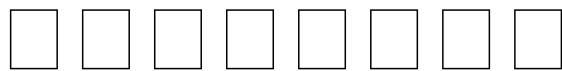


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Lithium-ion Battery Specification



PROJECT NAME **CS-PMIICSL**

Environmental : ROHS RoHS NO Support

AUTHORIZED SIGNATURE & COMPANY CHOP <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

APPROVED <input type="checkbox"/> <input type="checkbox"/>	CHECKED <input type="checkbox"/> <input type="checkbox"/>	PREPARED <input type="checkbox"/> <input type="checkbox"/>

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	<p>Notes(□□):</p> <ol style="list-style-type: none"> 1. Period of storage is counted from shipping date □□□□□□□□□□□□□□□□ 2. Test Method and standard listed as below, environment temperature (15□25)□, CC/CV mode, 0.2C constant current charge to 4.2V, then constant voltage charge mode, cut off current 0.01C□0.2C constant current discharge, cut off voltage 3.0V□more than 5 hours discharging time. □□□□□□□□□□□□□□□□(15□25)□,CC/CV □□,0.2C □□□□□□ 4.2V,□□□□□□ □,□□□□□ 0.01C □□□□0.2C □□□□□,□□□□□ 3.0V□□□□□□□□ 5 □□□□
--	---

3. Test (□□)

3.1 Testing Environment□□□□□□:

3.1.1 Test time should be no more than one month after receive the battery
□□□□□□□□□□□□□□□□ 1 □□□□□□.

3.1.2 Testing Environment(□□□□):

Humidity(□□): 15□--25□
Relative Humidity(□□□□): 45%--85%
Atmospheric Pressure(□□□□): 76kPa--106kPa

3.2 Testing Instrument(□□□□):

3.2.1 Voltage meter 0.5 grade or more regulated by IEC 51/IEC 485, more than 10KΩ/V internal resistance
□□□ IEC 51/IEC 485 □□□□ 0.5 □□□□□, □□□□ 10KΩ/V

3.2.2 Current meter 0.5 grade or more regulated by IEC 51/IEC 485, include wire resistance less than 0.01Ω.
□□□ IEC 51/IEC 485 □□□□ 0.5 □□□□□, □□□□□□□□□□ 0.01Ω.

3.2.3 Calipers Definition 0.02mm
□□ □□□ 0.02mm

3.2.4 Internal Resistance Meter AC 1KHz 4 terminal measure setting.
□□□ □□ 1KHz 4 □□□□□□□.

3.2.5 Load Resistance Include external circuitry, allowed resistance figure error is ±5%.
□□□□ □□□□□□□□,□□□□□□□□□□±5%.

3.2.6 Finished Battery Product Testing Machine
□□□□□□□□

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3.3 Test method and request ()

Item		Test Method	Request
1	Appearance	By sight 30CM vertically 30CM	Case appearance should be smooth w/o nick, burr and other mechanical damage. Exposed metallic part should not be Oxidized. Case should not be distorted.
2	Insulation Resistance	Test the external packing of battery and insulation between poles using insulation-meter	More than 10MΩ 10MΩ
3	Nominal Capacity	Charging Environment temperature (15-25) °C, CC/CV mode, 0.2C constant current charge to 4.2V, then constant voltage charge mode, cut off current 0.01C 15-25 °C, CC/CV 0.2C 4.2V, 0.01C	1) Discharging time: ≥5 hours. ≥5 2) No distortion on appearance, no burst and no leak
		Discharging Environment temperature (15-25) °C, 0.2C constant current discharge, cut off current 3.0V 15-25 °C, 0.2C 3.0V	
4	Internal Resistance	AC testing method. In half capacity condition, using AC 1kHz testing method to measure the internal resistance figure between poles in battery connector. AC 1kHz	Charge terminal/--- Discharge terminal/≤220mΩ
	High temperature Resistant Capability	1).Use nominal capacity charging method full charge the battery, then keep 0.5h-1h. 0.5-1h 2).Put full-charged battery in 60±2 °C thermostat for 2h then use 1C discharge to 3.0V 60±2 °C 2h 1C 3.0V	1).After test, 1C capacity should be ≥54 minutes. ≥54 2).Case appearance should not be distorted and crack.
6	Low temperature Resistant Capability	1).Use nominal capacity charging method full charge the battery, then keep 0.5h-1h. 0.5-1h 2).Put full-charged battery in -20 ± 2 °C chest freezer for 24h then use 0.2C discharge to 3.0V -20 ± 2 °C 24h 0.2C 3.0V	1).After test, 0.2C capacity should be ≥3.5 hours ≥3.5 2). Case appearance should not be distorted and crack.
7	Cycle Life	After 400 cycles of complete charge and discharge at 1C current, and record the capacity When the time between twice	Battery should not explode smoke, burn or burst. 1C charge and discharge cycle life should more than 300 times

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3.4. Shipping Voltage (Inspection before shipment): $\geq 3.7V$

□□□□□□(□□□□□): $\geq 3.7V$

4. Protection Capability Test Method and Request

□□□□□□□□□□

Item □□		Test Method □□□□	Request □□
1	Overcharge Test □□□□	Apply a 5V voltage and a 1C charge current on the battery for 10 hours. □□□□□□□□ 10hs□□□□□□□□□□ 5V□□□□□□ □ 1C □□□□□□□□	Battery could not be burst, burn, leak and smoke □□□□□□□□□□□□□□□□□□
2	Over discharge Test □□□□	Discharge the battery at 1C to cut off voltage□then discharge with loading 30Ω for 24hs. □ 1C □□□□□□□□□□ 30Ω □□□□ 24H□	Battery could not be burst, burn, leak and smoke □□□□□□. □□□□. □□□□□□□□
3	Over-current protection □□□□□	1) The battery is fully charged to rated capacity. □□□□□□□□□□□□□□□□□□ 2) Load current at 0.2A/S to cut off the output of the battery. □ 0.2A/S □□□□□□□□□□□□□□□□□□□□	Battery could not be burst, burn, leak and smoke □□□□□□□□□□□□□□□□□□
4	Pack Short-circuit Protection □□□□□	1) The battery is charged to rated capacity. □□□□□□□□□□□□□□□□□□ 2) The battery is to be short-circuited by connecting the positive and negative terminals of the battery with thermocouple having a maximum resistance load of 0.1Ω for 1h. □□□□□□□□□□□□□□□□□□□□□□□□ 0.1Ω □□□□ □□□□ 1h□	Battery could not be burst, burn, leak and smoke After charging. □□□□□□□□□□□□□□□□□□□□□□ After charging□the battery can be used normally. □□□□□□□□□□□□

5. Cell□□□□□

1) Chem: Lithium-ion Cell

□□□ □□□□□

2) Spec: 103450AR/3.7V/1600mAh □HY□□□

3) □□□103450AR/3.7V/1600mAh □HY□□□

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6. OUTLINE (□□□□):

L=52.1mm MAX W=34mm MAX H=10.5mm MAX



□□ P+ □□□□□□ □□ P- □□□□□□

7. PCM Electronic Characteristic / □□□□□□□□

Over-charging voltage protection □□□□□□	Over-discharging voltage protection □□□□□□	Over-current protection figure □□□□□□	Short-circuit protection time □□□□□□	Quiescent current □□□□
4.3V±25mV	2.45V±60mV	4.5 A±0.5A	≤300us	≤8uA

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8. Packing /

Packing method, as the customer required.