PX305550

Battery Spec

Model: PX305550-M

Stock Code: 900.869.503.207

Cell Type: PX305550

Nominal Voltage: 3.7V

Capacity: 800mAh

Draft	Checking	Approved	Customer Confirmation
Dora	Peter		

1. Revision History

Revision	Date	Editor	Contents
A0	2018-07-24	Dora	Draft

Product Specification

(Single cell)

No.	Item	General Parameter		Remark
1	Rated Capacity	Typical	800mAh	Standard discharge （0.2C) after Standard charge
		Minimum	780mAh	
2	Nominal Voltage	3.7V		Mean Operation Voltage
3	Voltage at end of Discharge	2.75V		Discharge Cut-off Voltage
4	Charging Voltage	4.2±0.03V		
5	Internal Impedance	≤200mΩ		Internal resistance measured at AC 1KHZ after 50% charge The measure must uses the new batteries that within one week after shipment and cycles less than 5 times
6	Weight	About 23 g		
7	Standard charge	Constant Current 0.2C Constant Voltage 4.2V 0.01 C cut-off		
8	Standard discharge	Constant current 0.2C end voltage2.75V		
9	Fast charge	Constant Current 1.0C Constant Voltage 4.2V 0.01C cut-off		
10	Fast discharge	Constant current 1.0C end voltage 2.75V		
11	Maximum Continuous Charge Current	1.0C		
12	Maximum Continuous Discharge Current	1.0C		
13	Operation Temperature Range	Charge: 0~45℃		60±25%R.H. Bare Cell
		Discharge: -20~60℃		
14	Storage Temperature Range	Less than 1 year: -20~25℃		60±25%R.H. at the shipment state
		less than 3 months: -20~40℃		
15	Single cell	Length (L)	50.0±0.5mm	Initial Dimension
		Width (W)	55.0±0.5mm	
		Thickness (T)	3.0±0.2mm	

2. Performance And Test Conditions

2.1 Standard Test Conditions

Test should be conducted with new batteries within one week after shipment from our factory and the cells shall not be cycled more than five times before the test. Unless otherwise specified, test and measurement shall be done under temperature of 20±5℃ and relative humidity of 45~85%. If it is judged that the test results are not affected by such conditions, the tests may be conducted at temperature 15~30℃ and humidity 25~85%RH.

2.2 Measuring Instrument or Apparatus

2.2.1 Dimension Measuring Instrument

The dimension measurement shall be implemented by instruments with equal or more precision scale of 0.01mm.

2.2.2 Voltmeter

Standard class specified in the national standard or more sensitive class having inner impedance more than 10kΩ/V

2.2.3 Ammeter

Standard class specified in the national standard or more sensitive class. Total external resistance including ammeter and wire is less than 0.01Ω.

2.2.4 Impedance Meter

Impedance shall be measured by a sinusoidal alternating current method(1kHz LCR meter).

2.3 Appearance

There shall be no such defect as flaw, crack, rust, leakage, which may adversely affect commercial value of battery.

2.4 Temperature Dependence of discharge capacity 放电温度特性

Table 3 （3）

Discharge Temperature	-10℃	0℃	23℃	60℃
Discharge Capacity （0.2C）	50%	80%	100%	95%

2.5 Cycle Life and Leakage-Proof

Table 4（4）

No.	Item	Criteria	Test Conditions
1	Cycle Life (0.5C)	Higher than 70% of the Initial Capacities of the Cells	Carry out 500cycle Charging/Discharging in the below condition. ◆Charge:Standard Charge ◆Discharge:0.5C to 2.75 V ◆Rest Time between charge/discharge:30min. ◆Temperature:20±5℃
2	Leakage-Proof	No leakage (visual inspection)	After full charge with standard charge, store at 55±3℃, 60±10%RH for 1 week.

