jiangsu Transimage Technology Inc.

江苏省扬州高邮市传艺钠电兴区路138号

文件名称：NaFP71/173/204CY-200钠离子电芯规格书		受控印章
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修订记录

Revision record

版本/Version	日期/Date	编制/Designed	变更内容/Change content
A0	2026-08-22	沈智	初版发行/Original release
A1	2026-09-16	沈智	全面更改/Comprehensive revision
A2	2026-04-15	岳政	1.更改标称电压/Change the nominal voltage 2.新增加了电池存储性能/New added battery storage performance 3.更改充放电方式/Change the charge and discharge mode 4.更改充电温度区间/Change the charging temperature range 5.更改电芯尺寸/Change the size of the cell
A3	2026-05-17	岳政	更改为中英文版/Change to the Chinese and English versions

文件名称：NaFP71/173/204CY-200钠离子电芯规格书		受控印章
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1．适用范围 Scope

本产品规格书描述了江苏传艺钠电科技有限公司提供的型号为NaFP71/173/204CY-200钠离子电池的产品性能指标。

This product specification sheet describes the performance indicators of the NaFP71/173/204CY-200 sodium-ion cell provided by Jiangsu Transimage Technology Inc

本产品使用层状氧化物正极材料和生物质前驱体硬碳体系，具备优异的低温、倍率、长循环的特性，

This product uses layered oxide cathode materials and biomass precursor hard carbon systems,featuring excellent low-temperature performance high-rate capability,and long cycle life.

本产品主要参考以下标准进行性能指标的评价/ The performance indicators of this product are mainly evaluated based on the following standards:

GB/T 36276-2018《电力储能用锂离子电池》

GB/T 36276-2018《Lithium ion battery for electrical energy storage》

GB 38031《电动汽车用动力蓄电池安全要求》

GB 38031《Electric vehicles traction battery safety requirements》

UL1642《 锂电池安全标准》

UL1642《Standard for safety lithium batteries》

2. 产 品 类 型Product type

2.1产品名称/Product name: 方形钠离子电池Prismatic Na-ion cell

2.2产品型号/Product type: NaFP71/173/204CY-200

① Na-代表钠离子电池"Na"stands for Na-ion cell

② F-正极为以铁为主的体系 The cathode is an iron-based system.

③ P-代表方形 Represents prismatic

④ 71/173/204-电池尺寸分别代表厚度/宽度/高度 Respectively represent the thickness/width/height of the cell

⑤200-标称容量，单位： Ah。Nominal capacity,unit:Ah

3. 产品参数Product parameters

3.1基本参数 Basic parameters

项目/Project	规格/Specifications	条件/Condition/Note
标称容量/Nominal capacity	200Ah	0.2C(1.5-3.9V)
标称电压/Nominal voltage	3.0V	/
电压区间/Voltage range	1.5-3.9V	/
直流内阻/DC Internal resistance	≤0.8mΩ	2C 30s 50%SOC
交流内阻/AC Internal resistance	≤0.25mΩ	AC 1kHz 2.7V,25±2℃
电池尺寸/Cell size	厚度/thickness:≤73mm 宽度/width:173.7±0.5mm 高度/height:204.6±0.5mm	外形尺寸 Dimensions
能量密度/Energy density	≥135.00Wh/Kg	/
电池重量/Cell weight	4.70±0.5Kg	/
储存条件/Storage conditions	温度/Temperature: 建议-10~35℃ Suggestion-10~35℃	通风避光/Ventilated and avoiding light
	湿度/Humidity: ≤70%RH	
	电压/Voltage:2.65±0.05V	

3.2电性能参数 Electrical performance

3.2.1充电性能 Charging performance

项目/Project		规格/Specifications		条件/Condition /Note	
充电性能 Charging performance	温度与充电 Temperature and charging	电芯表面温度 Cell surface temperature	>55℃	最佳充电充电方式 Optimal charging method	不允许充电 Charging prohibited
			10℃<T≤55℃		0.5P
			0℃<T≤10℃		0.3P
			-10℃<T≤0℃		0.15P
	充电温度区间 Charging temperature range	-10~55℃		温度超过此区间，不允许充电 Charging is not allowed if the temperature exceeds this range	
	标准充电功率 Standard charging	0.5P		25℃±2℃下，恒功率充电至3.9V	

	power		Constant power charging to 3.9V at 25℃±2℃
	最大持续充电功率 Maximum continuous charging power	1P充电能量/标准充电能量≥95% 1P charging energy/standard charging energy≥95%	

