

Datasheet

Primary lithium battery

RS Stock No: 7781119

3.6 V Primary lithium-thionyl chloride (Li-SOCl₂)

High energy density

C-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 % 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
- Underwriters Laboratories (UL) Component Recognition
- Compliant with IEC 60086-4 safety standard and IEC 60079-11 intrinsic safety standard
- Restricted for transport (Class 9)

Main applications

- Utility metering
- Automatic meter readers
- Buoys
- Measuring equipment
- Industrial applications
- Professional electronics

Optional upon request

- Low magnetic version

Cell size references

C

Electrical characteristics

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

Nominal capacity 7.7 Ah

(at 4 mA +20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)

Open circuit voltage (at +20°C) 3.67 V

Nominal voltage (at 0.5 mA +20°C) 3.6 V

Nominal energy 27.72 Wh

Pulse capability: Typically up to 300 mA

(300 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 150 mA

(Higher currents possible, consult Saft)

Storage (recommended) +30°C (+86°F) max
(for more severe conditions, consult Saft)

Operating temperature range -60°C/+85°C
(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)

Physical characteristics

Diameter (max) 26.0 mm (1.02 in)

Height (max) 49.1 mm or 50.4 mm
(1.93 in or 1.98 in)
depending on finish type

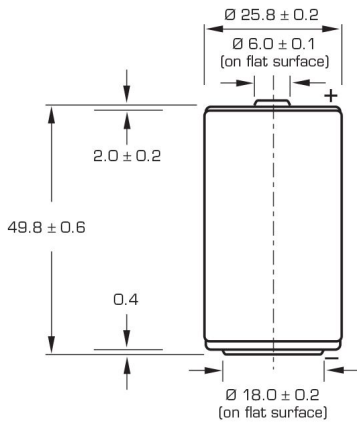
Typical weight 48 g (1.7 oz)

Li metal content approx. 2.0 g

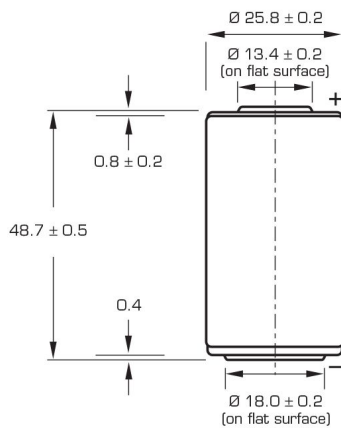
Available termination suffix

CNR
3 PF, 3 PF RP
CNA (AX)
FL

radial tabs
radial pins
axial leads
flying leads... etc.



Finished version with protruding positive end cap



Finished version with flat positive end cap

Dimensions in mm.

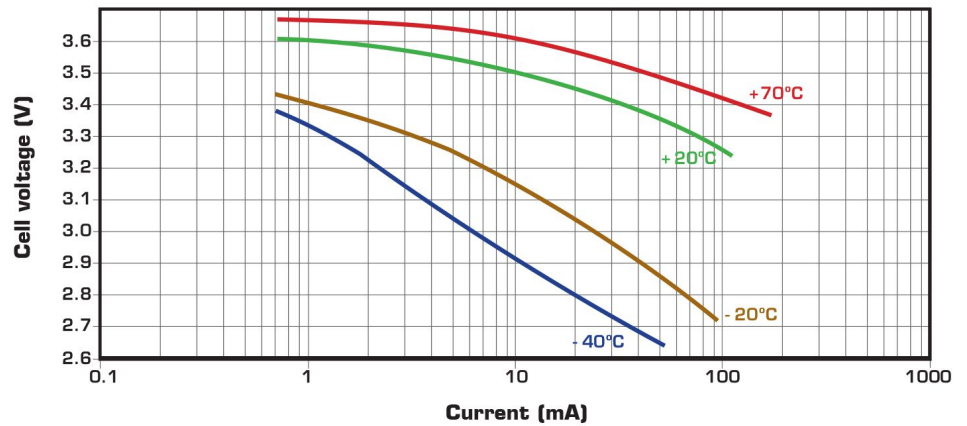
Storage

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

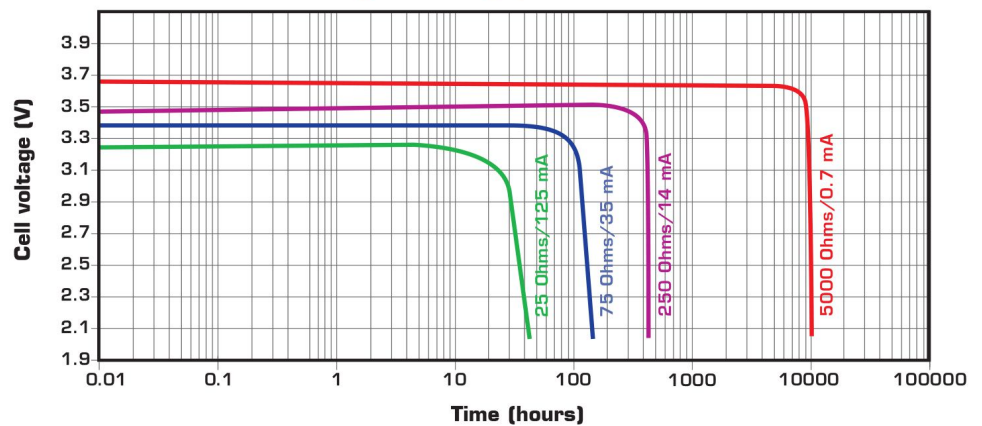
Warning

- 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 (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)

