LITHIUM MOTORCYCLE STARTER BATTERY

摩托车启动锂电池产品规格书

型号 MODEL
EN12-RT035B

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MODEL：EN12-RT035B

INTRODUCE 简介：

The lithium motorcycle starter battery is a high-performance power battery designed for frequent start-stop scenarios. It has the core advantages of wide temperature adaptability (-30℃ to 65℃), high rate discharge and long cycle life, and can fully replace traditional lead-acid batteries. Through material innovation and system optimization, LFP and NCM lithium batteries provide efficient and reliable power solutions for motorcycle start-stop scenarios, and promote the industry to green and intelligent upgrading.

摩托车启停锂电池是专为频繁启停场景设计的高性能动力电池，具有宽温适应性（-30℃至 65℃）、高倍率放电和长循环寿命等核心优势，可全面替代传统铅酸电池。通过材料创新与系统优化，LFP 和 NCM 锂电池为摩托车启停场景提供了高效、可靠的动力解决方案，推动行业向绿色化、智能化升级。

PRODUCT SPECIFICATIONS 产品规格

MODEL 型号	EN12-RT035B
VOLTAGE（V） 电压	12.8
CAPACITY(Ah) 容量	3.5
DIMENSIONS SIZE 尺寸(L*W*H)mm	113 * 70 *85
EXPANDED DIMENSIONS 拓展尺寸（L*W*H）mm	113*70*105 113*70*125
WEIGHT（kg） 重量	0.8
CA(AMPS) 启动电流	210
CCA(AMPS) 冷启动电流	105
CAN REPLACE LEAD ACID BATTERY 可替代铅酸电池	YTX4L-BS、YTZ5S-BS YTX5L-BS、YTZ6-BS YTZ7S-BS、YTX7L

PRODUCT CHARACTERISTICS 产品特性

- Ultra high rate 100C discharge
  超高倍率 100C 放电
- Quick wake up, easy to use
  快速唤醒，使用方便
- Wide temperature range adaptive system (-30℃ to 65℃)
  宽温域自适应系统（-30℃至 65℃）
- Intelligent Battery Management System (BMS)
  智能电池管理系统（BMS）
- Multi-scenario adaptability
  多场景适配性
- Low temperature heating technology
  低温加热技术
- Intelligent backup power, travel worry-free
  智能备用电源，出行无忧
- Long-term circulation and low self-consumption
  长效循环与低自耗
- Lightweight structure design
  轻量化结构

APPLICATION SCENARIO 应用场景

		
SUITABLE FOR SCOOTER	ROAD MOTORCYCLE	ATV
		
SNOWMOBILE	JET SKI	UTV

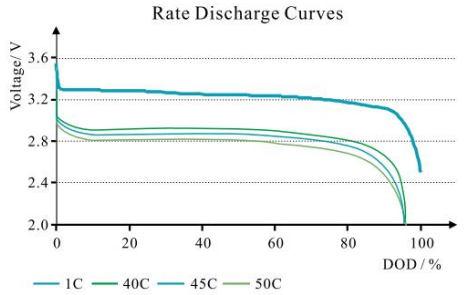
BATTERY CELL PERFORMANCE TEST 电池电芯性能测试（LFP）

1.ROOM TEMPERATURE RATE PERFORMANCE

常温倍率性能

Test method: At normal temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C: 1C(up to 2.5V), 40C, 45C, 50C constant discharge to 2.0V.

测试方法:常温下，0.5C 恒流恒压充至 3.68V，截止电流 0.05C: 分别以 1C(2.5V 截至)、40C、45C、50C 恒流放电至 2.0V。

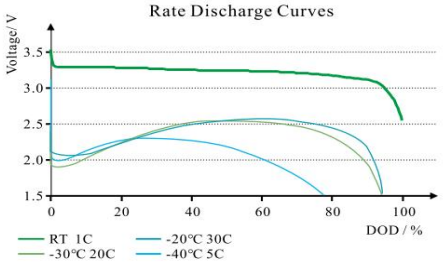


Rate 倍率	1C	40C	45C	50C
Median voltage 中值电压/V	3.244	2.886	2.852	2.807
Capacity holding ratio 容量保持率/%	100.0	94.9	95.9	94.8

2.LOW TEMPERATURE PERFORMANCE 低温性能

Test method: Under normal temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; Set aside at the test temperature for 4~8h, and discharge to 1.5V at the corresponding magnification respectively.

