

# Primary lithium batteries

## LS 9 V

Primary lithium-thionyl chloride (Li-SOCl<sub>2</sub>)

High energy density

Battery pack

A prismatic battery pack for a wide range of applications requesting low base currents combined with superimposed pulses. The LS 9 V version yields good voltage readings in a wide T range (-60°C to +85°C).



### Benefits

- High voltage, stable during most of the application's lifetime
- Wide operating temperature range
- Low self-discharge rate  
(less than 1 % per year of storage at +20°C)
- Easy integration into compact systems

### Key features

- Pack assembled from three ½ AA-sized (and UL-recognized) cells connected in series
- Component cells with stainless steel container and hermetic glass-to-metal sealing
- Plastic sleeve for battery housing
- Miniature snap-on terminals
- Non-flammable electrolyte
- Non-restricted for transport

### Main applications

- Memory back-up
- Alarm and security devices
- Smoke detectors
- Alarm equipment
- Industrial electronics
- Medical equipment

### Pack construction

3  
LS 14250  
in series

Pack designation	LS 9 V
Part number	C10-0046

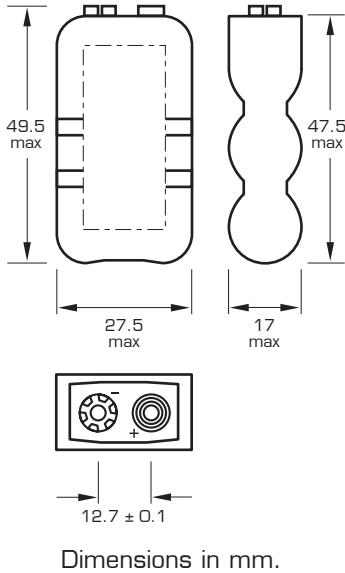
### Electrical characteristics

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

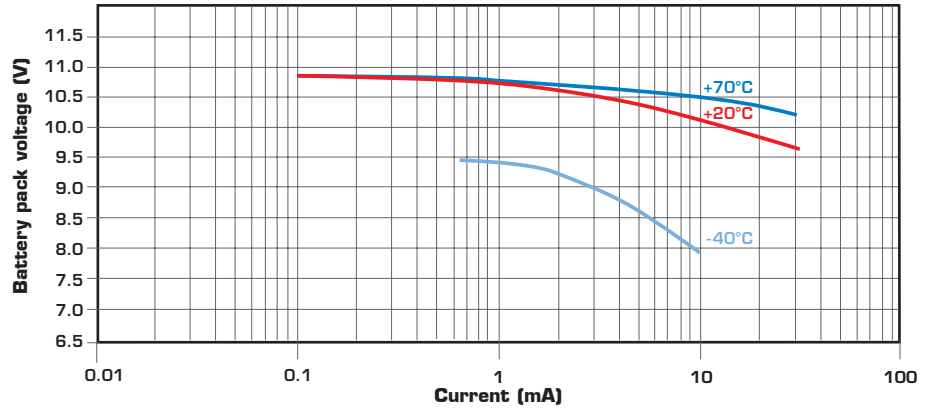
Nominal capacity	1.2 Ah
(at 1 mA, +20°C, 6.0 V cut-off. The capacity restored by the battery pack varies according to current drain, temperature and cut-off)	(1.0 mA)
Open circuit voltage (at +20°C)	11.0 V
Nominal voltage (at +20°C and 0.1 mA)	10.8 V
Pulse capability: Typically up to (0.1 second pulses, 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)	100 mA
Maximum recommended continuous current (Higher currents 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)
Typical weight	29 g (1 oz)
Li metal content	approx. 0.9 g



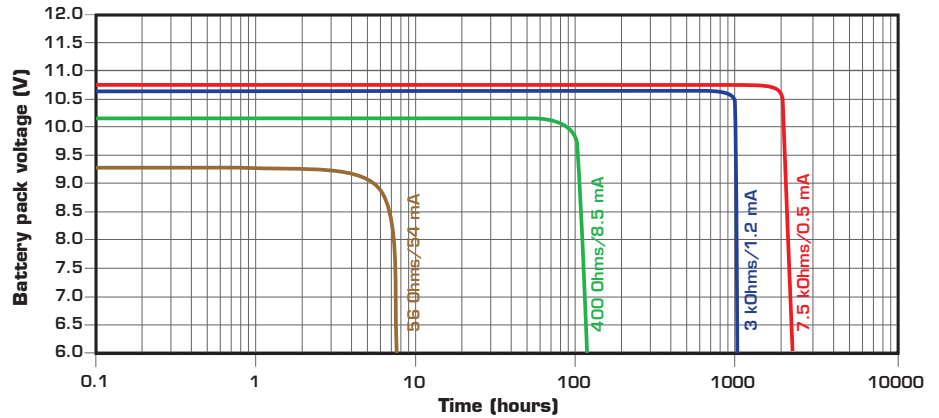
# LS 9 V battery pack



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



Typical discharge profiles at +20°C



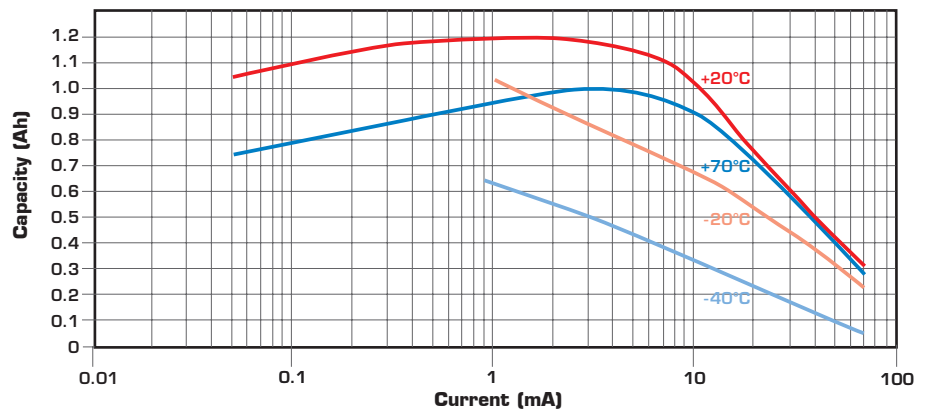
## Storage

- 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 battery pack.

Restored Capacity versus Current and Temperature (6.0 V cut-off)



## Saft

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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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