

# Primary lithium battery

## LO 40 SX

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

High drain capability

$\frac{2}{3}$  "Thin" D-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)*
- UL Component Recognition  
*(File Number MH 15076)*
- Meets shock, vibration and other environmental requirements of military specifications
- Restricted for transport *(Class 9)*
- Made in the USA

### Main applications

- Radiocommunications and other military applications
- Automotive telematics

### Cell size reference

$\frac{2}{3}$  "Thin" D

### Electrical characteristics

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

Nominal capacity 3.50 Ah  
*(under 120 mA +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 120 mA +20°C) 2.8 V

Maximum recommended continuous current 2.0 A  
*(to avoid over-heating. Higher currents possible, consult Saft)*

Pulse capability: Typically up to 5 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) 28.95 mm (1.140 in)

Height (max; finish without radial tabs) 42.29 mm (1.665 in)

Typical weight 40 g (1.41 oz)

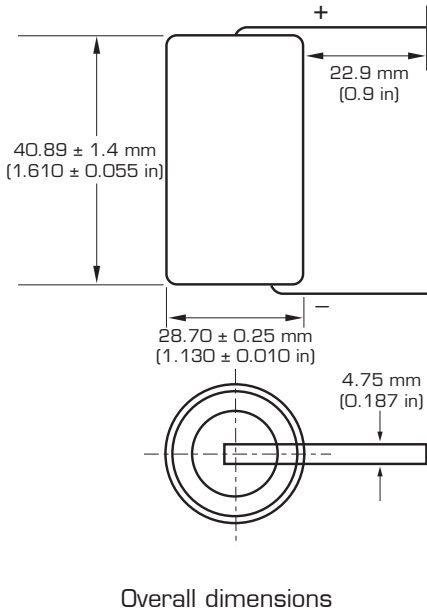
Li metal content 1.2 g

Standard cell comes with resin potting in the topshell area and two radial 0.15 mm - thick nickel tabs

Other 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).

## Saft

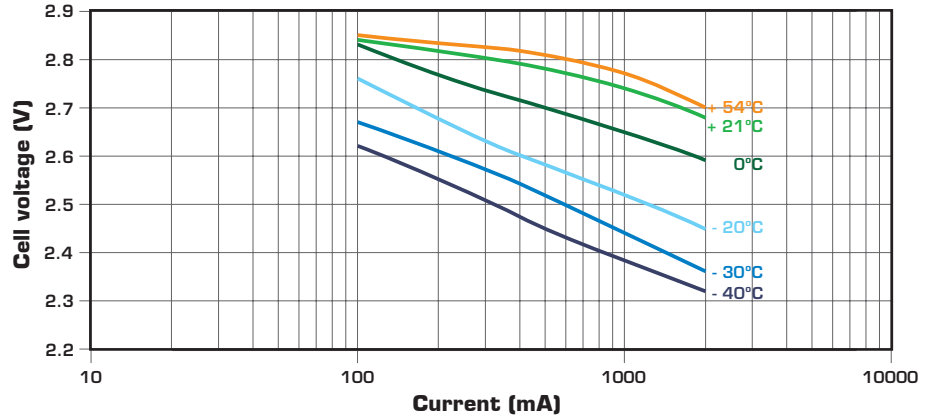
### Specialty Battery Group

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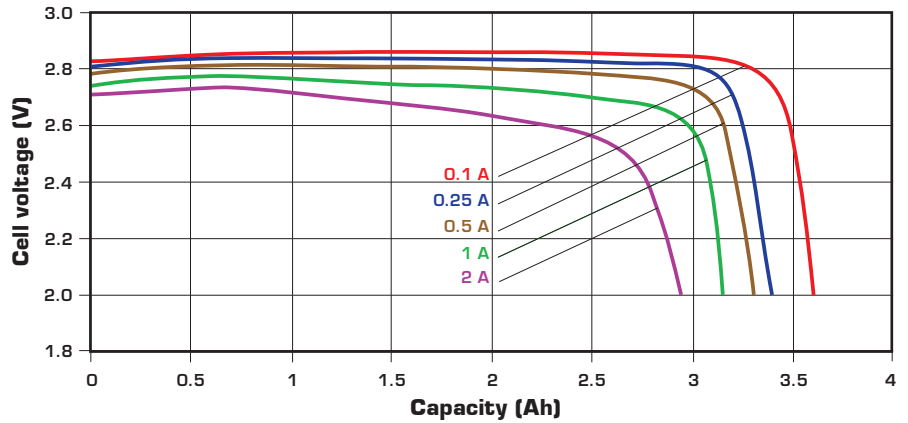
313 Crescent Street  
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Tel.: +1 (828) 874 41 11  
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[www.saftbatteries.com](http://www.saftbatteries.com)

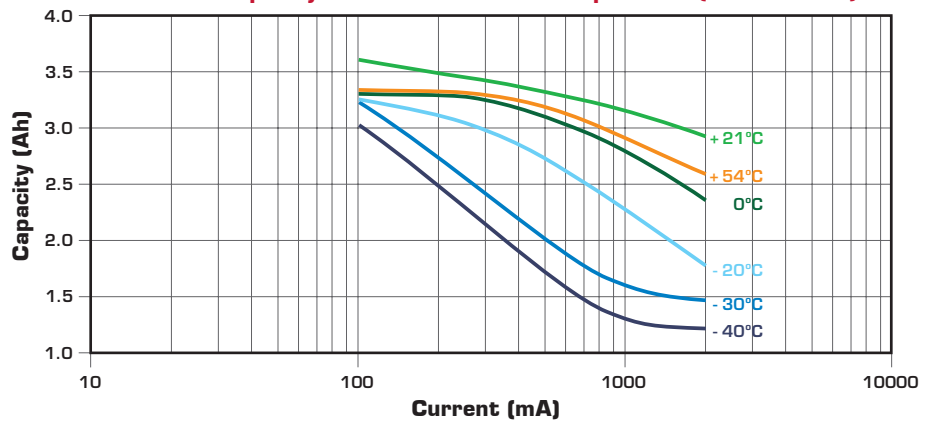
## Voltage plateau versus Current and Temperature



## Typical discharge profiles at + 20°C



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



Doc. N° 31088-2-0708

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

Published by the Communications Department.

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Société anonyme au capital de 31 944 000€  
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