测试方法:常温下，0.5C 恒流恒压充至 3.68V，截止电流 0.05C; 在测试温度下搁置 4~8h，分别以相应倍率恒流放电至 1.5V。

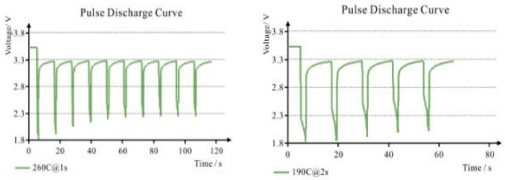


Temperature 温度/℃	RT	-20℃	-30℃	-40℃
Rate 倍率	1C	30C	20C	5C
Median voltage 中值电压/V	3.244	2.637	2.591	2.276
turning point 拐点/V	--	2.105	1.856	1.931
Capacity holding ratio 容量保持率/%	100.0	95.4	94.1	76.5

3.PULSE DISCHARGE PERFORMANCE AT ROOM TEMPERATURE 常温脉冲放电性能

Test method: Under normal temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; Discharge at 260C pulse for 1s, 190C pulse for 2s.

测试方法:常温下，0.5C 恒流恒压充至 3.68V，截止电流 0.05C; 分别以 260C 脉冲放电 1s、190C 脉冲放电 2s。

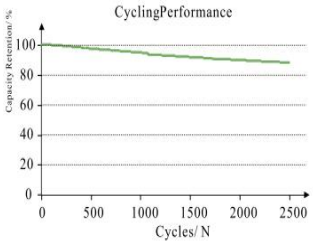


Pulse magnification @ Time 脉冲倍率@时间	Low head voltage 低头电压/V
260C@1s	1.811
190C@2S	1.879

4.ROOM TEMPERATURE CYCLE 常温循环

Test method: At room temperature, charge to 3.68V at 1C constant current and constant pressure, cut-off current is 0.05C; Let stand for 10min; 2C constant current discharge to 2.5V; Do a loop test.

测试方法:常温下，以 1C 恒流恒压充至 3.68V，截止电流 0.05C; 静置 10min;2C 恒流放电至 2.5V;做循环测试。

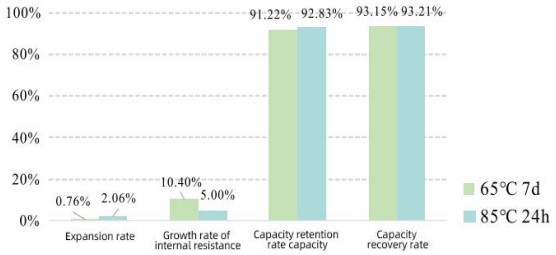


Cycle number 循环次数	Capacity retention rate /% 容量保持率/%	Median voltage /V 中值电压/V
1	100.00	3.192
100	100.46	3.207
300	99.32	3.214
500	98.03	3.212
700	96.94	3.211
1000	95.33	3.210
1300	93.18	3.204
1500	92.34	3.203
1700	91.55	3.202
2000	90.35	3.200
2300	89.27	3.198
2500	88.61	3.197

5.HIGH TEMPERATURE STORAGE 高温存储

Test method: At room temperature, 0.5C constant current constant voltage charge to 3.68V, cut-off current 0.05C; After being stored at 65℃ for 7d and 85℃ for 24h, the current was discharged to 2.5V at 1C. Then charge 1C at 0.5C, cycle 3 times, record the internal resistance, thickness and capacity of the battery before and after storage.

测试方法:常温下，以 0.5C 恒流恒压充至 3.68V，截止电流 0.05C;分别在 65℃下存储 7d、85℃下存储 24h 后，以 1C 恒流放电至 2.5V;再以 0.5C 充 1C 放，循环 3 次，记录电芯存储前后内阻、厚度、容量。



BATTERY CELL PERFORMANCE TEST 电池电芯性能测试（NCM）

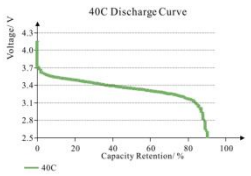
1. RATE DISCHARGE & PULSE DISCHARGE RT

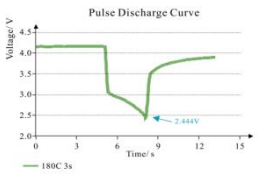
倍率放电&脉冲放电 RT

Test method a: At room temperature, 0.5C constant current constant voltage charge to 4.2V, cut-off current 0.05C; Then 40C constant current to 2.5V;
Test method b: At room temperature, 0.5C constant current constant voltage charge to 4.2V, cut-off current 0.05C; Then discharge 3s at 180C pulse.

