

# Product Specification

## 1. APPLICABILITY

This specification is applicable to "Cardio Cell" alkaline cell, LR14 (No mercury added).

## 2. GENERAL

### 2.1 Type designation

IEC LR14

JIS AM-2

ANSI C

### 2.2 chemical system

Zn/KOH-H<sub>2</sub>O/MnO<sub>2</sub>

### 2.3 Nominal voltage: 1.5 V

### 2.4 Weight: approximate 68g

### 2.5 Dimension(mm)

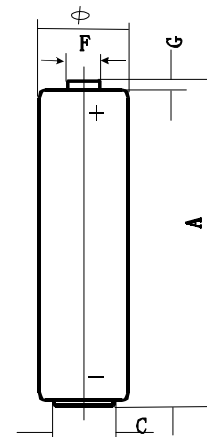
/	min	max
•	25.0	26.0
A	49.0	50.0
C	18.5	19.5
F	6.0	7.0
G	1.6	2.0

### 2.6 Heavy Metal Contents

Hg	Cd	Pb
<1ppm	<3ppm	<30ppm

### 2.7 capacity

approximate 7500mAh (20•,4h/d, 20•, e.v.:0.9V)



## 3. APPEARANCE

There shall be no dirt, scratch or deformation detrimental to practical service in appearance.

## 4. ELECTRICAL CHARACTERISTICS (1.0•, 0.3S, 20±2•)

/		OCV(V)	CCV(V)	SC(A) (reference)
Initial	Min	1.57	1.30	7.0
	Normal	1.60	1.50	12.0
Storage 1 year	Min	1.55	1.20	5.5
	Normal	1.57	1.35	9.0

Note: storage condition: 20±5°C, RH: 45%-75%

## 5. SERVICE OUTPUT

Load		3.9•	3.9•	3.9•	6.8•	20•
Test mode		24h/d	4min/h,8h/d	1h/d	1h/d	4h/d
end voltage		0.9V	0.9V	0.8V	0.9V	0.9V
Initial	MAD	17.0 h	18.0h	20h	34.0 h	115 h
	Normal	18.0 h	19.0h	22h	36.0 h	118h
Storage 1 year	MAD	15.5 h	16.5h	18h	32.0 h	110 h
	Normal	16.5 h	17.5h	19.5h	34.5 h	115h

Note: storage condition: 20±5°C, RH: 45%-75%

## 6. LEAKAGE RESISTANCE

(1) over discharge leakage test

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samples: 9pcs

test conditions: 20±2 • • RH 60±15% • 3.9 • continuous discharge 48h

requirement: no visible leakage and overall height no higher 0.2mm than max height(50.0).

criterion: 0/9

## (2) high temperature leakage test

samples: 40pcs

test conditions: store 20 days under 60±2 • & RH 90±5%, then store 4~24 h under 20±2 • & RH 60±15%.

requirement: no visible leakage and overall height no higher 0.2mm than max height (50.0) .

## 7. SECURITY CHARACTERISTICS

### (1) short-circuit explosion-proof characteristics

samples: 10pcs

test conditions: 24h short-circuit under 20±2 • , RH 60±15%.

requirement: negative terminal no departure from battery body.

criterion: 0/10

### (2) recharge explosion-proof characteristics

samples: 10pcs

test conditions: 20±2 • , 60±15%, recharge 24h with 400mA current.

requirement: negative terminal no departure from battery body

criterion: 0/10

## 8. DISCHARGE CURVE(*Reference*)

3.9 • continuous • 3.9 • pulse • 3.9 • • 6.8 • intermittent (encl.page.1)

## 9. EXPIRY PERIOD:

7 years

## 10. EXPIRY DATE MARKING:

(1) production date marked on the bottom plate of finished cells . for example: 2004-01 means produced on jan. , 2004. shelf life 3 years marked on bottom of sticker label.

(2) for private label, can mark according to customer's requirements.

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