PX306270
Battery Spec

Model: PX306270

Stock Code: 900.869.503.172

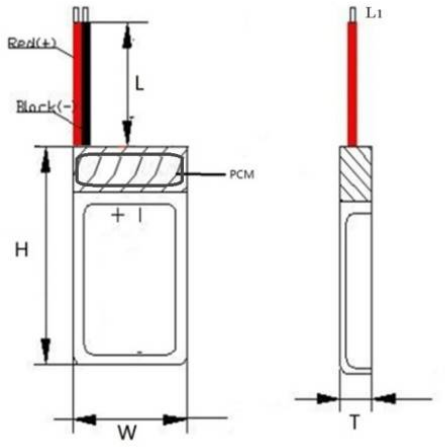
Cell Type: PX306270

Nominal Voltage: 3.7V

Capacity: 1500mAh

Draft	Checking	Approved	Customer Confirmation
Peter	Chun Qi Zeng		

1. Product Specification

Technical Drawing			Image
			
Dimension	**BMS**	Normal PCM（1.5A）	
	Length/Cable	100±5mm	
	Width (W)	62.0±1mm	
	Height (H)	72.0±1mm	
	Thickness (T)	3.0±0.5mm	
	Cable	UL1007#24AWG	

No.	Item	General Parameter		Remark
1	Rated Capacity	Typical	1500mAh	Standard discharge （0.2C) after Standard charge
		Minimum	1470mAh	
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 45 gr		
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)	70.0±0.5mm	Initial Dimension
		Width (W)	62.0±0.5mm	
		Height (H)	3.0±0.2mm	

2. Performance And Test Conditions

3.1 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.

3.2 Measuring Instrument or Apparatus

3.2.1 Dimension Measuring Instrument

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

3.2.2 Voltmeter

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

3.2.3 Ammeter

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

3.2.4 Impedance Meter

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

3.3 Appearance

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

3.4 Temperature Dependence of discharge capacity

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

3.5 Cycle Life and Leakage-Proof

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 ◆RestTime: 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

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 (3mm)	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 / BMS

Item	Symbol	Content	Criterion
Over charge Protection	VDET1	Over charge detection voltage	4.28±0.05V
	tVDET1	Over charge detection delay time	80—200ms
	VREL1	Over charge release voltage	4.10±0.05V
Over discharge protection	VDET1	Over discharge detection voltage	2.40±0.10V
	tVDET1	Over discharge detection delay time	40-120ms
	VREL1	Over discharge release voltage	3.00±0.1V
Over current protection	VDET3	Over current detection voltage	1.30±0.5V
	IDP	Over current detection current	3.5±1.0A
	tVDET3	Detection delay time	5-20ms
		Release condition	Cut load
Short protection		Detection condition	Exterior short circuit
	TSHOR	Detection delay time	5-120ms
		Release condition	Cut short circuit
Interior resistance	RDS	Main loop electrify resistance	VC=4.2V,RDS≤70mΩ
Current consumption	IDD	Current consume in normal operation	3.0μA Type 6.0μA Max