

# Primary lithium batteries

## G 04/3

3.0 V Primary lithium-sulfur dioxide (Li-SO<sub>2</sub>)  
 High drain capability  
 1/2 AA-size spiral cell



### Benefits

- High and stable discharge voltage
- High pulse capability
- Performance not affected by cell orientation
- Long storage possible before use
- Ability to withstand extreme temperature

### Key features

- Low self-discharge rate  
*(less than 3% after 1 year of storage at +20°C)*
- Hermetic glass-to-metal sealing
- Built-in safety vent  
*(at the negative end of the cell)*
- Meets shock, vibration and other environmental requirements of military specifications
- Made in UK

### Main applications

- Radiocommunications and other military applications
- Memory back-up

### Cell size reference

1/2 AA

### Electrical characteristics

*(typical values relative to cells stored for one year or less at +30°C max.)*

Nominal capacity  
*(at 50 mA +20°C 2.0 V cut off. The capacity restored by the cell varies according to current drain, temperature and cut off)* 0.45 Ah

Open circuit voltage (at +20°C) 3.0 V

Nominal voltage (at 0.03 A +20°C) 2.8 V

Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0 V cut off. 0.25 A

Pulse capability : Typically up to 0.4 A.  
*(The voltage readings may vary according to the pulse characteristics, the temperature and the cell's previous history. Fitting the cell with a capacitor may be recommended in severe conditions. Consult Saft)*

Storage *(recommended possible without leakage)* +30°C (+86°F) max  
 +85°C (+185°F) max

Operating temperature range  
*(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)* -60°C/+70°C  
 (-76°F/+158°F)

### Physical characteristics

Diameter (max) 14.2 mm (0.56 in)

Height (max) 27.9 mm (1.10 in)

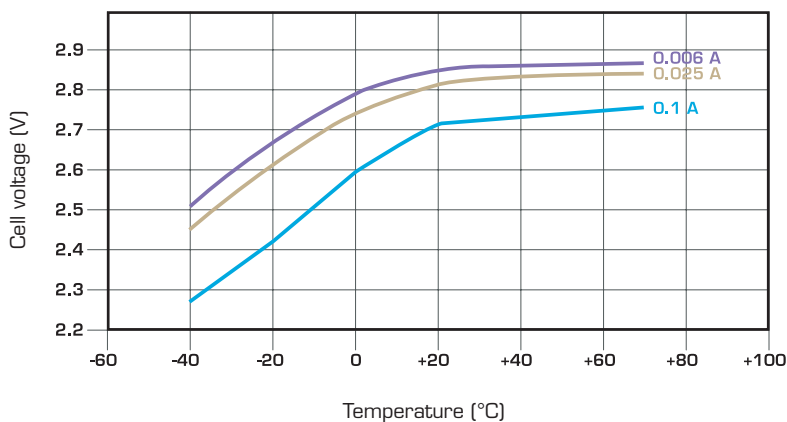
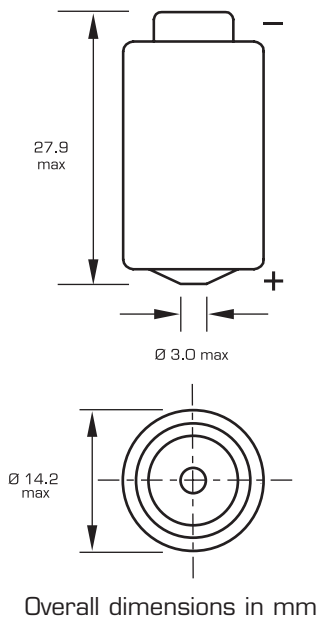
Typical weight 8 g (0.28 oz)

Li metal content 0.14 g

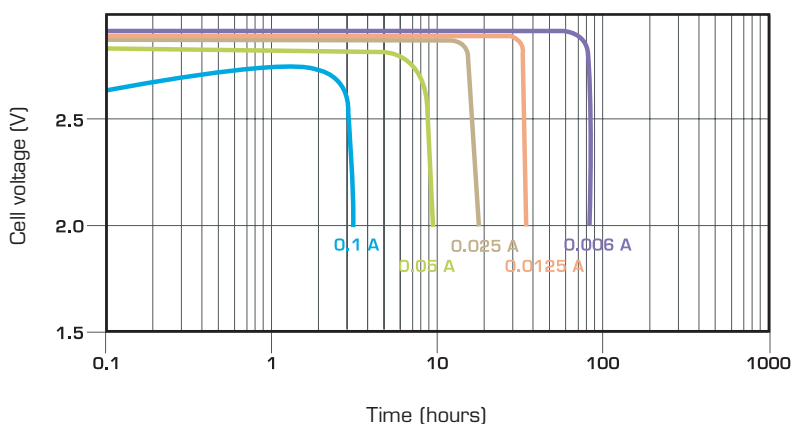
Standard cell comes with protruding positive end-cap.  
 Finish with tabs available on request.



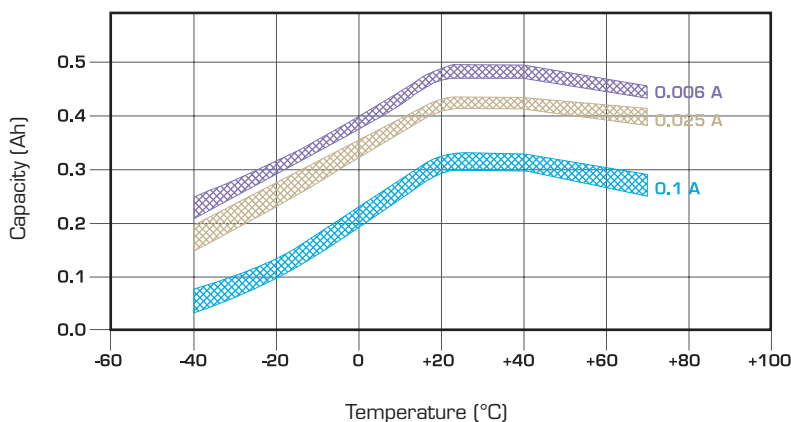
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Voltage at mid-discharge versus Current and Temperature (2.0 V cut-off)



Typical discharge profiles at +20°C



Capacity versus Current and Temperature (continuous discharges 2.0 V cut-off)

## Handling precautions

- Cell is pressurised.
- Do not puncture, open or mutilate.
- Do not obstruct the safety vent mechanism.
- Do not short circuit or charge.
- Do not expose to fire or temperatures above +70°C (+158°F).

## Saft

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For more details on primary lithium technologies please refer to Primary Lithium Batteries Selector Guide Doc N° 31048-2.

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