3.2.2放电性能 Discharge Performance

项目/Project		规格/Specifications		条件/Condition /Note
放电性能 Discharge performance	温度与放电能力 Temperature and discharge capability	-20℃	≥85%	搁置12h,相对于标称容量 Resting for 12 hours,relative to the nominal capacity.
		-10℃	≥90%	
		0℃	≥95%	
		25℃	100%	
		55℃	≥98%	
	放电温度区间 Discharge temperature range	-40~60℃		温度超过此区间，应停止工作 If the temperature exceeds this range,work should be stopped
	标准放电功率 Standard discharge power	0.5P		25℃±2℃下，恒功率放电至1.5V Constant power discharge to 1.5V at 25℃±2℃
	最大持续放电功率 Maximum continuous discharging Power	1P放电能量/标准放电能量≥95% 1P discharging energy/standard discharging energy≥95%		

3.2.3存储和循环性能/Storage and Cycling Performance

项目/Project			性能指标/Performance	测试条件与方法/Testing conditions and methods
存储性能 Storage performance	短期 Short-term	高温 High temperature	剩余容量≥94% Remaining capacity≥94% 可恢复容量≥96% Recoverable capacity ≥96%	45℃下存储7天，100%SOC Stored at 45℃ for 7 days,100% SOC
		低温 Low temperature	剩余容量≥95% Remaining capacity≥95% 可恢复容量≥98% Recoverable capacity ≥98%	-20℃下存储7天，100%SOC Stored at-20℃ for 7 days, 100%SOC
	长期 Long-term	常温 Room temperature	可恢复容量≥97% Recoverable capacity ≥97%	25℃下存储28天，100%SOC Stored at 25℃ for 28 days, 100%SOC

循环性能 Cycle performance	常温循环 Room temperature cycle	≥2000次 @100%DOC ≥2000 cycles@100%DOC	25℃,0.5P,(1.5-3.9V) 容量保持率≥80% 25℃,0.5P,(1.5-3.9V) Capacity retention rate≥80% 备注：中间静置时间要不小于60min;(300±20kgf预紧力) Note:The intermediate dwell time should not be less than 60 minutes;(Preload force of 300±20 kgf)
		≥3000次 @100%DOC ≥3000 cycles@100%DOC	25℃,0.3P,(1.5-3.9V) 容量保持率≥80% 25℃,0.3P,(1.5-3.9V) Capacity retention rate≥80% 备注：中间静置时间要不小于60min;(300±20kgf预紧力) Note:The intermediate dwell time should not be less than 60 minutes;(Preload force of 300±20 kgf)
		≥5000次 @90%DOC ≥5000 cycles@90%DOC	25℃,0.3P,(2.0-3.85V) 容量保持率≥70% 25℃,0.3P,(2.0-3.85V) Capacity retention rate≥70% 备注：中间静置时间要不小于60min;(300±20kgf预紧力) Note:The intermediate dwell time should not be less than 60 minutes;(Preload force of 300±20 kgf)

3.2.4安全性能 Safety Performance

项目/Project	性能指标/Performance	测试条件与方法/Testing conditions and methods
加热 Hot box	电池不起火、不爆炸 No fire,no explosion	参考：GB/T36276-2018 Reference to GB/T36276-2018
外部短路 External short circuit	电池不起火、不爆炸 No fire,no explosion	参考：GB/T36276-2018 Reference to GB/T36276-2018
过充 Over charge	电池不起火、不爆炸 No fire,no explosion	参考：GB-38031 Reference to GB-38031
过放 Over discharge	电池不起火、不爆炸 No fire,no explosion	GB/T36276-2018 Reference to GB/T36276-2018
跌落 Drop test	电池不起火、不爆炸、无漏液 No fire,no explosion,no leakage	参考：GB/T36276-2018 Reference to GB/T36276-2018
挤压 Crush	电池不起火、不爆炸 No fire,no explosion	参考：GB/T36276-2018 Reference to GB/T36276-2018

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低气压 Low pressure test	电池不起火、不爆炸 No fire,no explosion	参考：GB/T36276-2018 Reference to GB/T36276-2018
重物冲击 Heavy weight impact	电池不起火、不爆炸 No fire,no explosion	参考：UL1642-14 Reference to UL1642-14
振动测试 Vibration test	电池不起火、不爆炸、无漏液 No fire,no explosion,no leakage	参考：UL1642-16 Reference to UL1642-16

4. 测试方法Test methods

4.1标准测试条件Standard test conditions

若无特别要求，此规格书上的产品测试条件均为温度：25±2℃,湿度：小于70%RH,气压：86kPa~106kPa新电池状态。

If there are no specific requirements,the product testing conditions in this specification sheet are temperature:25±2℃,humidity:less than 70%RH,air pressure:86kPa~106kPa,and the cell is in a new state.

