



PRODUCT SPECIFICATION

File No.:	CB-WIA-002
Doc No.:	VIA21700/40-1S1P-01
Version:	1.0
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Specification Approval Sheet

Customer Name: _____

Customer Model: _____

Model: VIA21700

Capacity: 4000mAh

Date 2024/01/15

Prepared by	Checked by	Approved by

Customer Approved (Stamp)	Test by	Checked by	Approved by



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Amendment Records

Revision	Description	Prepared By	Approved By	Date
A/0	First Publish			2024/01/15



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1. Scope

This specification defines the technical requirements for Lithium ion battery.

2. Model

Cell Model INR21700 4000

3. Reference Standard

GB/T 18287、GB/T31241、UL1642 、IEC61960、IEC62133

4. Cell Specification

No.	Item	General Parameter	Remark
1.	Typical capacity	4000mAh	0.5C charge CCCV 80mA 0.2C discharge for cut-off 2.5V
2	Minimum Capacity	3955mAh	0.5C charge 0.2C discharge for cut-off
3	Nominal Voltage	3.7V	0.5C charge 0.2C discharge for cut-off
4	Internal Impedance	$\leq 12\text{m}\Omega$	AC Impedance (at 1000Hz、30%SOC)
5	Single battery weight	$\leq 68\text{ g}$	
6	Limited charge current	$4.20\text{V}\pm 0.05\text{V}$	
7	Cut-off Voltage	2.5 V	
8	Standard charge current	2000mA	0.5C
9	Max charge current	6000mA	1.5C
10	Max Continuous discharging current	40000mA	10C With 75°C temperature cut
11	Max. Pulse Discharge Current	80000mA	20C 2s pulse
12	Operating Temperature (surface temperature)	$0^{\circ}\text{C} < T \leq 50^{\circ}\text{C}$	Charge



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		$0^{\circ}\text{C} < T \leq 50^{\circ}\text{C}$	Charge
		$-20^{\circ}\text{C} < T \leq 75^{\circ}\text{C}$	Discharge
13	Storage Temperature	$-20^{\circ}\text{C} \sim 45^{\circ}\text{C}$	3 months 3
		$-20^{\circ}\text{C} \sim 25^{\circ}\text{C}$	1 year
14	Cell Dimension	Height $\leq 70.4\text{mm}$	Standard Height of battery (include PET)
		Diameter $\leq 21.3\text{mm}$	Standard Diameter of battery (include PET)

4. Product Endurance

No.	Items	Test Method and Condition	Criteria
1	Standard charge	Charge to 4.2V at constant current 0.5C (2A), then constant voltage charge to taper current 80mA	The cell shall be charge at $25 \pm 3^{\circ}\text{C}$ and 45%-85%RH
2	Discharge	After standard charge, the cell shall be discharge till the voltage discharge to 2.5V by 0.2C (800mA)	The cell shall be discharge at $25 \pm 3^{\circ}\text{C}$
3	Cycle Life $25 \pm 3^{\circ}\text{C}$	Charge: 4A CCCV to 4.2V by 0.08A cut-off, rest 10min. Discharge: 20A to 2.5V or 75°C cut off, rest 30min Repeat the procedures 300 cycles	Residue Capacity $\geq 80\%$
4	Discharge rate capabilities	Standard charged then rest for 30mins and discharge at 0.8A/2A/20A/30A/40A to the discharge cut-off voltage 2.5V, then rest for 30mins. Charge/discharge cycle can be conducted for 3 times before meeting the Standards the same below	$0.8\text{A} \geq 3955\text{mAh}$ $2\text{A} \geq 3920\text{mAh}$ $20\text{A} \geq 3850\text{mAh}$ $30\text{A} \geq 3800\text{mAh}$ $40\text{A} \geq 3750\text{mAh}$