Primary lithium battery
LSH 20

3.6 V Primary lithium-thionyl chloride (Li-$SOCl_2$)
High power
D-size spiral cell

Benefits

- High voltage response, stable during most of the lifetime of the application
- High drain/pulse capability
- Wide operating temperature range *(-60°C/+85°C)*
- Easy integration into compact systems
- Low self-discharge rate *(less than 3% after 1 year of storage at +20°C)*

Key features

- Stainless steel container
- Hermetic glass-to-metal sealing
- Built-in safety vent
- Finish with 5 A fuse
- Non-flammable electrolyte
- Underwriters Laboratories *(UL)* Component Recognition *(File Number MH 12609)*
- Restricted for transport *(Class 9)*

Main applications

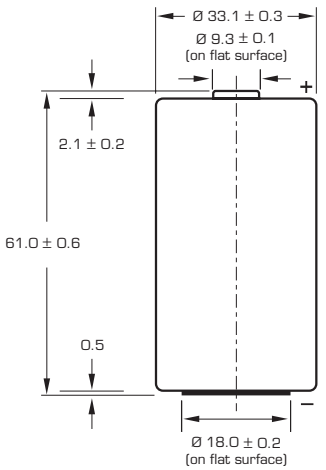
- Radiocommunication and other military applications
- Alarms and security systems
- Beacons and emergency location transmitters
- GPS
- Metering systems
- Sonobuoys
- Tracking systems
- GSM communication

Cell size references		**UM1 – R20 – D**
Electrical characteristics		
(typical values relative to cells stored for one year or less at + 30°C max.)		
Nominal capacity *(at 15 mA + 20°C 2.0 V cut off. The capacity restored by the cell varies according to current drain, temperature and cut off)*		13.0 Ah
Open circuit voltage	(at + 20°C)	3.67 V
Nominal voltage	(at 2 mA + 20°C)	3.6 V
Pulse capability: Typically up to 4000 mA *(4000 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 *(to maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may request specific thermal protection. Consult Saft)*		1800 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. Operation with current continuously above 1 A may restrict upper T range. Consult Saft)*		- 60°C/+ 85°C (- 76°F/+ 185°F)
Physical characteristics		
Diameter *(max)*		33.4 mm (1.32 in)
Height *(max)*		61.6 mm (2.42 in)
Typical weight		100 g (3.5 oz)
Li metal content		approx. 3.8 g
Available termination suffix	CN, CNR CNA (AX) FL	radial tabs axial leads flying leads …etc.

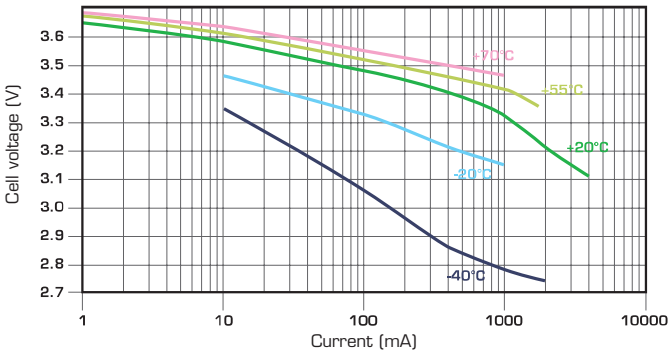
NATO stock number
6135 14 440 1213

October 2006

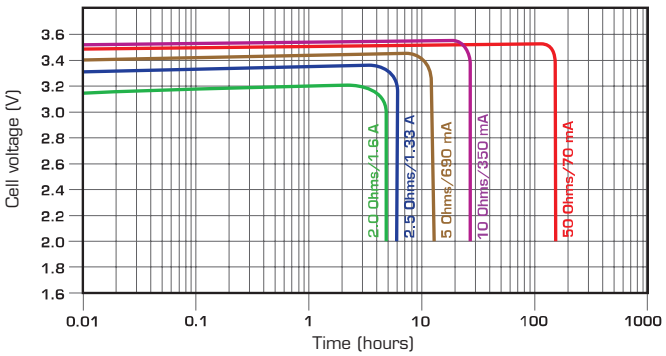
LSH 20



Dimensions in mm.



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



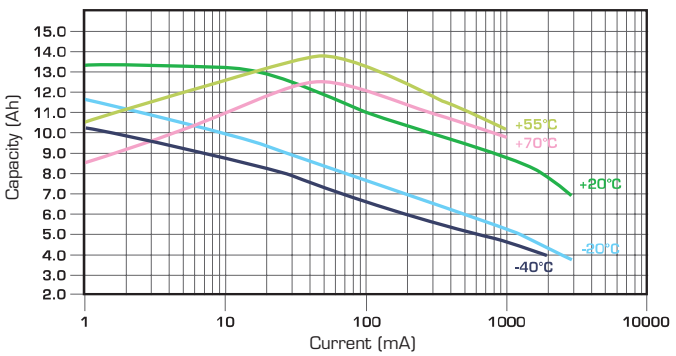
Typical discharge profiles at +20°C

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)

Doc. Nº 31015-2-1006

For more details on primary lithium technologies please refer to Primary Lithium Batteries Selector Guide Doc Nº 31048-2.

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