Primary lithium battery
LS 33600

3.6 V Primary lithium-thionyl chloride (Li-$SOCl_2$)
High energy
D-size bobbin cell



Benefits

- High voltage response, stable during most of the lifetime of the application
- Wide operating temperature range *(-60°C/85°C)*
- Easy integration in compact system
- Low self-discharge rate *(less than 1 % after 1 year of storage at + 20°C)*

Key features

- Stainless steel container
- Hermetic glass-to-metal sealing
- Built-in safety vent
- Finish with or without flat positive end
- Non-flammable electrolyte
- Compliant with IEC 60086-4 safety standard and IEC 60079-11 intrinsic safety standard
- Underwriters Laboratories *(UL)* Component Recognition *(File Number MH 12609)*
- Restricted for transport *(Class 9)*

Main applications

- Utility metering
- Automatic meter readers
- Buoys
- Measuring equipment
- Industrial applications
- Professional electronics
- Marine equipment

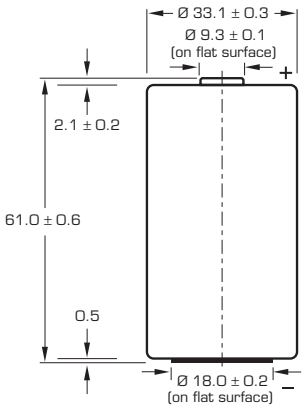
Optional upon request

- Low magnetic version

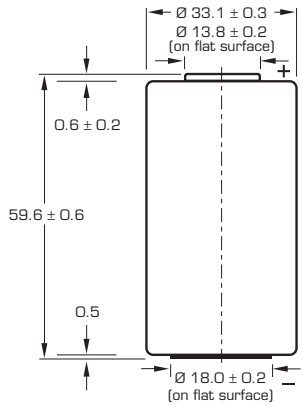
Cell size references		**D**
Electrical characteristics		
(typical values relative to cells stored for one year or less at + 30°C max.)		
Nominal capacity *(at 5 mA + 20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)*		17.0 Ah
Open circuit voltage	(at + 20°C)	3.67 V
Nominal voltage	(at 0.7 mA + 20°C)	3.6 V
Nominal energy		61.2 Wh
Pulse capability: Typically up to 400 mA *(400 mA/0.1 second pulses, drained every 2 mn at + 20°C from undischarged cells with 10 µA base current, yield voltage readings above 3.0 V. 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. Consult Saft)*		
Maximum recommended continuous current *(to maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may request specific thermal protection. Consult Saft)*		250 mA
Storage	*(recommended)* *(for more severe conditions, consult Saft)*	+ 30°C (+ 86°F) max
Operating temperature range *(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)*		- 60°C/+ 85°C (- 76°F/+ 185°F)
Physical characteristics		
Diameter (max)		33.4 mm (1.32 in)
Height (max)		60.2 or 61.6 mm (2.37 in or 2.42 in) depending on finish type
Typical weight		90 g (3.2 oz)
Li metal content		approx. 4.5 g
Available termination suffix		
	CN, CNR	radial tabs
	CNA (AX)	axial leads
	FL	flying leads… *etc.*

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Finished version with protruding positive end cap



Finished version with flat positive end cap

Dimensions in mm.

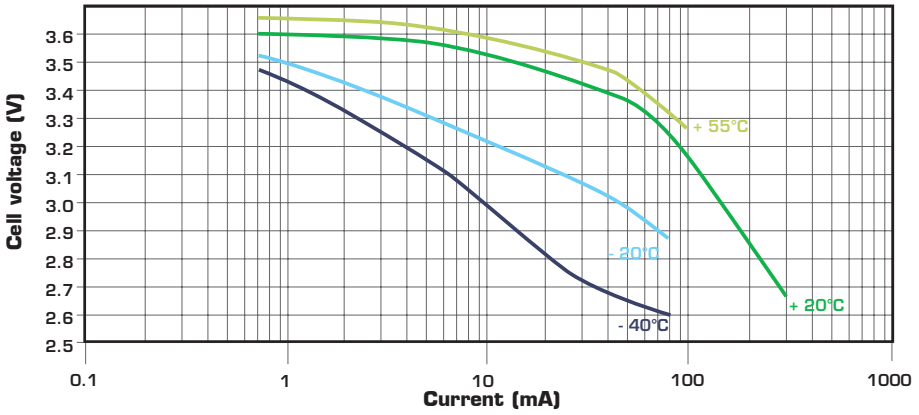
Storage

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

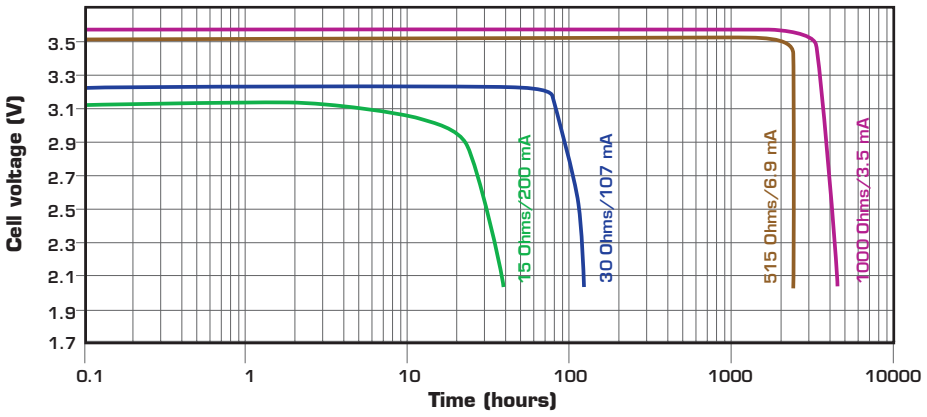
Warning

- 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)*.

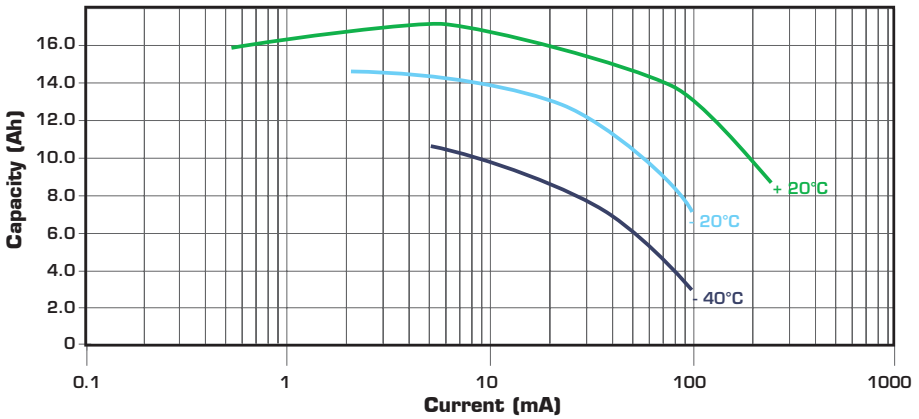
Voltage plateau versus Current and Temperature (at mid-discharge)



Typical discharge profiles at + 20°C



Restored Capacity versus Current and Temperature (2.0 V cut-off)



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Information in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.

For more details on primary lithium technologies please refer to Primary Lithium Batteries Selector Guide Doc N° 31048-2.

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