

# Primary lithium battery

## LS 17500

3.6 V Primary lithium-thionyl chloride (Li-SOCl<sub>2</sub>)  
High energy density  
A-size bobbin cell



### Benefits

- High and stable operating voltage
- Low self-discharge rate  
(less than 1 % after 1 year of storage at + 20°C)
- Wide operating temperature range  
(- 60/+ 85°C)
- Easy integration in compact system
- Superior resistance to atmospheric corrosion

### Key features

- Stainless steel container and end caps  
(low magnetic signature)
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Underwriters Laboratories (UL) Component Recognition  
(File Number MH 12609)
- Compliant with IEC 86-4 safety standard and EN 50020 intrinsic safety standard
- Non-restricted for transport

### Main applications

- Utility metering
- Automatic meter reading
- Alarms and security devices
- Tollgate systems
- Identification tags
- Tracking systems
- Automotive electronics
- Professional electronics

### Cell size reference

A

### Electrical characteristics

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

|                                                                                                                                     |                    |        |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------|
| Nominal capacity                                                                                                                    |                    | 3.6 Ah |
| <i>(at 3 mA + 20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)</i> |                    |        |
| Open circuit voltage                                                                                                                | (at + 20°C)        | 3.67 V |
| Nominal voltage                                                                                                                     | (at 0.3 mA + 20°C) | 3.6 V  |

Pulse capability: Typically up to 250 mA (250 mA/0.1 second pulses, drained every 2 mn at + 20°C from undischarged cells with 10 µA base current, yield voltage readings above 3.0 V. The 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)

|                                                                                                                                     |                                                             |                                   |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-----------------------------------|
| Maximum recommended continuous current                                                                                              |                                                             | 130 mA                            |
| <i>(Higher currents are possible. Consult Saft)</i>                                                                                 |                                                             |                                   |
| Storage                                                                                                                             | (recommended)<br>(for more severe conditions, consult Saft) | + 30°C (+ 86°F) max               |
| Operating temperature range                                                                                                         |                                                             | - 60°C/+ 85°C<br>(- 76°F/+ 185°F) |
| <i>(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)</i> |                                                             |                                   |

### Physical characteristics

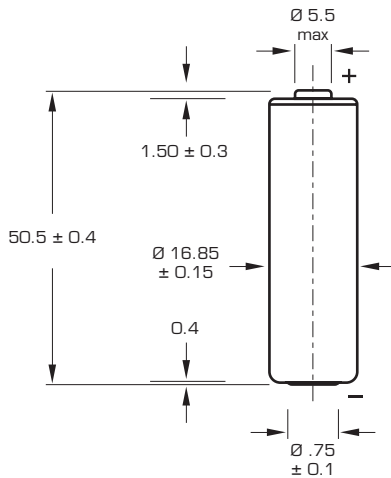
|                  |                   |
|------------------|-------------------|
| Diameter (max)   | 17.0 mm (0.67 in) |
| Height (max)     | 50.9 mm (2.00 in) |
| Typical weight   | 21.9 g (0.8 oz)   |
| Li metal content | approx. 0.9 g     |

Available termination suffix

|                           |                      |
|---------------------------|----------------------|
| CN, CNR                   | radial tabs          |
| 2 PF, 3 PF, 3 PF RP, 4 PF | radial pins          |
| CNA (AX)                  | axial leads          |
| FL                        | flying leads... etc. |



# LS 17500



Dimensions in mm.

## Storage

- The storage area should be clean, cool (*preferably not exceeding +30°C*), dry and ventilated.

## Warning

- Fire, explosion and burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above 100°C (212°F), incinerate, or expose contents to water.
- Do not solder directly to the cell (*use tabbed cell versions instead*).