4.2标准充放电方式Standard charging and discharging methods

“标准充电制式”即在环境温度为25±2℃的条件下以0.5P恒功率充电至3.9V。

"Standard charge method"refers to the charge to 3.9V at constant power of 0.5P under the condition of ambient temperature at 25±2℃.

“标准放电制式”即在环境温度为25±2℃的条件下以0.5P恒功率放电至1.5V。

"Standard discharge method"refers to the discharge to 1.5V at constant power of 0.5P under the condition of ambient temperature at 25±2℃.

4.3电性能测试 Electrical performance test

4.3.1充电性能 Charging performance

电池按标准放电方式放电结束后，放入温度试验箱内待电池表面温度达到设定值并保持6h,然后按规定的功率进行充电。

After discharging the cell according to the standard discharge method,place the cell in a temperature test chamber until the surface temperature of the cell reaches the set value and maintains it for 6 hours,and then charge it at the specified power.

4.3.2放电性能 Discharging performance

电池按标准充电方式充电结束后，放入温度试验箱内待电池表面温度达到设定值并保持6h,然后按规定的功率进行放电。

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After charging the cell according to the standard charge method,place the cell in a temperature test chamber until the surface temperature of the cell reaches the set value and maintains it for 6hours,and then discharge it at the specified power.

4.3.3存储性能测试 Storage performance test

4.3.3.1短期Short-term

a)高温存储High-temperature storage

在300kgf±20kgf的预紧力下电池按标准充电方式充电至100%SOC, 中间搁置30min, 然后将电池放入环境试验箱内并设定为45℃保持该温度7天，将电池取出放入25℃±2℃的环境下6h, 将电池按标准放电方式放电。

After charging the cell to 100%SOC according to the standard charging method under a pre-tightening force of 300kgf±20kgf,let it stand for 30min,then place the cell in an environmental test chamber set to 45℃ for 7 days,remove the cell and place it in an environment of 25℃±2℃ for 6h,and finally discharge the cell according to the standard discharge method.

b) 低温存储Low-temperature storage

电池按标准充电方式充电至100%SOC, 搁置30min, 放入环境试验箱内并设定为-20℃且保持该温度7天，将电池取出放入25℃±2℃的环境下6h, 将电池按标准放电方式放电。

The cell is charged to 100%SOC(State of Charge)using the standard charging method,then left to rest for 30 minutes.Place the cell in an environmental test chamber set to-20℃ and maintain this temperature for7 days Afterward,remove the celland place it in an environment at 25℃±2℃ for 6 hours.Finally,discharge the cell using the standard discharging method.

4.3.3.2**长期Long-term**

a)常温存储Room temperature storage

电池按标准放电方式放电，以0.5P恒功率充电至3.9V, 搁置30min, 将电池放入环境试验箱内并设定为25℃保持该温度28天，将电池取出放入25° ℃±2℃的环境下6h, 先将电池按标准放电方式放电，搁置30min, 然后将电池按标准充电方式进行充电，最后将电池按标准放电方式放电。

The cll is discharged according to standard discharge procedures,the charge to 3.9V at constant power of 0.5P,left for 30 minutes,placed in an environmental test chamber set at 25℃ for 28 days,removed and kept in an environment at 25℃±2℃ for 6 hours.Initially,the cell is discharged according to standard procedures,left for 30 minutes,then charged using standard charging procedures,and finally discharged according to standard procedures.

4.4安全性能测试 Safety performance test

4.4.1加热 Hot box

电池单体初始化充满电，将电池放在电热鼓风干燥箱中，温度以5°℃±2°C/min的速率由室温升至130℃±2℃并保持30min后停止加热，观察1小时，电池不应起火、爆炸。

Charge the cell to full capacity for initialization,then place it in an electrically heated air circulating oven. Increase the temperature from room temperature to 130℃±2℃ at a rate of 5℃±2C/min and maintain it for 30minutes before stopping the heating.Observe for 1hour,during which the cell should not catch fire or explode

4.4.2外部短路 External short circuit

电池单体初始化充满电，将电池正极端子和负极端子经外部短路10min(外部线路电阻<5mΩ)，观察1小时，电池不应起火、爆炸。

Charge the cell to full capacity for initialization,with the positive and negative terminals ofthe cell short-circuited externally for 10minutes(external circuit resistance<5mΩ2).Observation for 1 hour,during which the cell should not catch fire or explode.

