

# Primary lithium batteries

## LO 43 SHX

3.0 V Primary lithium-sulfur dioxide (Li-SO<sub>2</sub>)

Very high drain and pulse capability

5/4 C-size spiral cell



### Benefits

- High and stable discharge voltage
- Superior 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)
- Restricted for transport (class 9)
- UL Component Recognition  
(File Number MH 15076)
- Meets shock, vibration and other environmental requirements of military specifications
- Made in the USA

### Main applications

- Radiocommunications and other military applications
- Beacons and Emergency Location Transmitters
- Sonobuoys
- Emergency car door opening system

### Cell size references

5/4 R14 – 5/4 C

### Electrical characteristics

*(typical values for cells stored for one year or less)*

Nominal capacity 5.0 Ah

*(at 0.2 A +20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)*

Open circuit voltage (at +20°C) 3.0 V

Nominal voltage (at 0.6 A +21°C/+70°F) 2.8 V

Maximum recommended continuous current 2.5 A  
*(to avoid over-heating. Higher currents possible, consult Saft)*

Pulse capability : Typically up to 10 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) +30°C (+86°F) max  
(possible without leakage) -60°C/+85°C  
(-76°F/+185°F)

Operating temperature range -60°C/+70°C  
(-76°F/+158°F)

*(Short excursions up to +85°C possible at currents below 1 A)*

### Physical characteristics

Diameter (max) 26.0 mm (1.02 in)

Height (max; finish with radial tabs) 59.2 mm (2.33 in)

Typical weight 53 g (1.86 oz)

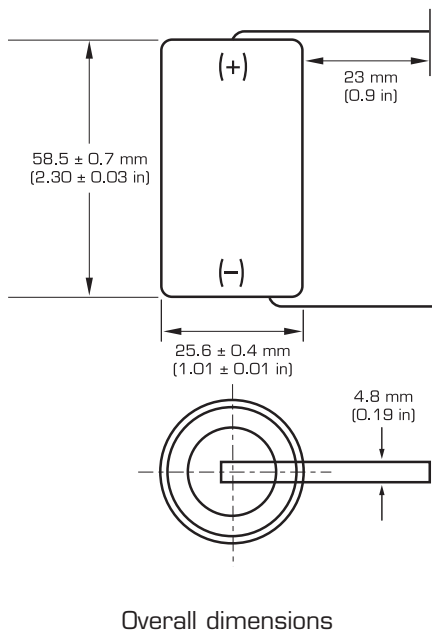
Li metal content 1.7 g

Standard cell comes with resin potting at the positive end and two radial 0.15 mm - thick nickel tabs

Other finish configurations available on request.



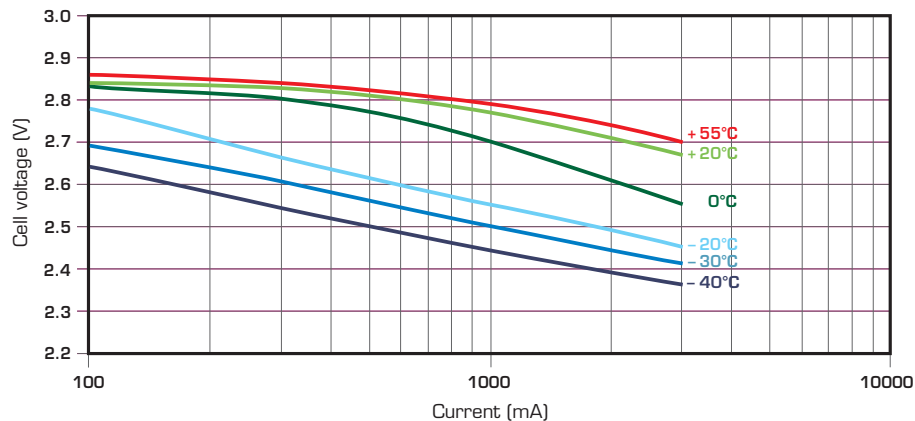
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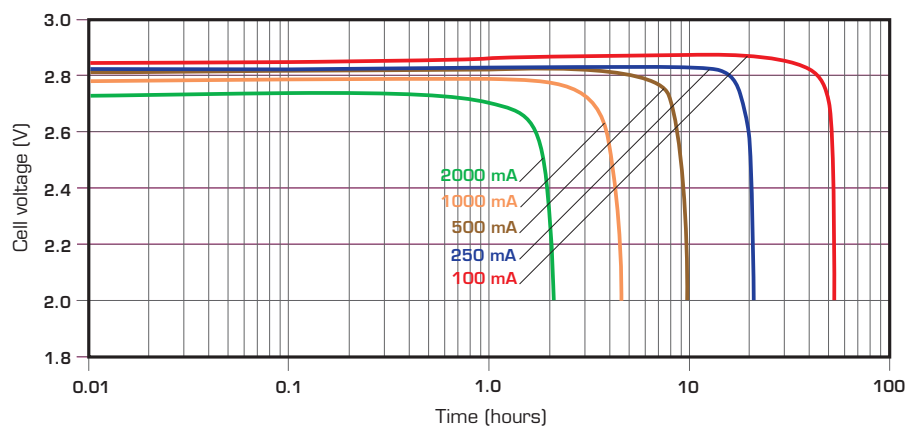
## Handling precautions

- Cell is pressurised at ambient temperature.
- 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).

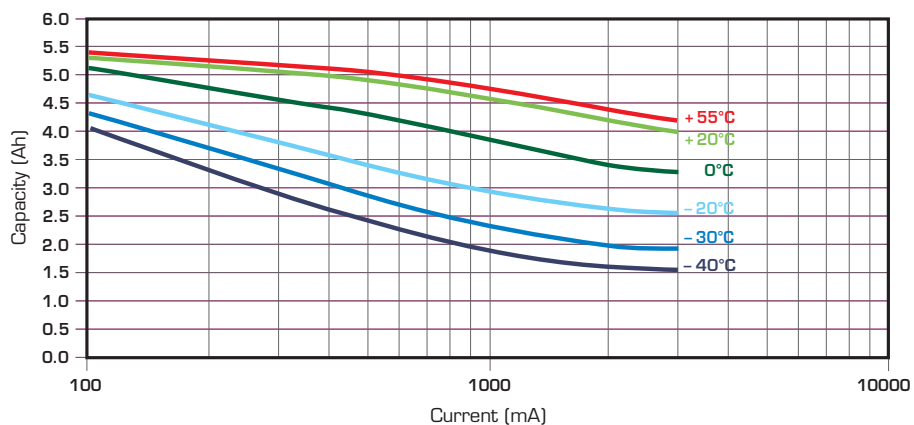
## Voltage plateau versus Current and Temperature



## Typical discharge profiles at +20°C



## Restored Capacity versus Current and Temperature (2.0 V cut-off)



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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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