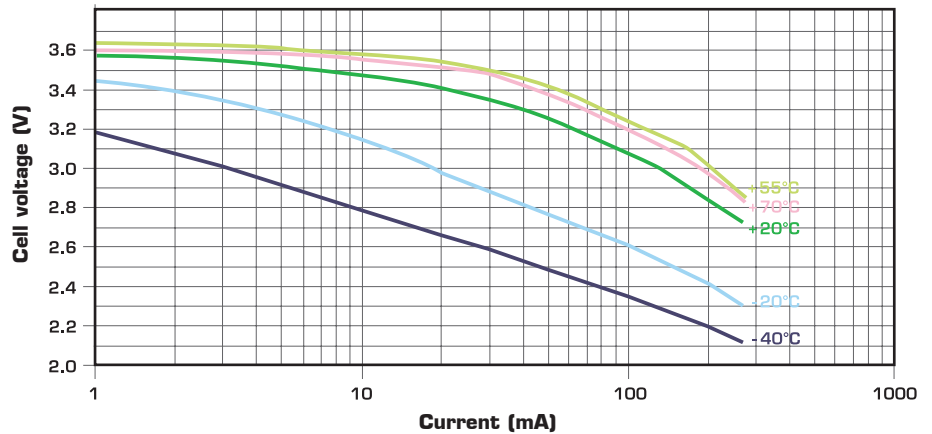
## Saft

### Specialty Battery Group

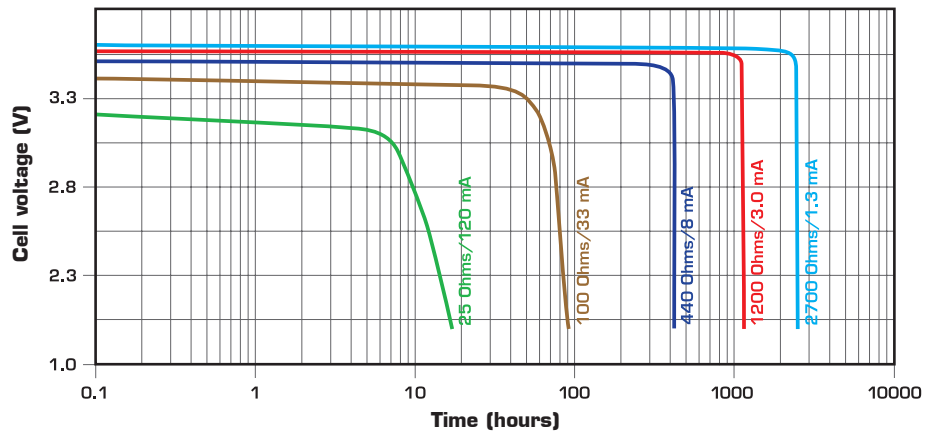
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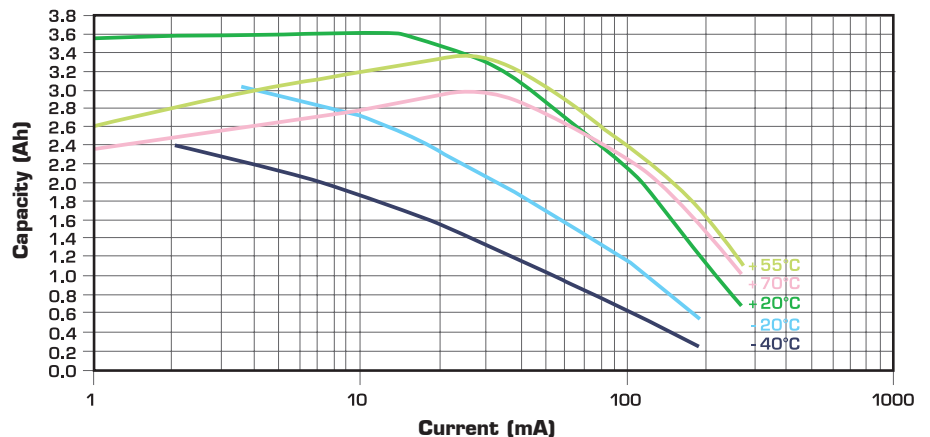
Voltage plateau versus Current and Temperature (at mid-discharge)



Typical discharge profiles at +20°C



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



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Information in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.

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

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