4.4.3过充 Over charge

电池单体初始化充满电，将电池单体以0.5C恒流充电至电压达到充电终止电压的1.1倍或115%SOC后，停止充电，观察1小时，电池不应起火、爆炸。

Charge the cellto fill capacity forinitialization,with the cell charged at a constant current of0.5C until the voltage reaches 1.1 times the termination voltage or 115%SOC,after which the charging is stopped.Observation for 1 hour,during which the cellshould not catch fire or explode.

4.4.4过放 Over discharge

电池单体初始化充满电，然后以1C恒流放电，直至放电时间到达90min，观察1小时，电池不应起火、爆炸。

Charge the cell o full capacity for initialization,then discharged at a constant current of 1C until the discharge time reaches 90 minutes.Observation for 1hour,during which the cell should not catch fire or explode.

4.4.5跌落Drop test

电池按标准充电制式充电结束后，将电池单体的正极或负极端子向下由高度为1.5m的位置自由跌落到水泥地面上1次，观察1小时，电池不应起火、爆炸、漏液。

After charging the cellaccording to the standard charging procedure,the positive or negative terminal of the cell is dropped freely from a height of1.5 meters onto a concrete floor once.Observation for 1 hour,during which the cell should not catch fire,explode,or leakage.

4.4.6挤压 Crush

电池放在挤压设备的两个挤压面之间，按垂直于电池单体极板方向进行施压，以5±1mm/s的挤压速度，逐渐增加压力至电压达到0V或变形量达到30%或挤压力达到(13±0.78)kN，保持压力10min，观察1小时，电池不应起火、爆炸。

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The cell is placed between two compression surfaces of a compression device,and pressure is applied in the direction perpendicular to the electrode plates of the cell.The pressure is gradually increased at a compression speed of5±1mm/s until the voltage reaches OVor the deformation reaches 30%,or the compression force reaches (13±0.78)kN.Maintain the pressure for 10 minutes,and observe for 1 hour.The cell should not catch fire or explode.

4.4.7低气压 Low pressure test

电池按标准充电制式充电结束后，将电池放入在绝对压力为11.6kPa, 温度为25±5℃条件下搁置6小时，观察1小时，电池不应起火、爆炸。

After charging the cell according to the standard charging method,place the cell under conditions of an absolute pressure of 11.6kPa and a temperature of 25±5℃ for 6 hours.Observe it for 1 hour;the cell should not catch fire or explode.

4.4.8重物冲击 **Heavy weight impact**

将电池放在冲击台上，将一个Φ15.8mm的钢柱置放电池中心，钢柱的纵轴平行于平面，让重量9.1kg重锤自610mm 高度自由落下，冲击电池，电池允许发生变形，观察1小时，电池不应起火、爆炸。

Place the cell on the impact table,with a steel rod of Φ15.8mm positioned at the center of the cell,the longitudinal axis ofthe rod parallel to the plane.Allow a 9.1kg weight to freely fall from a height of 610mm, impacting the battery.Deformation of the cell is permitted.Observe for 1 hour,during which the cell should not catch fire or explode

4.4.9振动测试 Vibration test

电池应经受振幅为0.8mm振动。振动频率在10-55Hz范围内以1Hz/min 的速率变化，并在90-100min内循环一次。电池沿3个相互垂直的方向振动，观察1小时，电池不应起火、爆炸、漏液。

The cell should withstand vibrations with an amplitude of 0.8 mm.The vibration frequency should vary within the range of 10-55 Hz at a rate of 1 Hz per minute,completing one cycle within 90-100 minutes.The cell should be vibrated along three mutually perpendicular directions.Observe it for 1 hour;the cell should not catch fire,explode,or leakage.

5. 使用说明 Instruction for use

5.1使用 Use

5.1.1运输 Transport

电池运输荷电状态为20~30%SOC, 电池包装成箱进行运输，在运输过程中应防止剧烈振动、冲击或挤压，防止日晒雨淋，不得倒置。在装卸过程中，产品应轻搬轻放，严防摔掷、翻滚、重压。

The cell transportation state of charge (SOC)should be 20-30%.The cell should be packed in boxes for transportation.During transportation,avoid severe vibrations,impacts,or compression,and protect them from direct sunlight and rain.Do not place the boxes upside down.During loading and unloading,handle the products with care,avoiding dropping,rolling,or heavy pressure.

