

# LS 14500

## Primary Li-SOCl<sub>2</sub> 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 <sup>[i]</sup>

|                                                                       |              |
|-----------------------------------------------------------------------|--------------|
| Nominal capacity (under 2 mA, +20 °C, 2.0 V cut-off) <sup>[iii]</sup> | 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 <sup>[iv]</sup>                                      | Up to 250 mA |
| Maximum recommended continuous current                                | 50 mA        |

#### Operating conditions

|                                                    |                                    |
|----------------------------------------------------|------------------------------------|
| Operating temperature range <sup>[v]</sup>         | -60 °C / +85 °C (-76 °F / +185 °F) |
| Storage temperatures (recommended) <sup>[vi]</sup> | +30 °C (+86 °F) max                |

#### Physical characteristics <sup>[ii]</sup>

|                  |                     |
|------------------|---------------------|
| 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.

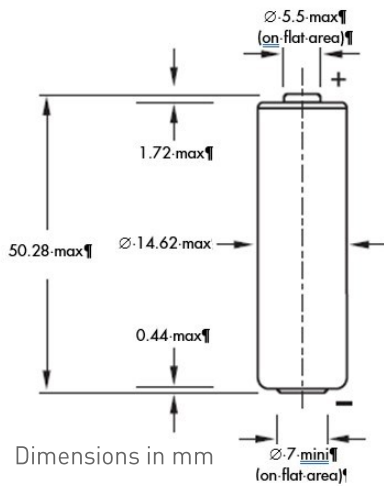
[iii] Dependent upon current drain, temperature, cut-off and cell orientation.

[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.

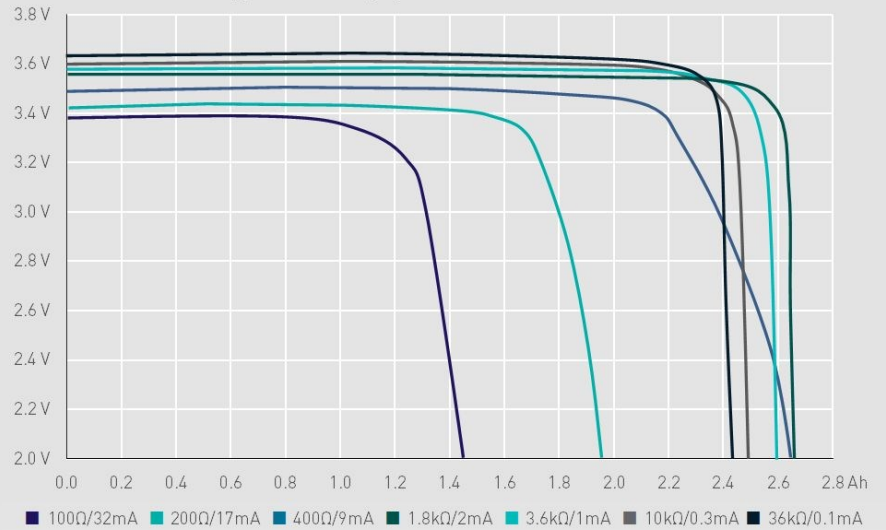
[v] Operation above ambient temperature may lead to reduced capacity and lower voltage readings. Consult Saft.

[vi] For more severe conditions, consult Saft.

# LS 14500



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



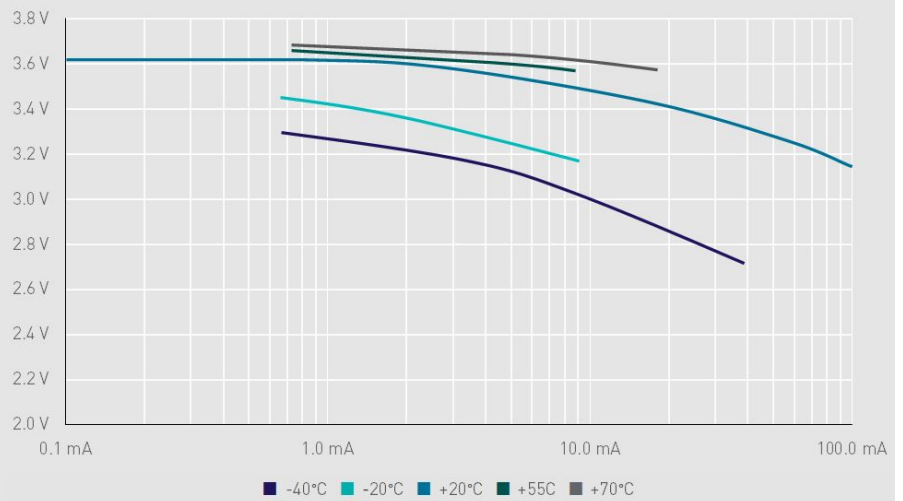
## Storage

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

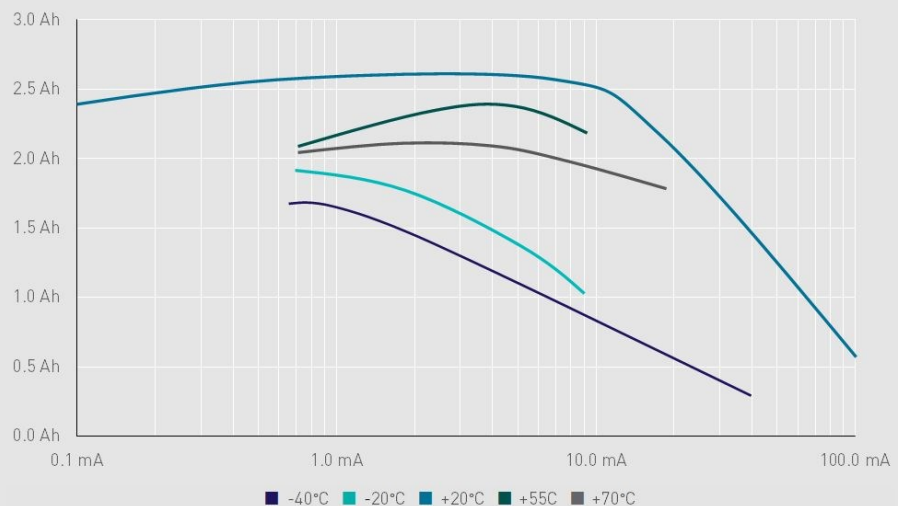
## Warning

- 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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