



FU-PL-CR2032 • Lithium button cell

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1. Scope

This specification governs the performance of the following FULLWAT Lithium button cell.

2. Ratings

Table 1

Item		Unit	Specifications	Condition
Nominal voltage		V	3.0	
Nominal capacity		mAh	210	Standard discharge with load 15kΩ
Instantaneous short-circuit current		mA	≥250	Time≤0.5 second
Off-load voltage		V	≥3.2	
Operating temperature		°C	-20~60	
Standard weight		g	3.0	Unit cell.
Service output	Initial	Standard	1100h	Continuous discharge with load 15kΩ, till 2.0V end-voltage
	After 12 months storage	Standard	1000h	

Table 2

Item	Conditions	Condition	
Thermal durability	Kept for 20 days at 60°C±3°C, then continuously discharge with 15kΩ load till 2.0v end-voltage	Standard	1100h
Self-discharge rate	Stored for 12 months at normal temperature and humidity.	≤5%	

3. Performance and test methods

Unless otherwise stated, all the testing is carried out under the condition: environmental temperature, 20°C~25°C; environmental humidity, 65±20%. Please refer to Table 3.

4. Suggestions and cautions

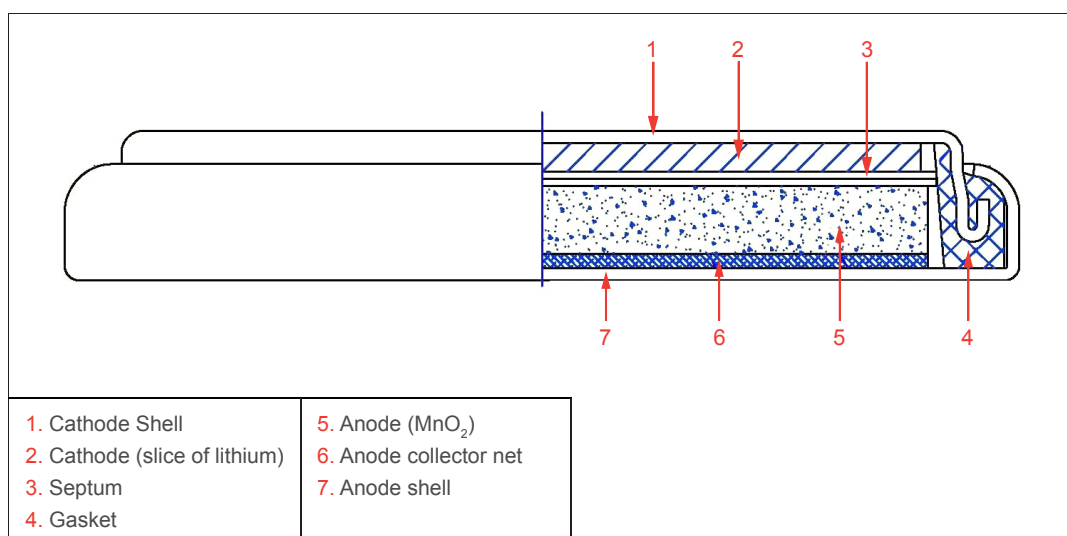
- 4.1 Install batteries correctly.
- 4.2 Ensure the contact points to be clean and conductive.
- 4.3 Do not mix different types, different brands batteries to serve together.
- 4.4 Do not heat, recharge the batteries.
- 4.5 Do not dispose of the batteries in fire.
- 4.6 Keep away from the small children, if swallowed promptly see doctor.
- 4.7 Pay attention to the producing date.

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Table 3

No	Item	Test methods	Performance	
1	Dimensions	Using vernier caliper (accuracy ≥ 0.02) while avoiding short-circuit.	Diameter	20.0 (-0.20) mm
			Height	3.2 (± 0.20) mm
2	Off-load voltage	Using multimeter (accuracy $\geq 0.25\%$) internal resistance $\geq 1M\Omega$.	$\geq 3.20V$	
3	Instantaneous short-circuit current	Time of short-circuit should be less than 0.5 second and avoid repeated test within half an hour	≥ 250 mA	
4	Appearance	Eyeballing.	Bright, clean, no rust, no leakage, and no flaw.	
5	Capacity	Continuously discharge for 8 hours with load 15k Ω , temperature at 20~25°C, humidity at 65 \pm 20% till 2.0v end-voltage (for fresh battery only: within 3 months)	≥ 1100 h	
6	Vibration test	Put battery on the platform of the vibrations machine, start the machine and adjust the frequency form 10 times per minute to 15 times per minute. keep it running for an hour	Characteristics keep stability.	
7	Leakage at high temperature test	Stored under temperature (60°C) for 7 days	No leakage allowed.	
8	Over discharge test	After 2.0V end-voltage, continuously discharged for 5 hours.	No leakage allowed	

5. Cutaway diagram of 3.0V Lithium Manganese dioxide button cell.



6. Discharge characteristics