3. Mechanical characteristics and Safety Test for Cell

Table 5（5） (Mechanical characteristics)

No.	Items	Test Method and Condition	Criteria
1	Vibration Test	After standard charging, fixed the cell to vibration table and subjected to vibration cycling that the frequency is to be varied at the rate of 1Hz per minute between 10Hz an 55Hz, the excursion of the vibration is 1.6mm. The cell shall be vibrated for 30 minutes per axis of XYZ axes.	No leakage No fire
2	Drop Test	The cell is to be dropped from a height of 1 meter twice onto concrete ground.	No explosion, No fire, no leakage
Item	**Battery Condition**	**Test Method**	**Requirements**
Crush	Fresh, Fully charged	Crush between two flat plates. Applied force is about 13kN(1.72Mpa) for 30min.	No explosion, No fire
Short Circuit（20℃）	Fresh, Fully charged	Each test sample battery, in turn, is to be short-circuited by connecting the (+) and (-) terminals of the battery with a Cu wire having a maximum resistance load of 0.1Ω.Tests are to be conducted at room temperature(20±2℃).	No explosion, No fire / The Temperature of the surface of the Cells are lower than 150℃
Short Circuit（60℃）	Fresh, Fully charged	Each test sample battery, in turn, is to be short-circuited by connecting the (+) and (-) terminals of the battery with a Cu wire having a maximum resistance load of 0.1Ω.Tests are to be conducted at temperature(60±2℃).	No explosion, No fire The Temperature of the surface of the Cells are lower than 150℃
Impact	Fresh, Fully charged	A 56mm diameter bar is inlayed into the bottom of a 10kg weight. And the weight is to be dropped from a height of 1m onto a sample battery and then the bar will be across the center of the sample.	No explosion, No fire
Forced Discharge	Fresh, Fully charged	Discharge at a current of 1.0Cfor 2.5h.	No explosion, No fire
Nail Pricking(	Fresh, Fully charged	Prick through the sample battery with a nail having a diameter of 3mm and remain 2h.	No explosion, No fire

4. Protection circuit

(PCM Standard)

Item	Symbol	Content	Criterion
Current	I_{DP}	Max.Charging Current	1.5A
		Max.Discharging	1.5A
Over charge Protection	V_{DET1}	Over charge detection voltage	4.28±0.05V
	tV_{DET1}	Over charge detection delay time	80–200ms
	V_{REL1}	Over charge release voltage	4.10±0.05V
Over discharge protection	V_{DET1}	Over discharge detection voltage	2.40±0.10V
	tV_{DET1}	Over discharge detection delay time	40-120ms
	V_{REL1}	Over discharge release voltage	3.00±0.1V
Over current protection	V_{DET3}	Over current detection voltage	1.30±0.5V
	I_{DP}	Over current detection current	3.5±1.5A
	tV_{DET3}	Detection delay time	5-20ms
		Release condition	Cut load
Short protection		Detection condition	Exterior short circuit
	T_{SHOR}	Detection delay time	5-120ms
		Release condition	Cut short circuit
Interior resistance	R_{DS}	Main loop electrify resistance	VC=2.5V,RDS≤34mΩ
Current consumption	I_{DD}	Current consume in normal operation	3.0μA Type 6.0μA Max

5. Handling of Cells

5.1 Consideration of strength of film package

1) Soft Aluminium foil

Easily damaged by sharp edge parts such as pins and needles, Ni-tabs, comparing with metal-can-cased LIB.

2).Sealed edge may be damaged by heat above 100°C, bend or fold sealed edge.

5.2 Prohibition short circuit

Never make short circuit cell. It generates very high current which causes heating of the cells and may cause electrolyte leakage, gassing or explosion that are very dangerous.

The Power-Xtra tabs may be easily short-circuited by putting them on conductive surface. Such outer short circuit may lead to heat generation and damage of the cell.

An appropriate circuitry with PCM shall be employed to protect accidental short circuit of the battery pack.

5.3.Mechanical shock

Power-Xtra cells have less mechanical endurance than metal-can-cased LIB.

Falling, hitting, bending, etc. may cause degradation of Power-Xtra characteristics.

5.4 Handling of tabs

The battery tabs are not so stubborn especially for aluminum tab.

