fullwat®
professional solutions

FU-PL-CR1225T • Lithium-Manganese 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	50	Standard discharge with load 62kΩ
Instantaneous short–circuit current		mA	≥100	Time ≤0.5 second
Off-load voltage		V	≥3.20	
Operating temperature		ºC	-20~60	
Standard weight		g	~0.85	Unit cell
Service output	Initial	Standard	1210h	Continuous discharge with load 62kΩ, till 2.0v end-voltage at 20~25ºC
	After 12 months storage	Standard	1140h	

Table 2

Item	Conditions	Condition	
Thermal durability	Kept for 10 days at 50 ±3 , then continuously discharge with 62kΩ load till 2.0v end-voltage	Standard	1140h
Self-discharge rate	Stored for 12 months at normal temperature and humidity	≤1%	

3. Performance and test methods

Unless otherwise stated, all the testing is carried out under the condition: environmental temperature, 20ºC~25ºC ; 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.

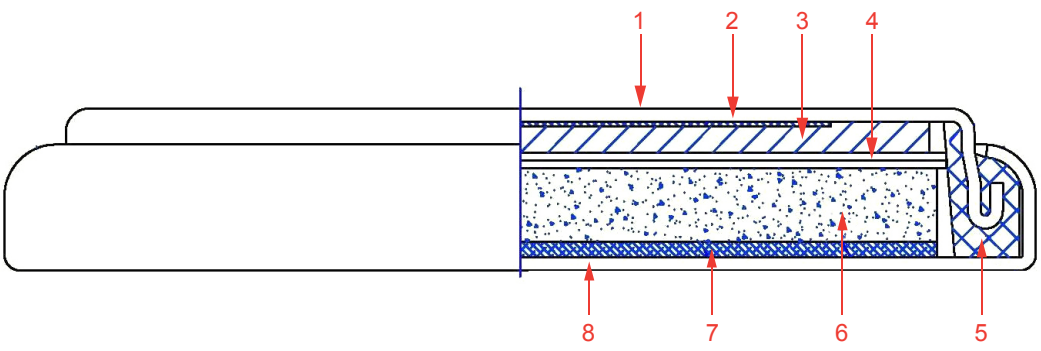
4.6 Keep away from the small children, if swallowed promptly see doctor.

4.7 Pay attention to the producing date.

Table 3

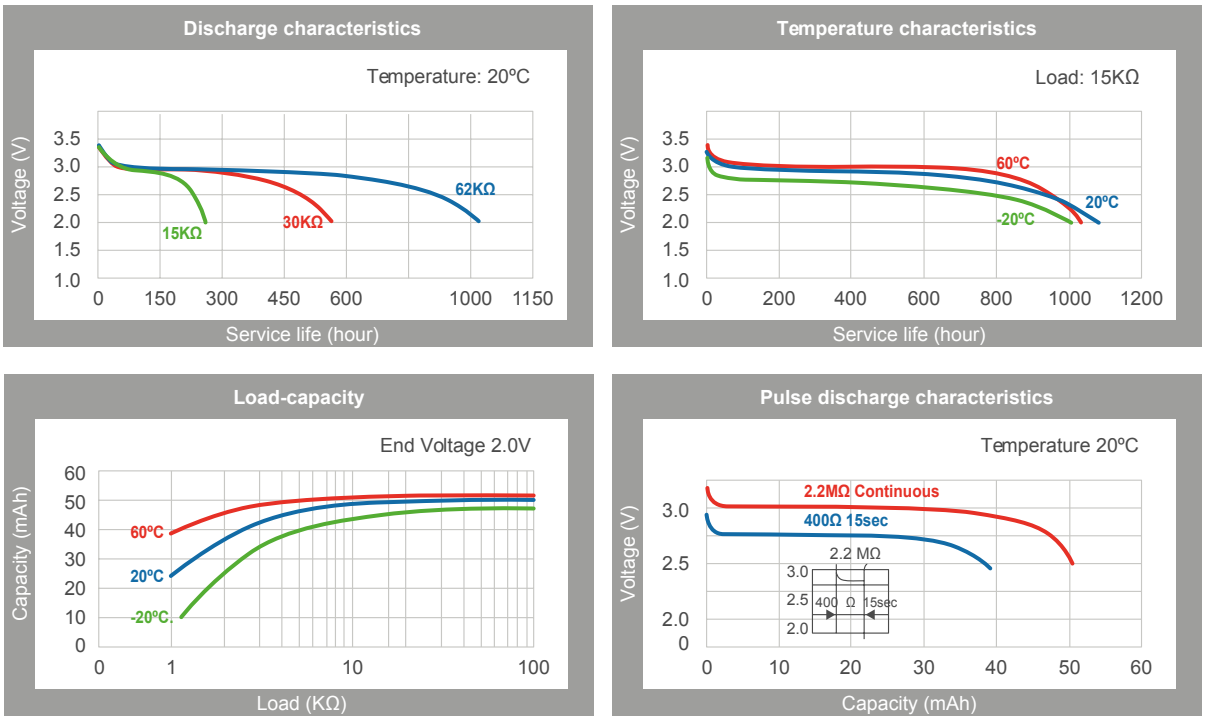
No	Item	Test methods	Performance	
1	Dimensions	Using vernier caliper (accuracy ≥0.02) while avoiding short-circuit.	Diameter	12.5 (-0.20) mm
			Height	2.50 (±0.1) mm
2	Off-load voltage	Using multimeter (accuracy 0.2≥5%) internal resistance 1MΩ.	≥3.20v	
3	Instantaneous short-circuit current	Time of short-circuit should be less than 0.5 second and avoid repeated test within half an hour.	≥100mA	
4	Appearance	Eyeballing.	Bright, clean, no rust, no leakage, And no flaw	
5	Capacity	Continuously discharge with load 62kΩ, temperature at 20~25ºC, humidity at 65±20% till 2.0v end-voltage (for fresh battery only: within 3 months).	≥1210h	
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	Stored under temperature (50ºC) for 10 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.

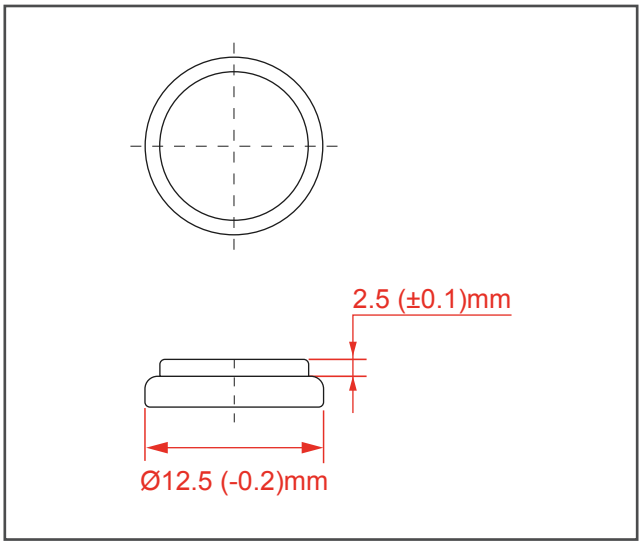


1. Cathode Shell	5. Gasket
2. Cathode collector net	6. Anode (MnO_2)
3. Cathode (slice of lithium)	7. Anode collector net
4. Septum	8. Anode shell

6. Discharge characteristics



7. Dimensions



8. Warranty

The warranty is specified in our warranties section of Terms of Sales. If the product is to be stored for more than three months it is necessary to perform the appropriate maintenance to ensure the good condition of the batteries. Consult our annex to the Terms of Sales on the recommended maintenance.