

LS 14500

Primary Li-SOCl₂ cell

3.6 V AA size bobbin cell high energy density

Saft's LS 14500 cell is ideally suited for long-term applications (typically from 5 to 20+ years), featuring low base currents and periodic 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 container.
- Non-flammable electrolyte.
- RoHS and REACH compliance.
- Manufactured in France, China, UK.

Designed to meet all major quality, safety and environmental 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 World Class continuous evaluation program.

Typical applications

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



Electrical characteristics ^[i]	
Nominal capacity (under 2 mA, +20 °C, 2.0 V cut-off) ^[iii]	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 ^[iv]	Up to 250 mA
Maximum recommended continuous current	50 mA
Operating conditions	
Operating temperature range ^[v]	-60 °C / +85 °C [-76 °F / +185 °F]
Storage temperatures (recommended) ^[vi]	+30 °C (+86 °F) max
Physical characteristics ^[i]	
Diameter (max)	14.62 mm (0.575 in)
Height (max)	50.28 mm (1.98 in)
Typical weight	17 g (0.6 oz)
Li metal content	approx. 0.7 g
Termination suffix	
CN, CNR	Radial tabs
2 PF, 2 PF, 3PF RP, 4 PF	Radial pins
CNA	Axial leads
FL	Flying leads
Other configurations upon request	

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

[ii] Sleeved cell.

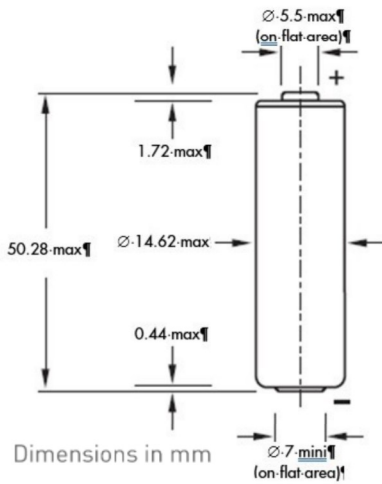
[iii] Dependent upon current drain, temperature, cut-off and cell orientation.

[iv] Under 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.

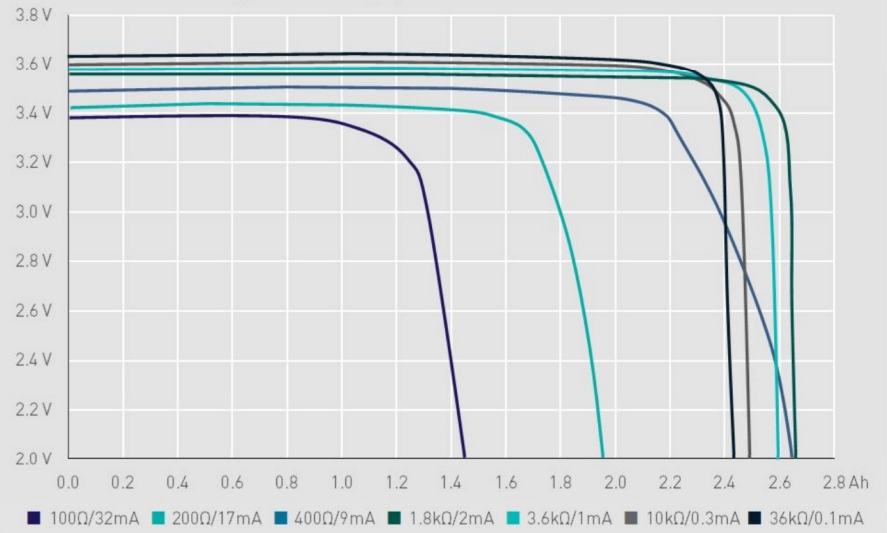
[v] Operation above ambient temperature may lead to reduced capacity and lower voltage readings. Consult Saft.

[vi] For more severe conditions, consult Saft.

LS 14500



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



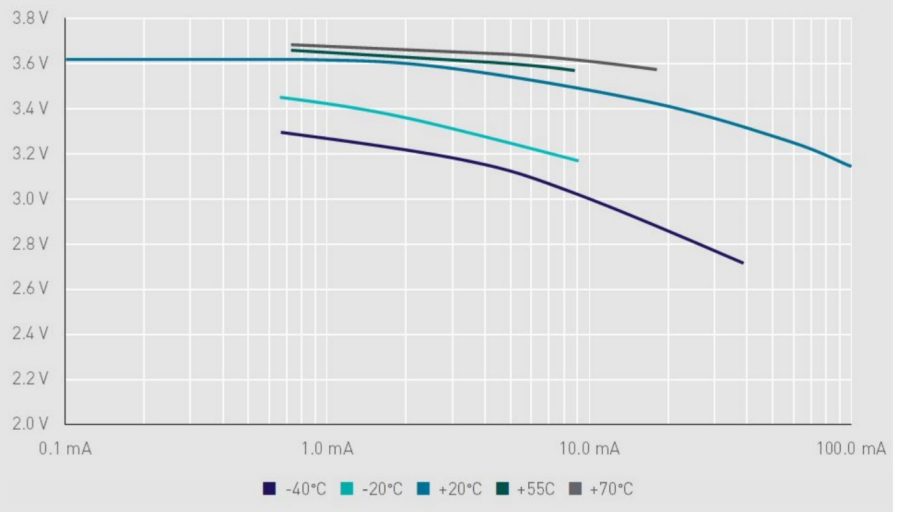
Storage

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

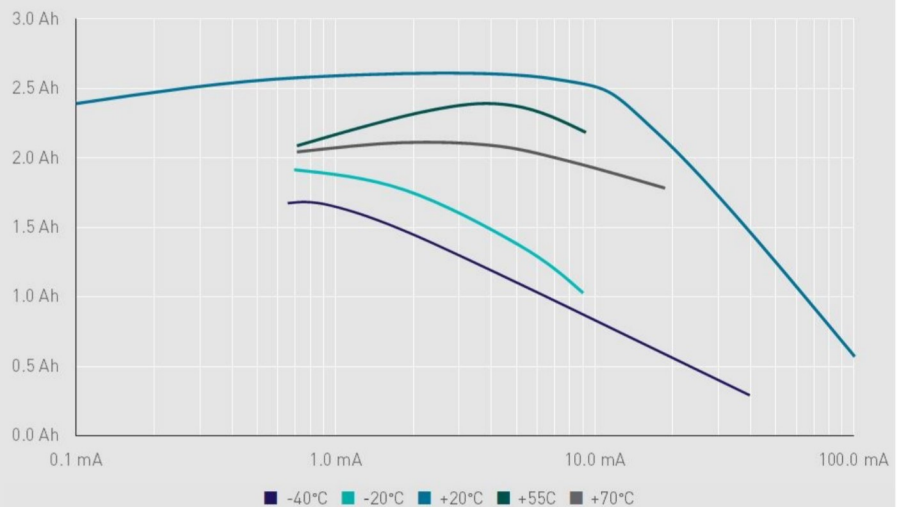
Warning

- 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).

LS 14500 Voltage plateau vs current and temperature (at mid-discharge)



LS 14500 Capacity vs current at various temperatures



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