

## Lithium Manganese Battery Technology Specification

**Customer** \_\_\_\_\_

**Part name** Lithium Manganese Battery

**Model No** CR2450ESL 620mAh 3.0V

**Serial No** \_\_\_\_\_

**Produce No** \_\_\_\_\_

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## 1 Scope 适用范围

The specification applies to CR2450ESL lithium manganese battery supplied by Shenzhen pkcell battery Co.,Ltd

本技术规格书适用于深圳市比苛电池有限公司生产的 CR2450ESL 锂锰扣式电池。

## 2 Characteristics and Performance 技术参数

2.1 Battery type: CR2450ESL

电池型号: CR2450ESL

2.2 Nominal voltage: 3.0 V

标称电压: 3.0 V

2.3 Normal capacity: 620 mAh(7.5K Ω to cut-off voltage 2.0V at 23°C±3°C)

标准容量: 620 mAh (23°C±3°C 7.5K Ω 负载电阻连续放电至 2.0V)

2.4 Nominal Discharge current: 0.4mA

标准放电电流: 0.4mA

2.5 Maximum pulse current: 28mA

脉冲放电电流: 28mA

2.6 Operating temperature range: -20-70°C

使用温度: -20-70°C

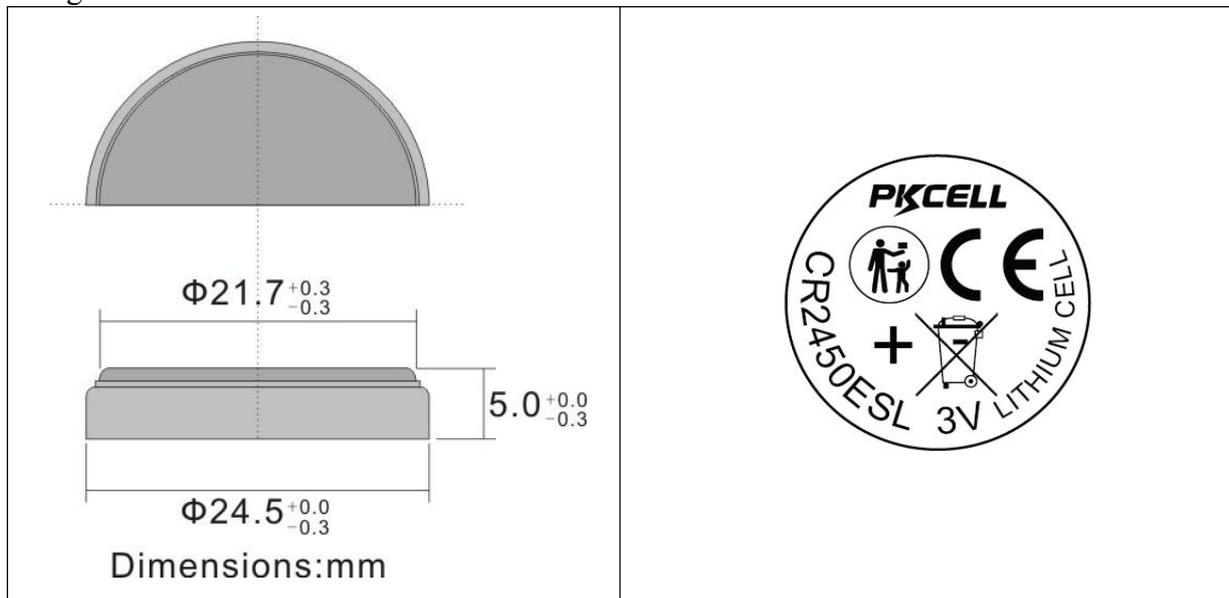
2.7 Storage temperature range/humidity: 0~30°C/35~75%

保存温度/湿度: 0~30°C/35~75%

2.8 Structure and Outside dimensions: Fig1.

结构和外观尺寸: Fig1.

Fig1.



2.7: Performance:

电池特性表:

CR2450ESL Performance 特性表

Table 表 1.

