

DALY-STATION BATTERY CO.,LTD

3/F East, Jinqiao Building, Jihua Road, Bantian Buji Town, Shenzhen, China.

TEL: +86-755-29676189

FAX: +86-755-61104059

WEB: <http://www.daly-station.com>

E-MAIL:sales@daly-station.com

APPROVAL SHEET

BRAND	Daly-Station
PRODUCT	3.0V LITHIUM-MANGANESE BUTTON CELL
MODEL	CR2032
PREPARED BY	REN HONG YAN
APPROVED BY	ALEX YIP
DATE	MAR. 17. 2006

1. [SCOPE]

This specification applies to the following 3.0v lithium button cell CR2032 made by DALY-STATION BATTERY CO., LTD

2. [RATINGS]

TABLE I :

ITEM	UNIT	SPECIFICATIONS	CONDITIONS
Nominal voltage	V	3.0	Standard discharge
Nominal capacity	mAh	230	Standard discharge
Instantaneous short-circuit current	mA	≥ 350	Time ≤ 0.5 second
Off-load voltage	V	3.25 – 3.60	Unit cell
Storage temperature	°C	0 - 40	Unit cell
Apply temperature	°C	-20 - 70	Unit cell
Standard weight	g	2.85	Unit cell
Service output	Initial	h	Continuous discharge with load 3 k Ω ,till 2.0v end-voltage at 20-25°C
	After 12 months storage	h	

TABLE II :

ITEM	CONDITIONS	CHARACTERISTICS
Self-discharge rate	Stored for 12 months at normal temperature, then continuously discharged with 15 k Ω load till 2.0v end-voltage	Less than $\leq 2\%$

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, $65 \pm 20\%$.

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 swallow promptly see doctor

4.7 Pay attention to the producing date

TABLE III:

NO.	ITEM	TEST METHODS	STANDARD	
1	Dimensions	Using vernier caliper (accuracy ≥ 0.02) while avoiding short-circuit	Diameter	20.0(-0.15)mm
			Height	3.20(-0.20)mm
2	Off-load voltage	Using multimeter (accuracy $\geq 0.25\%$) internal resistance $\geq 1M \Omega$	$\geq 3.25V$	
3	Instantaneous Short-circuit current	Time of short-circuit should be less than 0.5 Second and avoid repeated test within half an hour	$\geq 350mA$	
4	Appearance	Eyeballing	Bright, clean, no rust, no leakage, and no flaw	
5	Capacity	Continuously discharge for 8 hour with load $3k \Omega$, temperature at $20-25^\circ C$, humidity at $65 \pm 20\%$ till 2.0V end-voltage (for fresh battery only: within 3 months)	$\geq 210h$	
6	Vibration test	Put battery on the platform of the vibrations Machine, start the machine and adjust the frequency from 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 ($45^\circ C$) for 30 days	Leakage rate $\leq 0.05\%$	
8	Over Discharge Test	After 2.0V end-voltage, continuously discharged for 5 hours	No leakage allowed	

5. [DISCHARGE CHARACTERISTICS]

With load $3.0 \text{ k}\Omega$ {CR2032}

