LS 17500

Primary Li-$SOCl_2$ cell

3.6 V lithium thionyl chloride A-size bobbin cell

Saft's LS 17500 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 (1139 Wh/l and 592 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 long operating life (less than 1% after 1 year of storage at + 20 °C)
- 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
- Non restricted for transport
- RoHS and REACH compliance
- Made in France, China, UK

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642, IEC 60086-4
- ATEX: IEC 60079-11 part 10.5 (T3 rating at + 40 °C)
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft World Class continuous program

Typical applications

- Utility Metering
- Internet of Things
- Alarms and security
- Medical devices
- Tracking systems
- Professional electronics

Electrical characteristics (Typical values relative to cells stored up to one year at + 30 °C max)	
Nominal capacity (at 3 mA, + 20 °C, 2.0 V cut-off) [1]	3.6 Ah
Open circuit voltage (at + 20 °C)	3.67 V
Nominal voltage (at 0.3 mA, + 20 °C)	3.6 V
Nominal energy	12.96 Wh
Pulse capacity [2]	up to 250 mA
Maximum recommended continuous current	100 mA

Operating conditions		
Operating temperature range [3]		-60 °C / + 85 °C (- 76 °F / + 185 °F)
Storage temperatures	Recommended [4]	+ 30 °C (+ 86 °F) max

Physical characteristics	
Diameter (max)	17.13 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

Termination		
Available 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	

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

[2] Under 0.1 second pulses, drained every 2 minutes at + 20 °C from undischarged cells with 10 µA base current, yield voltage readings above 3.0V 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.

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

[4] For more severe conditions, consult Saft.

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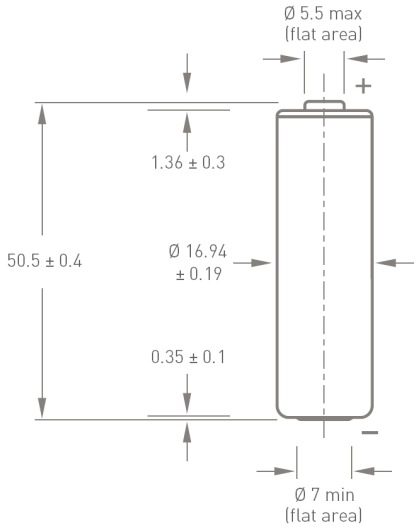
LS 17500 dimensions



Dimensions in mm

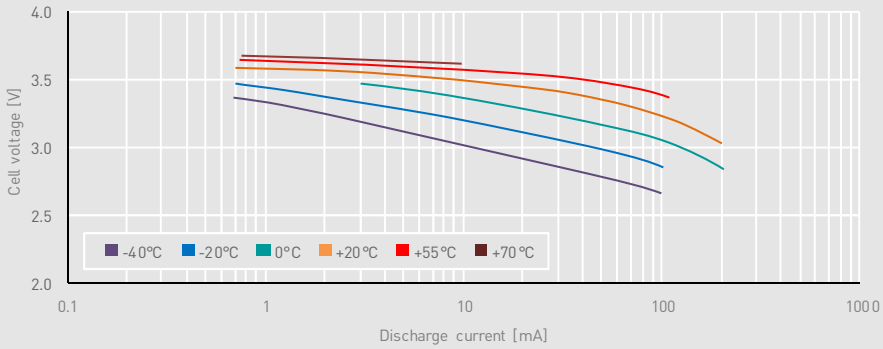
Storage

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

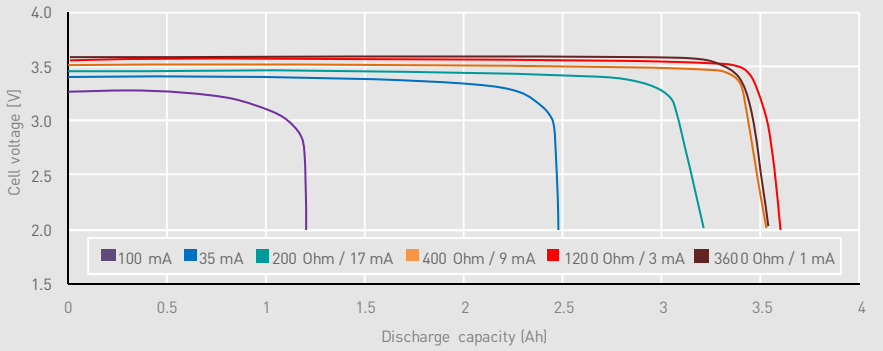
Warning

- 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)

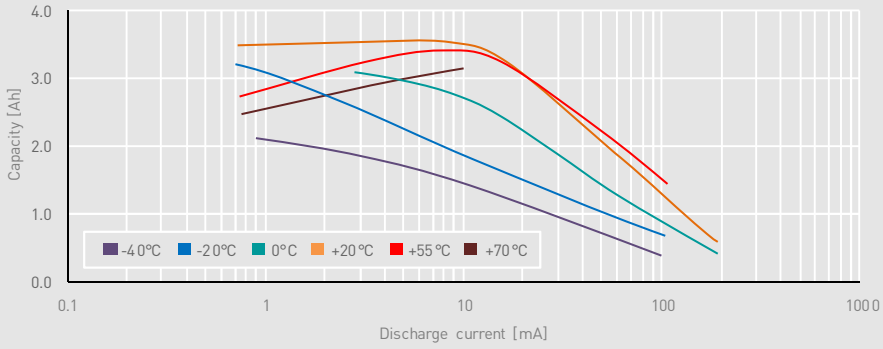
Voltage plateau versus current and temperature (at mid-discharge)



Typical discharge profiles at +20°C



Capacity vs. current at various temperatures



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