5.1.2存储 Storage

长期储存的电池超过6个月须置于干燥、通风处，储存荷电状态为20~50%SOC，且每6个月对电池进行一次充放电循环。

If the cellis stored for more than 6 months,it should be kept in a dry and ventilated place with a state of charge(SOC)of 20-50%.Additionally,the cell should undergo a charge-discharge cycle every 6 months.

5.2安全守则 **Safety guidelines**

滥用钠离子充电电池可能会造成电池的损害或人身伤害，在使用钠离子电池之前，请仔细阅读以下的安全守则：

The abuse of sodium ion cell may cause cell damage or personal injury.Please read the following precautions carefully before using sodium ion cell:

注释1:如果客户需要将电池在该文件之外的条件下操作应用，请先咨询传艺钠电公司相关事宜；

Note 1:If customers need to operate or use the cell under conditions not covered in this document,please consult Jiangsu Transimage Technology Inc with for further information.

注释2:在该文件说明的条件之外使用该电池而产生的事故，传艺钠电公司不承担任何责任。

Note 2:Jiangsu Transimage Technology Inc assumes no responsibility for any accidents resulting from the use of this cell under conditions not specified in this document.

5.2.1 注意事项 Attention

a) 严禁将电芯浸入海水或水中；

Do not immerse the cell in seawater or water.

b)禁止将电池放置在高温源，如火，加热器等旁；

Do not place the cell near high heat sources such as fire,heaters,etc

c) 充电时请选用钠离子电池专用充电器；

Please use a charger specifically designed for sodium-ion cellwhen charging.

d)严禁颠倒正负极后使用电池；

Do not use the cell with reversed polarity.

e)禁止用金属直接连接电池正负极，造成短路；

Do not directly connect the positive and negative terminals ofthe cell with metal to avoid short-circuiting.

f)禁止将电池与金属，如发卡、项链等一起运输或存储；

Forbidden to transport or store the cell together with metal,such as hairpin and necklace.

g)禁止用钉子或其它利器刺穿电池；

Forbidden pierce the cell with nails or other sharp tools.

h)严禁在强静电和强磁场的地方使用，否则易破坏电芯安全保护装置，带来不安全的隐；

Forbidden to use it in the place with strong static electricity and strong magnetic field,otherwise,it is easy to damage the safety protection device of the cell and bring unsafe hidden danger.

i)如果电芯发生泄漏，电解液进入眼睛，应用清水冲洗眼睛，并立即送医治疗；

If electrolyte from the cell core leaks into the eyes,rinse the eyes thoroughly with plenty of water and seek immediate medical attention.

j) 如果电芯发出异味、发热、变色、变形或使用、贮存、充电过程中出现任何异常，立即停止充电或停止使用，并将其从装置中移出或隔离；

If the cell gives off odor,heat,discoloration,deformation or any abnormality occurs in the process of use, storage and charging,immediately stop charging or use,and remove or isolate it from the device.

k)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 electrode is dirty,wipe it with dry cloth before use,otherwise it may lead to poor contact function failure.

6. 修订声明 Revision statement

因不断地改善产品质量、特性的需要，本公司有权对产品规格书及维护特性进行修订，修订后将不预先通知用户。

Due to the ongoing need for continuous improvement of product quality and characteristics,our company reserves the right to revise product specifications and maintenance features.Users will not be notified of these revisions in advance.

7. 其他事项Others

本规格书中未提及的事项，须经本公司确认，本公司保留对此规格书中所述内容的最终解释权。For matters not covered in this specification document,confirmation from our company is required.We reserve the right to provide the final interpretation of the content described in this specification document.

8. 包装出货 Package

方形钠离子电池按照20%~30%SOC的标称容量或客户要求出货，电池出货后充电前的剩余容量取决于储存条件和储存时间。每一小箱采用卡槽放置6支电池，每一大箱放置1小箱密封后贴标签纸

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，每一托盘放置3层1、2层放置6大箱，3层放置4大箱，总计每一托盘承载的最大电池数量控制在100支以内。

Square sodium-ion cell is shipped based on a nominal capacity of 20%-30%SOC or as per customer requirements.The remaining capacity of the cell before charging,after shipment,depends on storage conditions and duration.Each small box contains 6 cells placed in slots,sealed with labeled paper after packing.Each pallet accommodates up to 3layers:the first and second layers hold 6large boxes each,and the third layer holds 4 large boxes,with a maximum of 100 cells per pallet.