Item 项目	Condition 条件	Test temperature 试验温度	Characteristic 特性值	
Open circuit voltage 开路电压	No load 无负载	23°C±3°C	Initial 新电池	3.0-3.4V
			After 12 Months 12 个月后	3.0-3.4V
Load voltage 负载电压	7.5K Ω , after 0.8s 7.5K Ω 0.8 秒内	23°C±3°C	Initial 新电池	3.0-3.4V
			After 12 Months 12 个月后	3.0-3.4V
Discharge Capacity 放电容量	Continually discharge at 7.5K Ω resistance to cut-off voltage 2.0V 7.5K Ω 负载连续放 电, 终止电压 2.0V	23°C±3°C	Initial 新电池	100%
			After 12 Months 12 个月后	≥98%

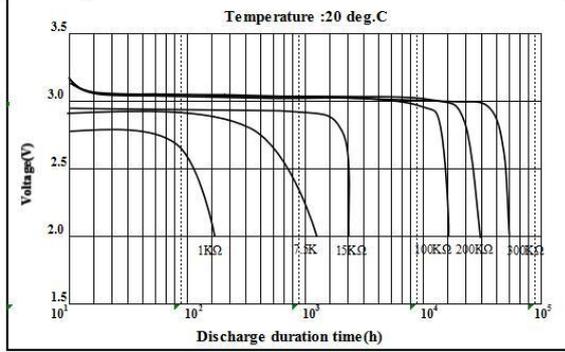
- 4 -

Table 表 2.

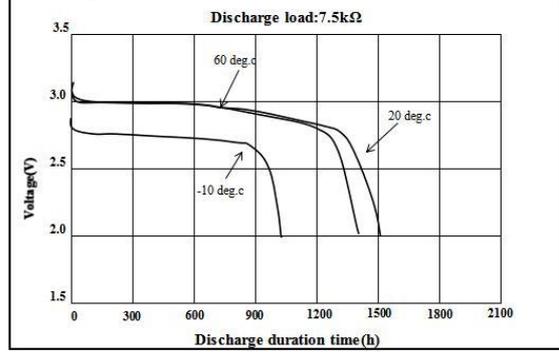
Item 项目	Condition 条件	Characteristic 特性值
Leakage Characteristics 耐漏液特性	Temperature: 45 ± 2°C, Relative Humidity: 75% Storage: 30 Days 温度 45 ± 2°C, 湿度 75%环境下保存 30 天	No Leakage 不漏液
Self- dischargerate 自放电率	The normal temperature and humidity under normal storage for 12 months 常温常湿下保存 12 个月	≤2%
Service Life After Storage At High Temperature 高温保存后的 使用寿命	Temperature: 60 ± 2°C, Storage: 20 Days, Continuous Discharge At 20± 2°C Under Standard Load To 2.0V End- Voltage After Storage. 温度 60± 2°C 环境下保存 20 天后, 在 20± 2°C 环境下标 准电阻放电至 2.0V	≥98%

