

LS 14500

Primary Li-SOCl₂ cell

High energy density 3.6 V AA-size bobbin cell

Saft's LS 14500 cell is ideally suited for long-term applications (typically from 5 to 20+ years), featuring low base currents and aperiodic pulses.

Benefits

- High capacity and high energy (1122 Wh/l and 520 Wh/kg)
- High voltage response, stable during most of the lifetime of the application
- Wide operating temperature range (-60°C/+85°C)
- Low self-discharge, compatible with a long operating life (less than 1% per year of storage, at +20°C, after 1 year)
- Superior resistance to corrosion
- Low magnetic signature

Key features

- Bobbin construction
- Well controlled passivation
- Hermetic construction with glass-to-metal seal
- Stainless steel can
- Non-flammable electrolyte
- RoHS and REACH compliance
- Manufactured in France, China, UK

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642, IEC 60086-4
- IEC 60079-11 part 10.5, (T4 temperature rating at +60°C)
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft Excellence System, continuous evaluation program
- CE: P/N: 04224X

Typical Applications

- Utility Metering
- Internet of Things
- Tracking systems
- Alarms and security
- Connected sensors
- Medical devices



Electrical characteristics¹

Nominal capacity (under 2 mA, +20°C, 2.0 V cut-off) ³	2.6 Ah
Open circuit voltage (at +20°C)	3.67 V
Nominal voltage (under 0.2 mA, +20°C)	3.6 V
Nominal energy	9.36 Wh
Pulse capability ⁴	Up to 250 mA
Maximum recommended continuous current ⁷	50 mA

For battery sizing, consult Saft

Operating conditions

Operating temperature range ⁵	-60°C / +85°C (-76°F / +185°F)
Storage temperatures (max recommended) ⁶	+30°C (+86°F)

Physical characteristics²

Diameter (max)	14.62 mm (0.575 in)
Height (max)	50.28 mm (1.98 in)
Typical weight	17 g (0.59 oz)
Li metal content	approx. 0.7 g

Termination suffix

CN, CNR	Radial tabs
2 PF, 3 PF, 3 PF RP, 4 PF	Radial pins
CNA	Axial leads
FL	Flying leads

Other configurations upon request

¹Typical values relative to cells stored up to one year at +30°C max.

²Sleeved cell.

³Dependent upon current drain, temperature, cut-off and cell orientation.

⁴Under 250 mA / 0.1 second pulses, drained every 2 minutes at +20°C from undischarged cells during 24 h, with 10 µA base current, yield voltage readings above 3.0 V after initial stabilisation. 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 or for high pulse currents. Consult Saft.

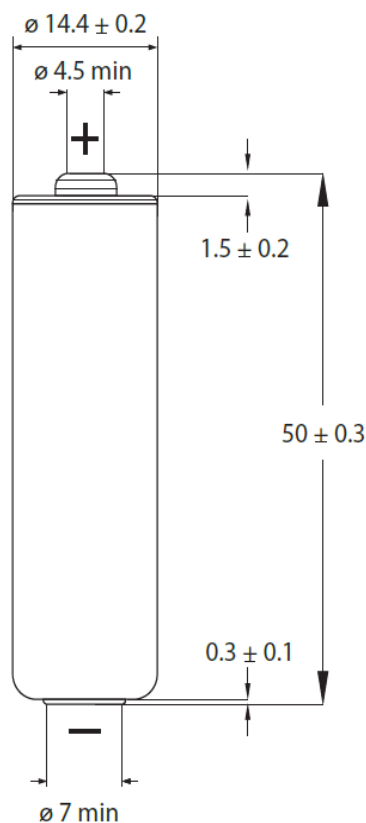
⁵Operation above ambient temperature may lead to reduced capacity and lower voltage readings. Consult Saft.

⁶For more severe conditions, consult Saft.

⁷If above this value, please consult Saft.

LS 14500

Primary Li-SOCl₂ cell



Dimensions in mm of cells made in France

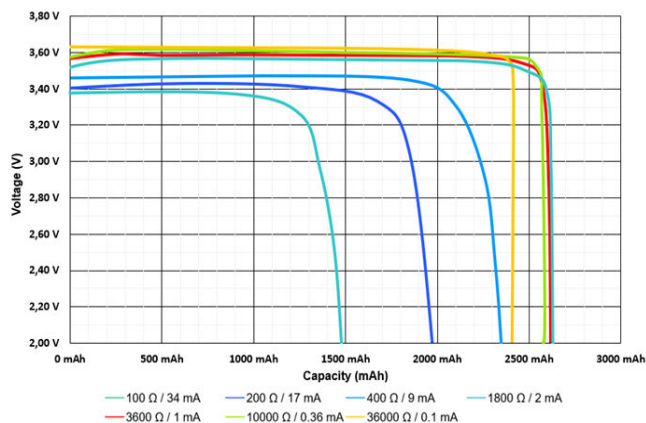
Storage

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

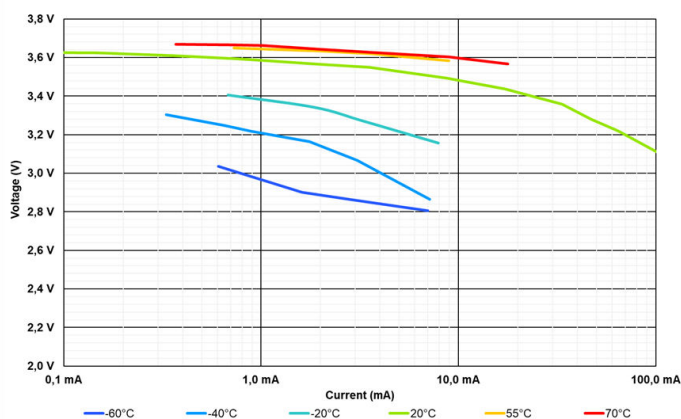
Warning

- Fire, explosion and severe 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).
- Do not mix new and used cells or cells from different origins.
- Mind the polarities of the cell.

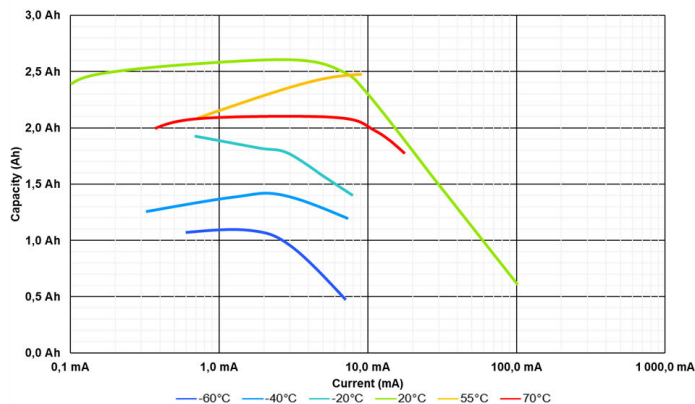
LS 14500 Typical discharge profiles at 20°C under various rates



LS 14500 Voltage plateau vs current at various temperatures (at mid-discharge)



LS 14500 Typical Capacity vs current at various temperatures



The curves presented are based on experimental averages and do not necessarily reflect the minimum values that may be observed, particularly when the discharge regime exceeds the nominal conditions specific to each temperature.