

## **Product Specification**

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Model No.: GP364F

## **PRODUCT SPECIFICATION**

#### Mercury and Lead Free Alkaline Battery

Model: GP364F

#### **Revision History**

Revision	Date	Initiator	Reason for Change
0	2006/10/17	Greater Zhang	New Issue
1	2012/08/30	John Wei	Change Storage Temperature Change Shelf life

Prepared By	Approved By
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Date: 2012/08/30	Date: 2012/08/30

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## 1. SCOPE

This specification covers the requirements for mercury & lead free of sliver oxide dioxide button cell.

GP Model: GP364F

IEC:SR60

### 2. RATINGS

Description	Unit	Specification	Conditions	
Description		Mercury & Lead Free Of Sliver Oxide Dioxide Button Cell		
Nominal Voltage V		1.55	digital multimeter	
Nominal Dimension	mm	OD 6.80 X Ht 2.15 micrometer, caliper, projector		
Application		Analog watch, tec		
Average Weight	gram	0.35	digital balance	
Shelf Life		Not less than 90% of the service capacity within first year, storage at 20 ± 2 °C 60 ± 15 %RH.		
Date Code		Unless otherwise specified, each cell will carry a numeric year code and an alphabetical month code	0A=Jan 2010 0F=June 2010	
Nominal Service Life	hr	162 (at 15 k ohm Load)	cut-off 1.2V	
Average Service Capacity	mAh	17 (at 6.2 k ohm Load)	cut-off 1.2V	
Storage Temperature	°C	10~25℃ and never exceed 30℃	10% loss for 20 days storage at 60°C	
Storage Humidity	RH%	45-75		
Testing temperature	°C	20±2		
Operation temperature	°C	0 to 45		



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#### 3. PERFORMANCE

Unless otherwise stated, tested should be done within one month of delivery under the following conditions:

Test	Unit	Specification	Conditions	Remarks
Service life	hr	≥ 162	15 k ohm load, cut-off voltage 1.2V Eight batteries discharged to the end voltage, calculate the average without the exclusion of any result. No battery permit to go below 8% of the service hours specified in the table. Only 1 retest is allowed for each lot tested.	
Open Circuit Voltage (OCV)	Circuit Voltage V ≥1.55 The open circuit voltage is measured on a digital voltmeter with input impedance of 1 mega ohm minimum.		digital multimeter	
Close Circuit Voltage (CCV)	V	≧1.25	Load resistor 300 ohm for 0.1 to 2 seconds	digital multimeter
Leakage		No leakage nor deformation	When batteries are stored and discharge under the standard conditions given in this document, no electrolyte or other internal component shall surfaces of the battery	naked eye
External Short N/A circuit		No fire and no explosion.	After standard charge, short circuit the cell at 20±2°C until the cell temperature returns to ambient temperature. (The resistance of the inter-connecting circuitry shall not exceed 0.1 ohm.)	

## 4. CONFIGURATIONS, DIMENSIONS AND MARKINGS

Please refer to its Data Sheet.

#### 5. EXTERNAL APPEARANCE

The cell shall be free from cracks, scars, breakage, rust, discoloration, leakage and deformation.

#### 6. WARRANTY

Not less than 90% of the service capacity within first year, Storage at 20 ± 2 °C 45~75%RH.

## 7. Precaution, Handling and Storage

- Y Do not attempt to take batteries apart or subject them to pressure or impact. Heat may be generated or fire may result. The alkaline electrolyte is harmful to eyes and skin, and it may damage clothing upon contact.
- Y Keep away from children. If swallowed, contact a physician at once.
- Ϋ́ Do not mix GP batteries with other battery brands or batteries of a different chemistry such as alkaline and zinc carbon
- Ÿ Do not short circuit batteries, permanent damage to batteries may result.
- Y Do not incinerate or mutilate batteries, may burst or release toxic material.
- Y Do not solder directly to cells or batteries.

# **GP** Batteries

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- Ÿ Store batteries in a cool dry place.
- Y If find any noise, excessive temperature or leakage from a battery, please stop its use.
- Ÿ When not using a battery, disconnect it from the device.
- Y Do not mix new batteries in use with semi-used batteries.
- When find battery power down during use, please switch off the device and take batteries out.
- Ÿ Never put a battery into water or seawater.