### 3 Discharge performance graph 性能曲线图

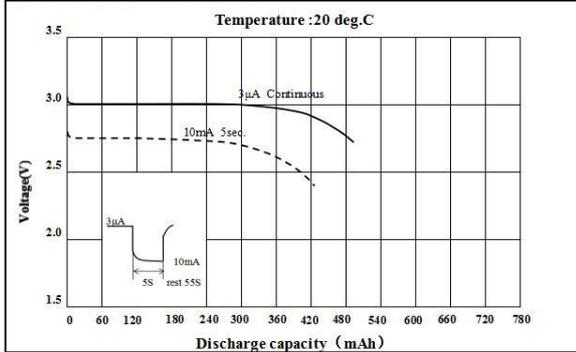
Discharge Characteristics



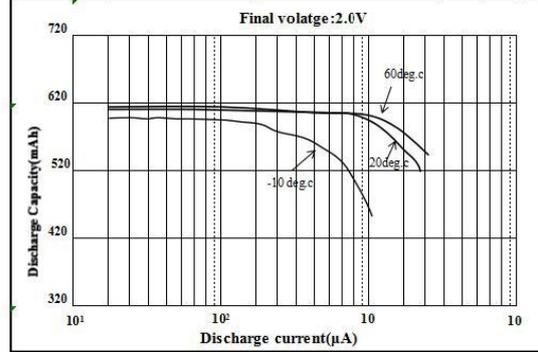
Discharge Characteristics



Pulse Discharge Characteristics



Relationship between Discharge Current and Discharge Capacity



- 5 -

### 4 Mark 标志

4.1 Brand: PKCELL

品牌: PKCELL

4.2 Cell type: CR2450ESL

电池型号: CR2450ESL

4.3 Nominal voltage: 3V

标称电压: 3V

4.4 Polarity: +

极性: +

## 5 Inspection rules 检验规则

5.1 Deliver inspection: Depending on GB2828.

交收检验: 依据 GB2828。

Table 3 表 3

Number	Test 试验项目	Item 条款	IL	AQL
1	Dimensions 外形尺寸	3.4	S-2	0.4
2	Appearance 外观	3.8	II	1.0
3	Open circuit voltage 开路电压	3.6	II	0.4
4	Discharge capacity 放电容量	3.7	--	--

5.2 Routine inspection: Depending on GB2829 and QB/T2389.

例行检验: 依据 GB2829 和 QB/T2389。

5.3 Batteries conform to directive of European Union 2006/66/EC and the directive 2013/56/EU.

符合欧盟电池指令 2006/66/EC 及其第 4 章的修订指令 2013/56/EU 中提及的限量。

- 6 -

## 6 Inspection for service output 容量检验

6.1 9 samples shall be tested for service output.

样品数为 9 只。

6.2 If the average value is equal to or more than the value of table 1, and if the number of batteries showing a value less than 80% of the value of table 1 is 1 or less. The batteries are considered to conform to the requirement.

当平均放电容量不低于表 1 所规定的标准值, 且低于标准值 80% 的电池数不大于 1 时, 判定电池容量合格。

6.3 If the average value is less than the value of table 1, or if the number of batteries showing a value less than 80% is 2 or more, the test shall be repeated with other 9 pieces. At the second test, if the average value is equal to or more than the value of table 1, and if the number of batteries showing a value less than 80% of the value of table 1 is 1 or less, these batteries are considered to conform to the requirement.

当平均放电容量低于表 1 所规定的标准值, 或低于标准值 80% 的电池数大于 1 时, 重新取 9 只样品进行试验, 若平均放电容量不低于表 1 所规定的标准值, 且低于标准值 80% 的电池数不大于 1 时, 判定电池容量合格。

6.4 At above second test, if the average value is less than the value of table 1, or if the number of batteries showing a value less than 80% of the value of table 1 is 2 or more, the batteries are considered not to conform to the requirement. third test shall not be performed.

若第二次试验中平均放电容量低于表 1 所规定的标准值, 或低于标准值 80%的电池数大于 1 时, 判定电池容量不合格, 不再进行第三次试验。

## 7 Display and storage 陈列和贮存

7.1 Batteries shall be stored in well-ventilated dry and cool conditions.

电池应贮存在通风良好, 阴凉干燥处。

7.2 Battery cartons should not be piled up in several layers, or should not exceed a specified height.

电池箱不应层叠, 或不应超过规定的高度。

7.3 Batteries should not be exposed to direct sun ray for a long time or placed in areas where they get wet by rain.

电池不应当长时间暴露在阳光直射处或放于雨淋之处。

7.4 Do not mix unpacked batteries so as to avoid mechanical damage and/or short circuit among each other.

不要将去掉包装的电池混堆在一起。

## 8 Storage life 保存期限

- 7 -

8.1 Storage life of batteries are five years long at 20°C±2°C and RH 60±15%.

在 20°C±2°C, 相对湿度 60±15% 贮存条件下, 保存期限为 5 年。

## 9 Warnings and Cautions 警告和注意事项

9.1 Do not short circuited, recharge, heat, disassemble nor dispose in fire.

不要将电池短路、充电、加热、拆卸或投入火中。

9.2 Do not force-discharge.

不要过放电。

9.3 Do not make the anode and the cathode reversed.

不要接反正负极。

9.4 Do not solder directly.

不要直接在电池上焊接。

9.5 Keep battery out of children's reach.

将电池放置在儿童触及不到的地方。

9.6 Do not store or use in the environment of over 85°C.

不要在温度超过 85°C 的环境下使用和贮存电池。

## 10 Note 注释

10.1 According to the need, this technical specification may be modified at any time. For more information, please consult with us.

该技术规格书在需要时可能会随时进行修改，如需要详细的资讯请联系我们。

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