

## LSH 20

### Primary Li-SOCl<sub>2</sub> cell

High power density 3.6 V D-size spiral cell

Saft's LSH 20 cell is ideally suited for long-term applications (typically from 5 to 20+ years), featuring high drain / high pulses currents.

#### Benefits

- High power / high energy densities (65 W/kg and 468 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 rate, compatible with long operating life (less than 3% per year of storage, at +20°C, after 1 year)
- Superior resistance to corrosion
- Low magnetic signature

#### Key features

- Spiral construction
- Built-in safety vent
- Finishing top with 5 A fuse
- Hermetic construction with glass-to-metal seal
- Stainless steel can
- Non-flammable electrolyte
- RoHS and REACH compliance
- Made in France

#### Designed to meet all major quality, safety and environment standards

- Safety: UL 1642, IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft Excellence System, continuous program

#### Typical applications

- Utility Metering
- Tracking systems
- Dataloggers
- Alarms and security
- Wireless sensors
- Military radios

**NATO Stock Number**  
6135 14 440 1213



#### Electrical characteristics<sup>1</sup>

Nominal capacity (under 14 mA, +20°C, 2.0 V cut-off) <sup>3</sup>	13.5 Ah
Open circuit voltage (at +20°C)	3.67 V
Nominal voltage (at 2 mA, +20°C)	3.6 V
Nominal energy	47 Wh
Pulse capability <sup>4</sup>	Up to 4 A
Maximum recommended continuous current	1.8 A
For battery sizing, consult Saft	

#### Operating conditions

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

#### Physical characteristics<sup>2</sup>

Diameter (max)	33.26 mm (1.31 in)
Height (max)	61.31 mm (2.41 in)
Typical weight	100 g (3.5 oz)
Li metal content	approx. 3.8 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

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

<sup>2</sup>Sleeved cell.

<sup>3</sup>Dependent upon current drain, temperature, cut-off and cell orientation.

<sup>4</sup>Under 4 A / 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.

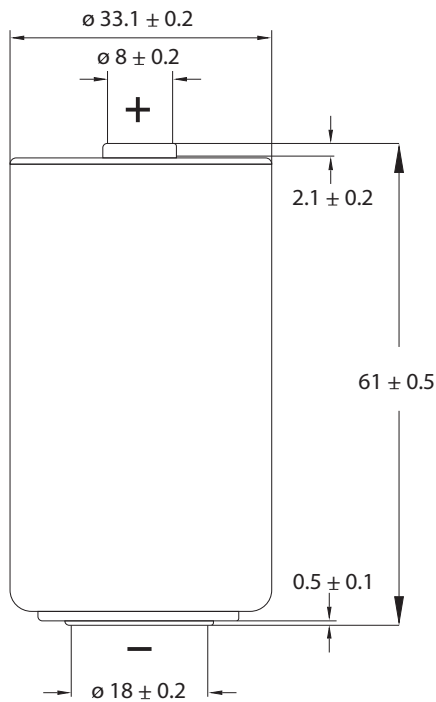
<sup>5</sup>Operation above ambient temperature may lead to reduced capacity and lower voltage readings. Consult Saft.

<sup>6</sup>For more severe conditions, consult Saft.



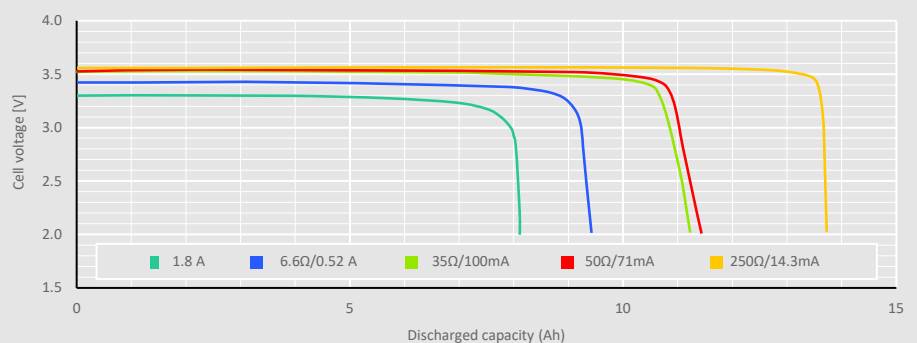
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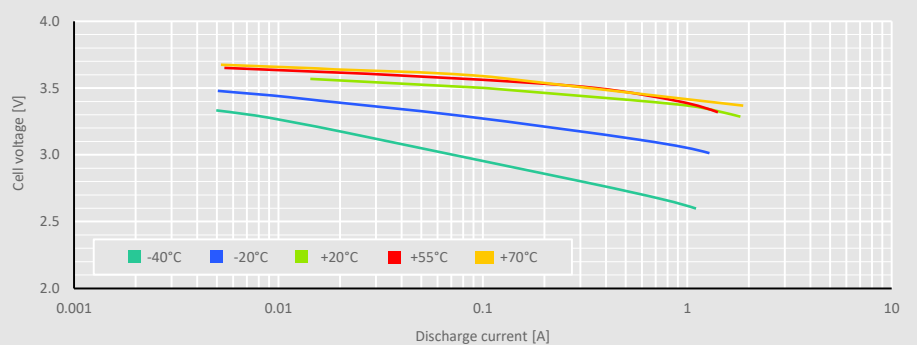


Dimensions in mm

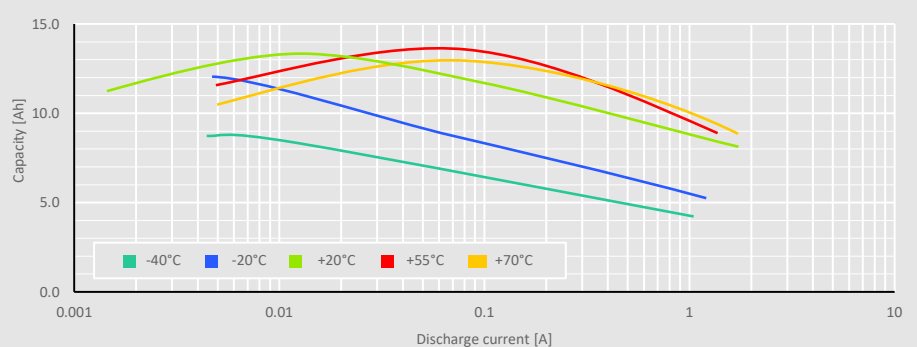
Typical discharge profiles at +20°C



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



Capacity vs. current at various temperatures



#### 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 remove the cells from their original packing before use.
- Do not store the cells in bulk to avoid accidental short circuiting.
- Do not mix new and used cells or cells from different origins.
- Mind the polarities of the cell.