Primary lithium battery
LS 14500



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

Benefits

- Enhanced capacity
- High voltage response, stable during most of the lifetime of the application
- Wide operating temperature range *(-60°C/+85°C)*
- Low self-discharge rate *(less than 1 % after 1 year of storage at +20°C)*
- Easy integration into compact systems
- Superior resistance to atmospheric corrosion

Key features

- Stainless steel container and end caps *(low magnetic signature)*
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Compliant with IEC 60086-4 safety standard and IEC 60079-11 intrinsic safety standard *(class T3 assignment)*
- Underwriters Laboratories *(UL)* Component Recognition
- Non-restricted for transport/ Non-assigned to Class 9 according to the UN Recommendations on the transport of dangerous goods – Model Regulations
- Manufactured in France, UK, China

Main applications

- Utility metering
- Automatic meter reading
- Alarms and security devices
- Tollgate systems
- Memory back-up
- Tracking systems
- Automotive electronics
- Professional electronics

Cell size references		R6 - AA
Electrical characteristics		
(typical values relative to cells stored for one year or less at +30°C max.)		
Nominal capacity *(at 2 mA +20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)*		2.6 Ah
Open circuit voltage	(at +20°C)	3.67 V
Nominal voltage	(at 0.2 mA +20°C)	3.6 V
Nominal energy		9.36 Wh
Pulse capability: Typically up to 250 mA *(250 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 *(Higher currents possible, consult Saft)*		50 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)		14.55 mm (0.57 in)
Height (max)		50.3 mm (1.98 in)
Typical weight		16.7 g (~ 0.6 oz)
Li metal content		approx. 0.7 g
Available termination suffix		
	CN, CNR	radial tabs
	2 PF, 3 PF, 3 PF RP, 4 PF	radial pins
	CNA (AX)	axial leads
	FL	flying leads…*etc.*

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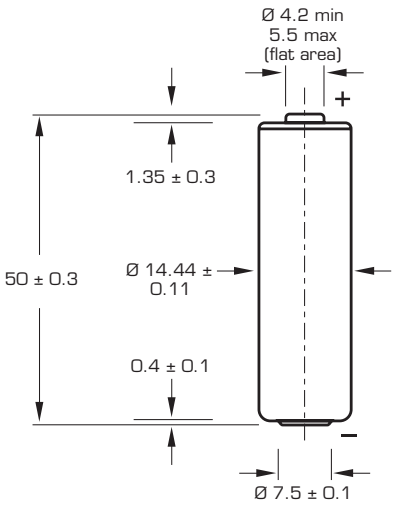
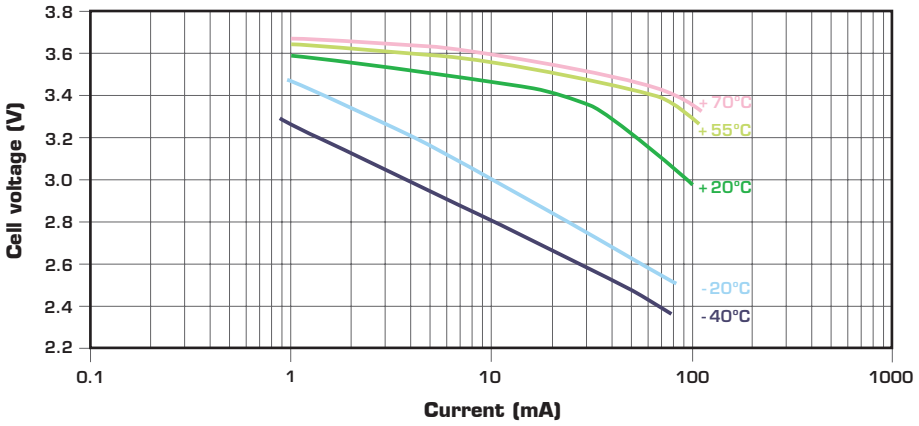
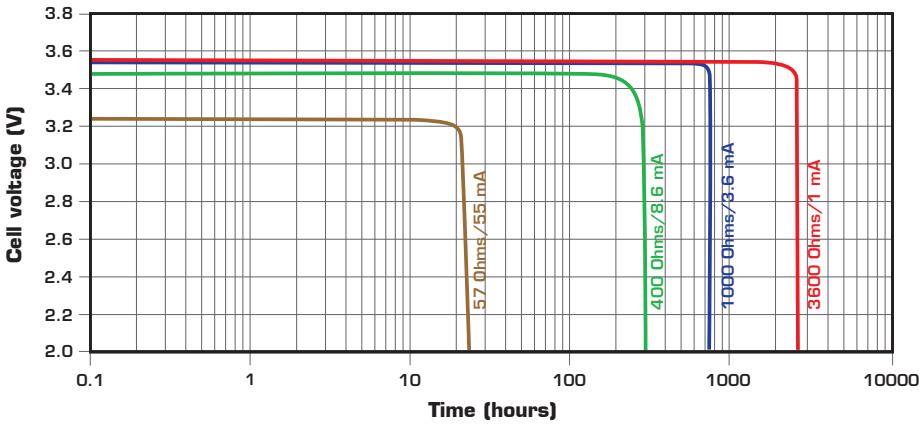


Dimensions in mm.

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



Typical discharge profiles at + 20°C



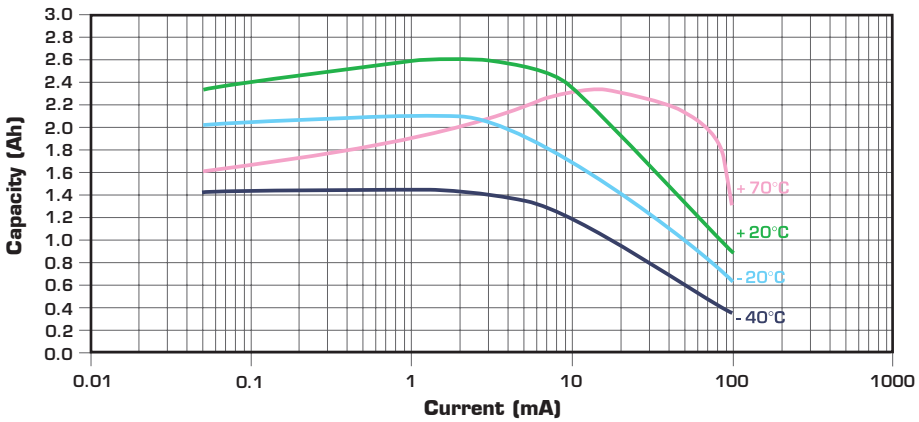
Storage

- 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).*

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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