

LS 14500ht

Primary Li-SOCl₂ cell

High energy density 3.6 V in extreme environment AA-size bobbin cell

Saft's LS 14500ht cell is ideally suited for typically 1 year applications.

Benefits

- High capacity and high energy most of the lifetime of the application
- Ability to perform safely and reliably up to 150°C with severe vibration/shock constraints
- Low self-discharge, compatible with a long operating life (less than 1% per year of storage, at +20°C, after 1 year)
- High and stable operating voltage
- Low magnetic signature

Key features

- Bobbin construction
- Hermetic construction with glass-to-metal seal
- Sturdy and pressure resistant stainless steel envelope
- No swelling
- Non-flammable electrolyte
- RoHS and REACH compliance
- Manufactured in France

Designed to meet all major quality, safety and environment standards

- Compliant with the vibrations and shocks test a 150°C defined in the Baker-Hughes environmental specification No. 27696 / Rev. E for downhole battery assemblies
- Compliant with intrinsic safety standard IEC 60079-11 part 10.5 and 7.4 (ATEX "IIA T4" classification, when tested at 60°C)
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft Excellence System, continuous evaluation program
- CE: P/N: 04477B

Typical Applications

- Oil and gas well monitoring
- Measure While Drilling (MWD)
- Heat sterilizable applications



Electrical characteristics¹

Nominal capacity (under 5 mA, +150°C, 2.0 V cut-off) ³	2.2 Ah
Open circuit voltage (at +20°C)	3.67 V
Nominal voltage (under 5 mA, + 150°C)	3.6 V
Nominal energy	7.92 Wh
Pulse capability ⁴	Up to 150 mA
Maximum recommended continuous current ⁷	100 mA

For battery sizing, consult Saft

Operating conditions

Operating temperature range ⁵	-40°C / +150°C (-104°F / +302°F)
Storage temperatures (max recommended) ⁶	+150°C (+302°F)

Physical characteristics²

Diameter (max)	14.62 mm (0.575 in)
Height (max)	50.28 mm (1.98 in)
Typical weight	17 g (0.31 oz)
Li metal content	approx. 0.7 g

Termination suffix

All Saft standard terminations available

Other configurations upon request

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

²Sleeved cell.

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

⁴Under 150 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 2.0 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.

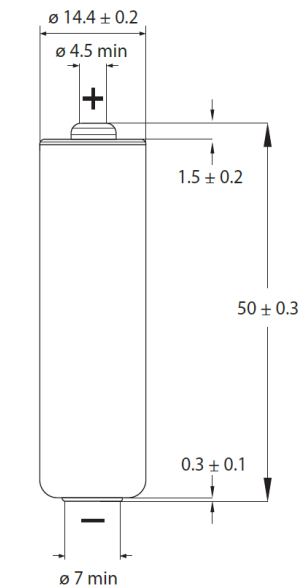
⁵Operation above ambient temperature may lead to reduced capacity and lower voltage readings. Consult Saft.

⁶For more severe conditions, consult Saft.

⁷If above this value, please consult Saft.

