Primary lithium battery

LS 14250C

3.6 V Primary lithium-thionyl chloride (Li-$SOCl_2$)
High energy density
½ AA-size bobbin cell
(recommended for cool temperature environments)

Preferably for moderate temperature uses (i.e. indoor applications with occasional T excursions up to + 70°C), requesting superior voltage response and operating life.

Key features

- High and stable operating voltage
- Superior voltage response during pulsing at ambient T
- Low self-discharge rate *(less than 1 % after 1 year of storage at + 20 °C)*
- Stainless steel container and end caps *(low magnetic signature)*
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Compliant with IEC 86-4 safety standard and IEC 60079-11 intrinsic safety standard
- Underwriters Laboratories *(UL)* Component Recognition *(File Number MH 12609)*
- Non-restricted for transport

Main applications

- Utility metering
- Alarms and security devices
- Memory back-up
- Computer real-time clocks
- Tracking systems
- Professional electronics

Cell size references	**½ R6 – ½ AA**

Electrical characteristics

(typical values relative to cells stored for one year or less at + 30°C max.)

Nominal capacity *(at 1 mA + 20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)*		1.20 Ah
Open circuit voltage	(at + 20°C)	3.67 V
Nominal voltage	(at 0.1 mA + 20°C)	3.6 V
Nominal energy		4.32 Wh
Pulse capability: Typically up to 50 mA *(50 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 are possible, consult Saft)*		15 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/+ 70°C (- 76°F/+ 158°F)

Physical characteristics

Diameter (max)		14.65 mm (0.58 in)
Height (max)		24.8 mm (0.98 in)
Typical weight		8.9 g (0.3 oz)
Li metal content		approx. 0.3 g
Available termination suffix:	CN, CNR 2 PF, 3 PF, 3 PF RP, 4 PF CNA (AX) FL	radial tabs radial pins axial leads flying leads …etc.

October 2008

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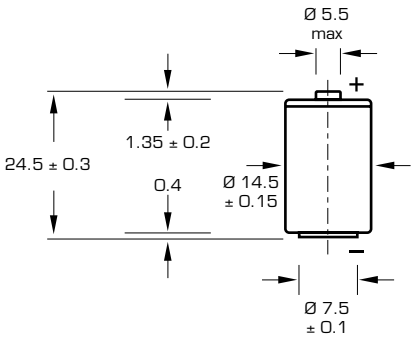


Dimensions in mm.

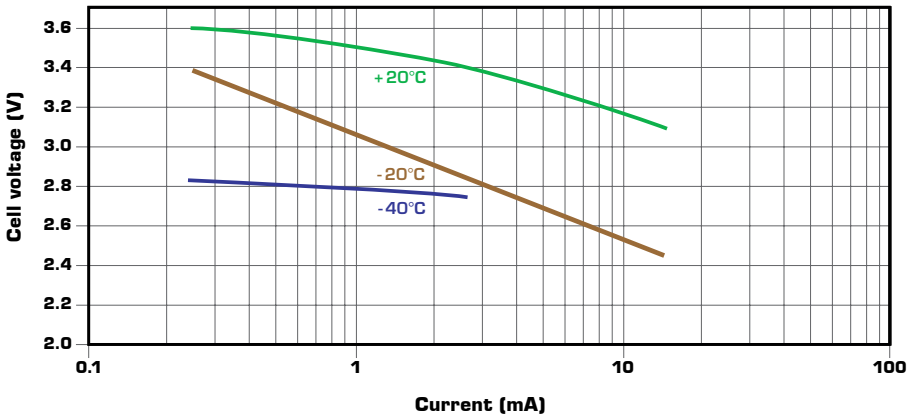
Storage

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

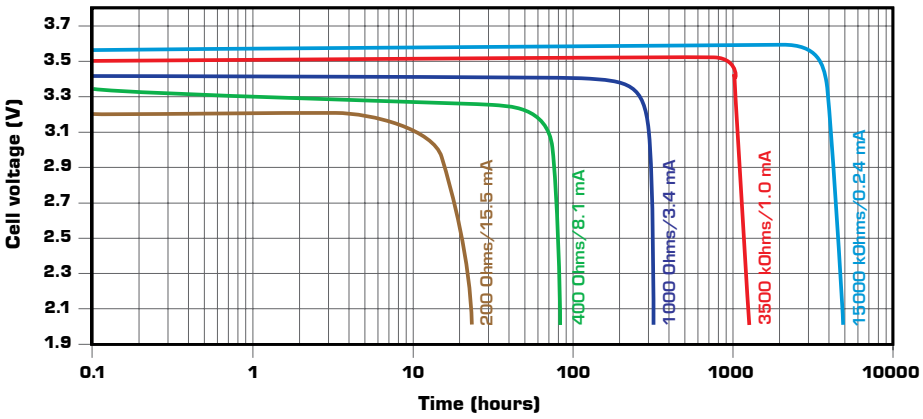
Warning

- 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)*.

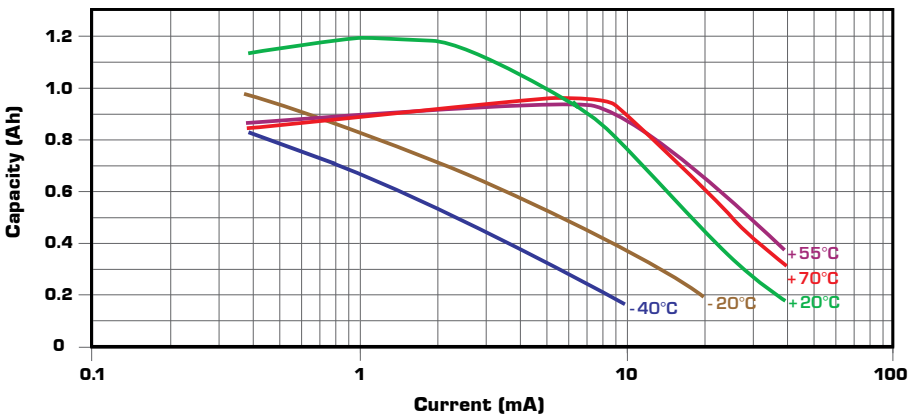
Voltage plateau versus Current and Temperature (at mid-discharge)



Typical discharge profiles at + 20°C



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



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Doc. N° 31010-2-1008

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

Published by the Communications Department.

Photo credit: Saft

Société anonyme au capital de 31 944 000 €
RCS Bobigny B 383 703 873

Produced by Arthur Associates Limited.

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