Primary lithium battery

LS 14250

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

Benefits

- 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 % per 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 6007 9 -11 intrinsic safety standard (class T4 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
- Computer real-time clocks
- Tracking systems
- Automotive electronics
- 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 cu t-off. The capacity restored by the cell varies according to current drain, temperature and cu t-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 100 mA (100 mA/0.1 second pulses, drained every 2 mn at +20 °C from undischarged cells with 1 0 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 Sa ft)		
Maximum recommended continuous current (Higher currents are possible, consult Saft)		35 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)	25.15 mm (0.99 in)
Typical weight	8.9 g (0.3 oz)
Li metal content	approx. 0.3 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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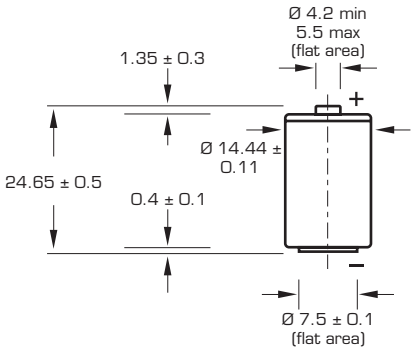
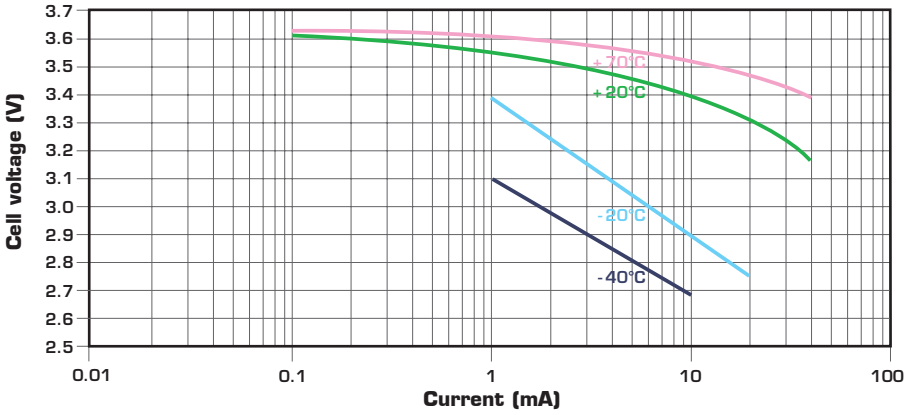
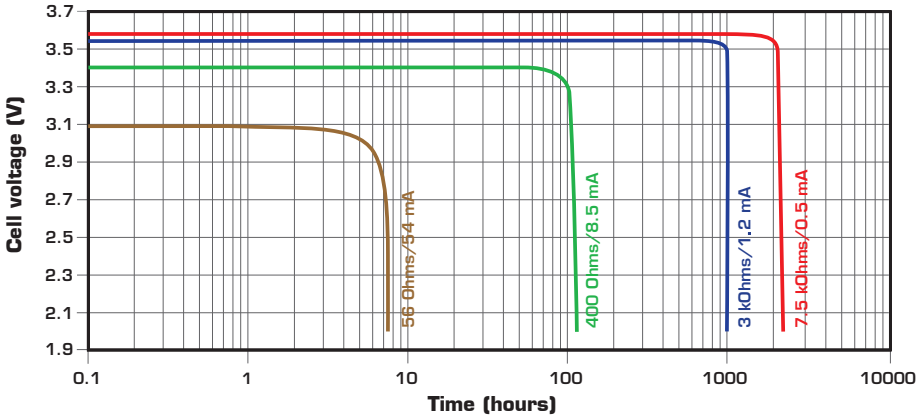


Dimensions in mm.

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



Typical discharge profiles at + 20°C



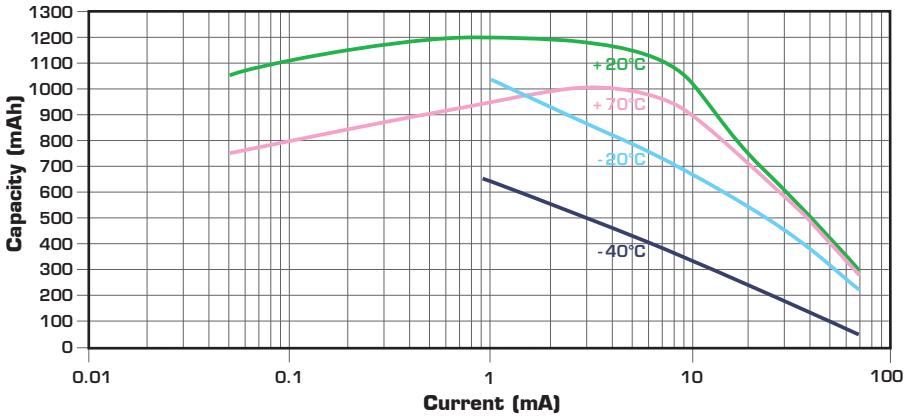
Storage

- 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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Doc. N° 31072-2-0909

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

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