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Dimensions in mm

Shocks and vibrations

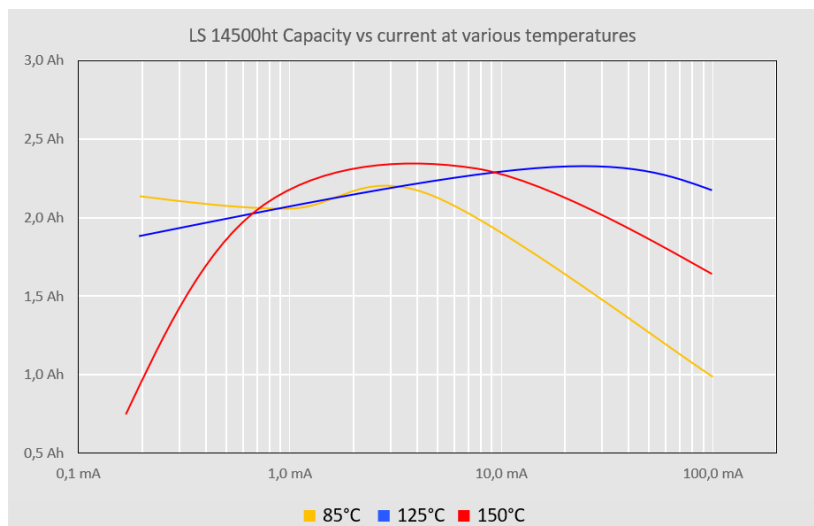
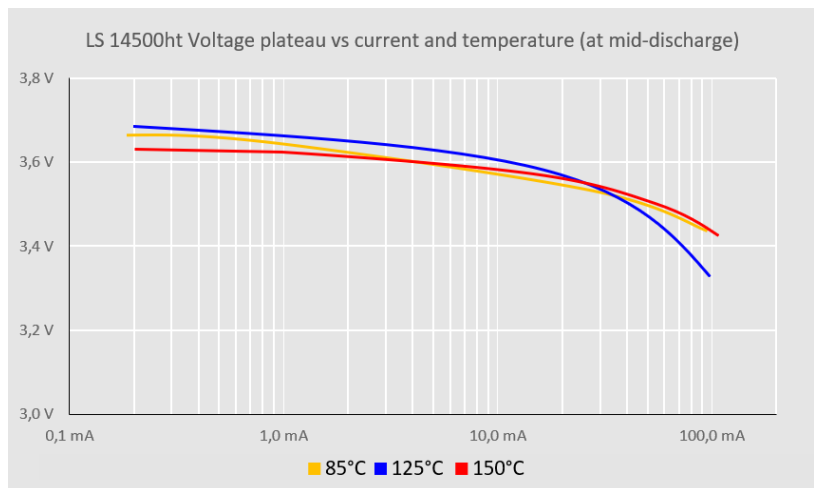
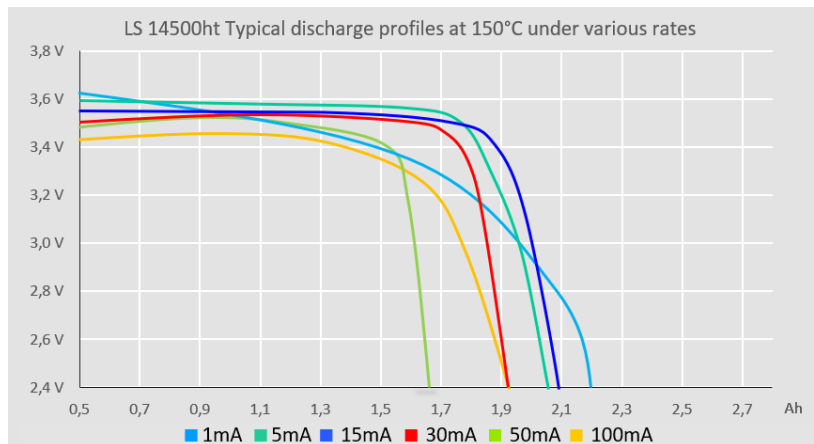
- Ability to withstand in the entire temperature range 20 gRMS random vibrations for 2 hours along X and Y axes and for 4 hours along Z axes
 - o < 30 Hz @ > 6 dB/ octave
 - o 30-80 Hz @ 3 dB/ octave
 - o 80-300 Hz @ 0 dB/ octave
 - o 300-1000 Hz @ -3 dB/ octave
- Ability to withstand in the entire temperature range linear sine sweep at 30 g peak from 30 to 2000 Hz for 1 hours, along X, Y and Z axes
- Ability to withstand at ambient temperature a sequence of 10 shocks 750 g/0.5 msec at half-sine along X,Y and Z axes

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 150°C (302°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.



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