测试方法a:常温下,以0.5C恒流恒压充至4.2V,截止电流0.05C;再以 40C 恒流放电至 2.5V;

测试方法 b:常温下，以 0.5C 恒流恒压充至 4.2V，截止电流 0.05C;再以 180C 脉冲放电 3s。





item 项目	Median voltage/V 中值电压/V	容量保持率/% Capacity retention rate/%
40C	3.37	90.09

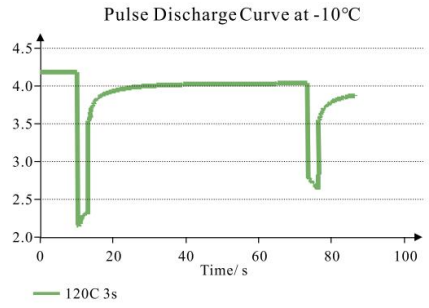
item 项目	Low head voltage/V 低头电压/V
180C 3S	2.444

2. LOW TEMPERATURE PULSE DISCHARGE -10

低温脉冲放电-10℃

Test method: At room temperature, 0.5C constant current constant voltage charge to 4.2V, cut-off current 0.05C; Set aside at -10℃ for 4h, and then discharge 3s at 120C pulse.

测试方法:常温下，以 0.5C 恒流恒压充至 4.2V，截止电流 0.05C;-10℃下搁置 4h，再以 120C 脉冲放电 3s。

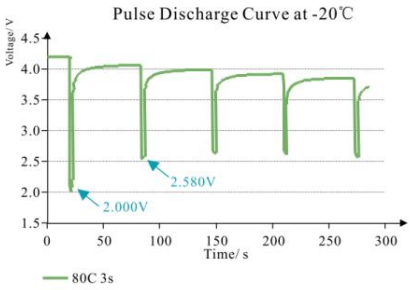


item 项目	Low head voltage/V(First) 低头电压/V(第一次)	Low head voltage/V（Second） 低头电压/V（第二次）
120C 3S	2.155	2.639

3.Low temperature pulse discharge -20℃低温脉冲放电-20℃

Test method: At room temperature, 0.5C constant current constant voltage charge to 4.2V, cut-off current 0.05C; Set aside at -20℃ for 4h, and then discharge 3s at 80C pulse.

测试方法:常温下，以 0.5C 恒流恒压充至 4.2V，截止电流 0.05C;-20℃下搁置 4h，再以 80C 脉冲放电 3s。



Item 项目	80C 3S
Low head voltage/V(First) 低头电压/V(第一次)	2.000
Low head voltage/V(Second) 低头电压/V(第二次)	2.580
Low head voltage/V(Third) 低头电压/V(第三次)	2.638
Low head voltage/V(Quater) 低头电压/V(第四次)	2.613
Low head voltage/V(Fifth) 低头电压/V(第五次)	2.557

CERTIFICATION 认证

ISO 14001 | ISO 9001 | ROHS | CE | FC

STORAGE AND SHIPMENT REQUIREMENT 存储及运输要求

Item 项目	Requirement 要求	Remark 备注
Storage temperature 存储温度	≤1 month:-20℃~45℃ ≤3 month:-20℃~30℃ ≤1 year:23±2℃	The recommended storage Temperature is 23±2° C. 推荐存储温度为 23±2℃。
Humidity 环境湿度	45%~85%RH	/
State of charge 荷电量	50%-100%	Voltage: 3.20-3.65V 电压: 3.20-3.65V

1.The storage temperature should be controlled at -20℃~40℃, away from open flame, corrosive substances and humid environment.
存放温度应控制在-20℃~40℃，远离明火、腐蚀性物质及潮湿环境。

2.Do not charge in a sealed, high temperature (> 40℃) or low temperature (< -5℃) environment to avoid abnormal reaction of the electrolyte.
禁止在密封、高温（> 40℃）或低温（< -5℃）环境下充电，避免电解液异常反应。

3.Do not reverse connect the positive and negative terminals; otherwise, short circuit or device damage may occur.
禁止反接正负极，否则可能引发短路或设备损坏。

4.If the volume of the lithium battery is smaller than that of the original battery, secure the battery using the provided base or foam to ensure stable installation.
若锂电池体积小于原装电池，需通过附赠的底托或泡棉固定，确保电池安装稳固。

5.When storing, it is important to avoid external vibrations and colisions as much as possible toavoid short circuits inside the battery or damage to the metal casing.
存放时应尽量避免外力的振动和碰撞,以免造成电池内部短路或损坏金属外壳。

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