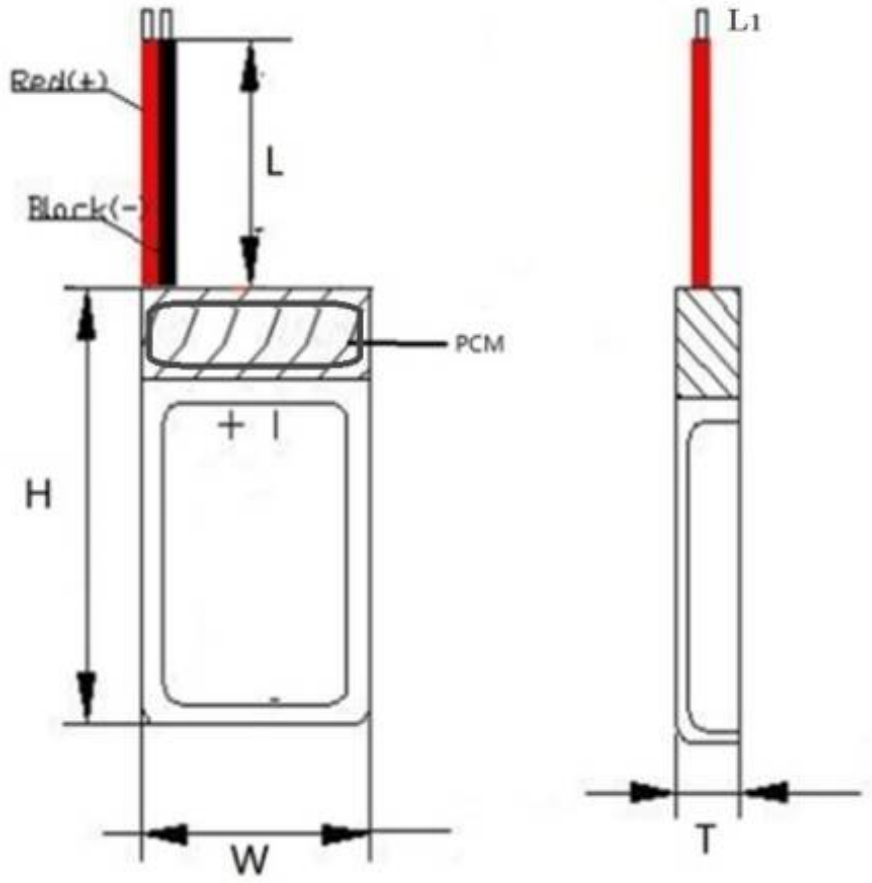
Don't bend tab.

Do not bend tabs unnecessarily.

6. Storing the Batteries

The batteries should be stored at room temperature, charged to about 30% to 50% of capacity. We recommend that batteries be charged about once per half a year to prevent over discharge.

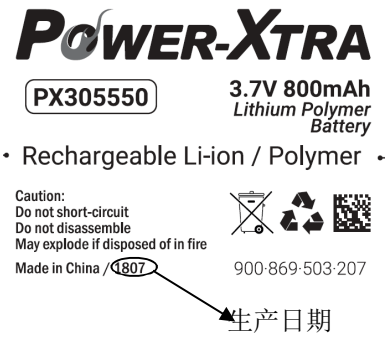
7. Dimension 尺寸



Dimensions (Units：mm)	PCM	Normal PCM（1.5A）
	Length Cable（L）	100±5mm (Tin plating:2mm)
	Height (H)	52.0±1mm
	Width (W)	55.5±1mm
	Thickness (T)	3.2±0.5mm
	Cable	1007#26AWG

8. Drawing of Label 标签图

PET 透明标签，2D(Data Matrix)二维码，内容为：“8680187004811”。日期按出货月份更改。YY 为年，MM 为月，年在前，月份在后（年月），如：1807（2018 年 07 月）。标签格式如下:



9. Drawing Packing 包装图

整齐装托盘，内置防潮袋，每箱不超 10KG；客户定制 Logo 纸箱，外箱 Logo 格式如下：

ENA-13 Bar code 条形码/侧唛:
贴于纸箱正/背两侧，侧唛尺寸 130*100mm（侧唛尺寸视情况而定）：

PO NO.	Order 16-8
MODEL NO.	900.869.503.207
QTY	500PCS
DATE	YYYY-MM-DD
Made in China	
8 680187 004811	

根据每次订单更改

根据每箱数量更改

根据出货日期更改