Primary lithium batteries
LS 33600

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

For applications requesting good voltage response and operating life in -60°C/+85°C environments.

Key features

- High and stable operating voltage
- Low self-discharge rate *(less than 1% after 1 year of storage at +20°C)*
- 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 86-4 safety standard and EN 50020 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

etc...

Cell size references	**UM1 – R20 – 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 2.0V 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)	3.67V
Nominal voltage	(at 0.7mA +20°C)	3.6V
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 3.0V. 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)*		
Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0V cut off. *(Higher currents possible, 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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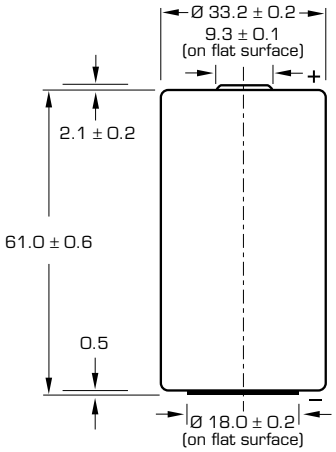
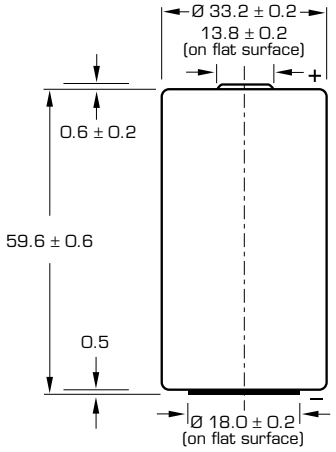


Finished version with protruding positive end cap



Finished version with flat positive end cap

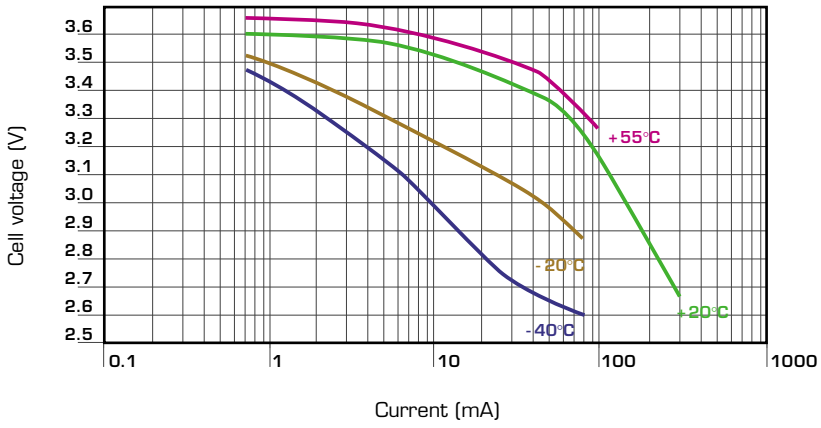
Dimensions in mm.

Storage

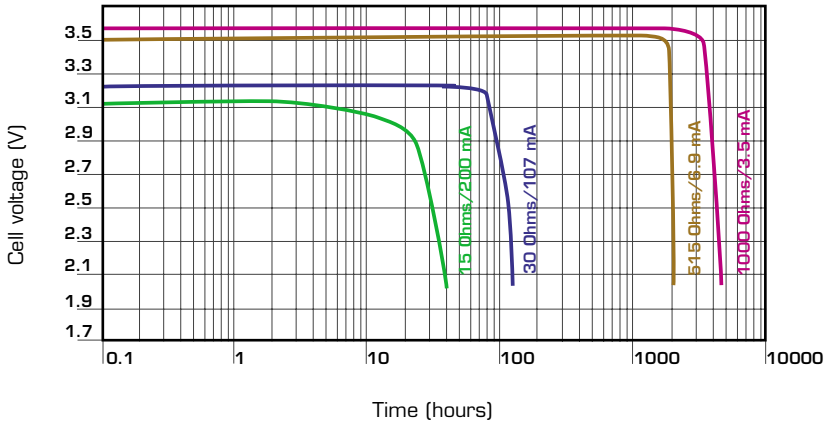
- The storage area should be clean, cool (not exceeding + 30°C), dry and ventilated.

Warning

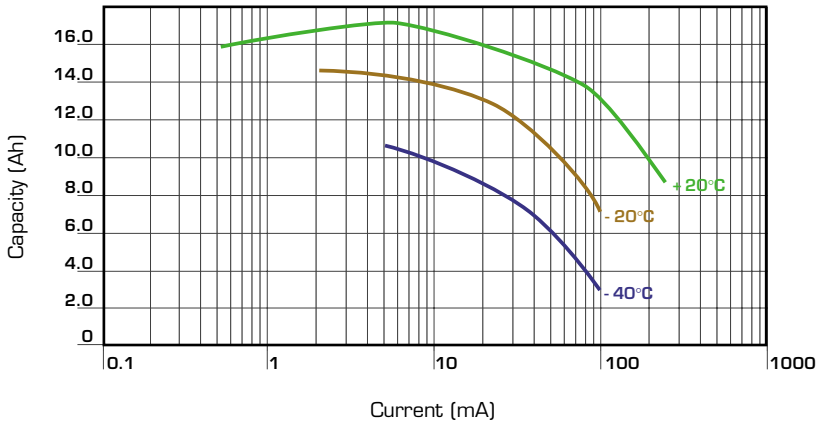
- Fire, explosion and severe burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above 100°C (212°F), incinerate, or expose contents to water.
- Do not solder directly to the cell.



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



Typical discharge profiles at +20°C



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

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