

LS 33600

Primary Li-SOCl₂ cell

High energy density 3.6 V D-size bobbin cell

Saft's LS 33600 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 (1185 Wh/l and 680 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 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
- Made in France

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642, IEC 60086-4
- ATEX: IEC 60079-11 part 10.5 T4 rating at 40°C (Consult Saft)
- 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 5 mA, +20°C, 2.0 V cut-off) ⁽¹⁾	17 Ah
Open circuit voltage (at +20°C)	3.67 V
Nominal voltage (at 0.7 mA, +20°C)	3.6 V
Nominal energy	61.2 Wh
Pulse capacity ⁽²⁾	up to 400 mA
Maximum recommended continuous current	250 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)	33.3 mm [1.31 in]
Height (max)	61.3 mm [2.41 in]
Typical weight	90 g [3.2 oz]
Li metal content	approx. 4.5 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	

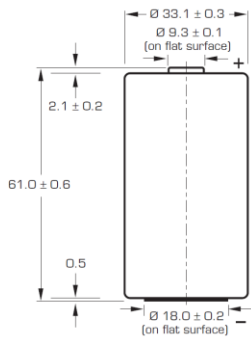
⁽¹⁾ Dependent upon current drain, temperature, cut-off and cell orientation.

⁽²⁾ Under 400 mA / 0.1 second pulses, drained every 2 minutes at +20°C from undischarged cells during 24h, 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.

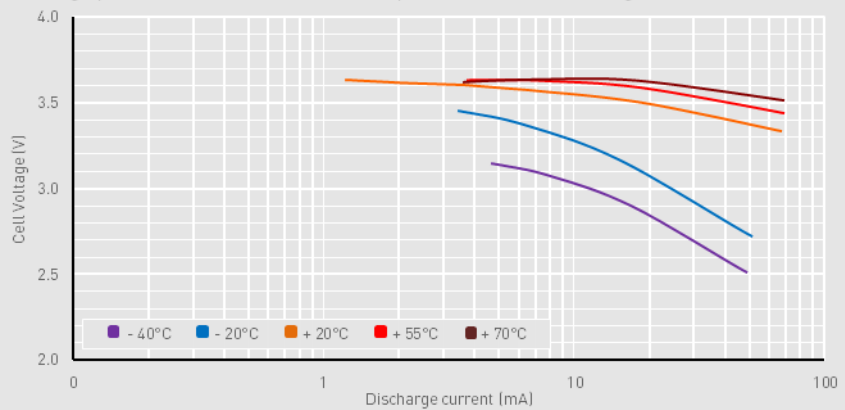
⁽³⁾ Operation above ambient temperature may lead to reduced capacity and lower voltage readings. Consult Saft.

⁽⁴⁾ For more severe conditions, consult Saft.

LS 33600 dimensions



Voltage plateau versus current and temperature at mid-discharge



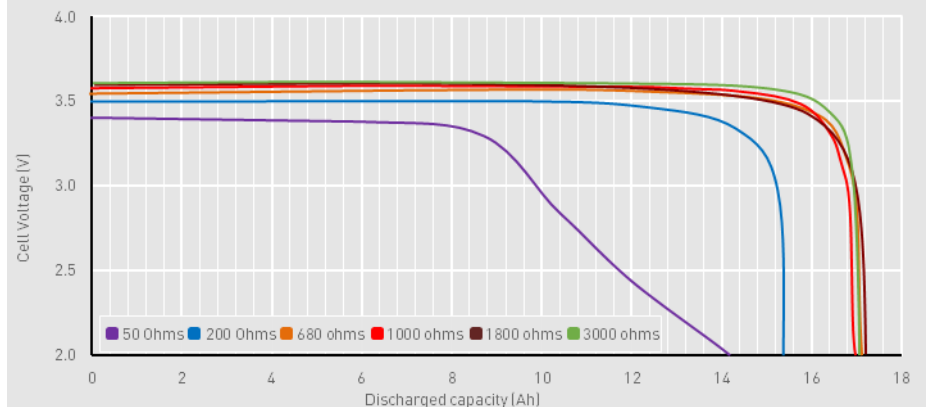
Storage

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

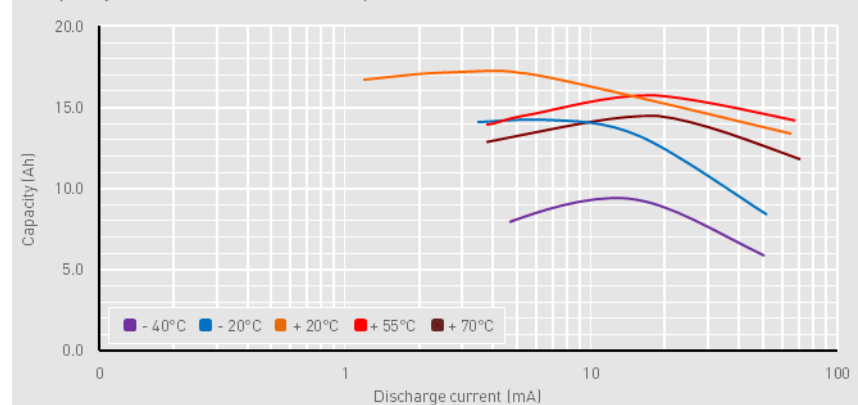
Warning

- 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)

Typical discharge profiles at +20°C



Capacity vs. current at various temperatures



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