

# Primary lithium batteries

## LSH 20

3.6V Primary lithium-thionyl chloride (Li-SOCl<sub>2</sub>)

High power

D-size spiral cell

For high drain/high pulses applications requesting superior voltage response in -60°C/+85°C environments.



### Key features

- High and stable operating voltage
- Superior drain capability
- Low self-discharge rate  
(less than 3% after 1 year of storage at +20°C)
- 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
- etc...

NATO stock number  
6135 14 440 1213

### 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 2.0V 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)	3.67V
Nominal voltage (at 2 mA +20°C)	3.6V

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 3.0V. 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)	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

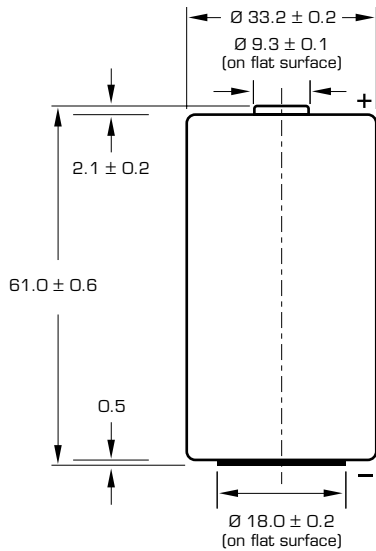
Diameter (max)	33.4 mm (1.32 in)
Height (max)	61.6 mm (2.42 in)
Typical weight	100 g (3.5 oz)
Li metal content	approx. 4.0 g

Available termination suffix

CN, CNR  
CNA (AX)  
FL

radial tabs  
axial leads  
flying leads ...etc.

# LSH 20



Dimensions in mm.

## Storage

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

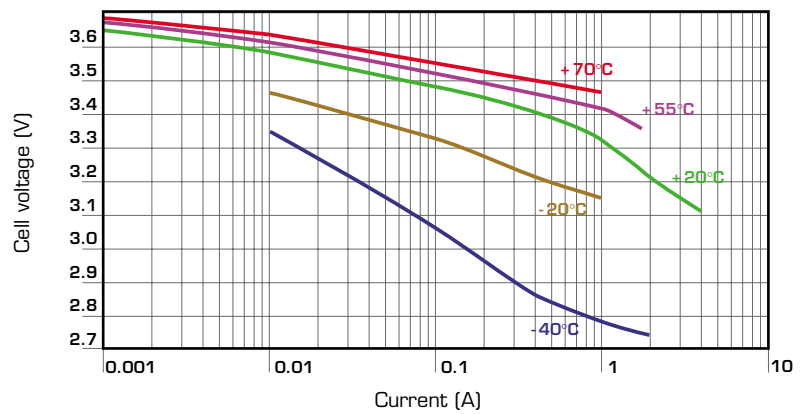
## Warning

- 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.

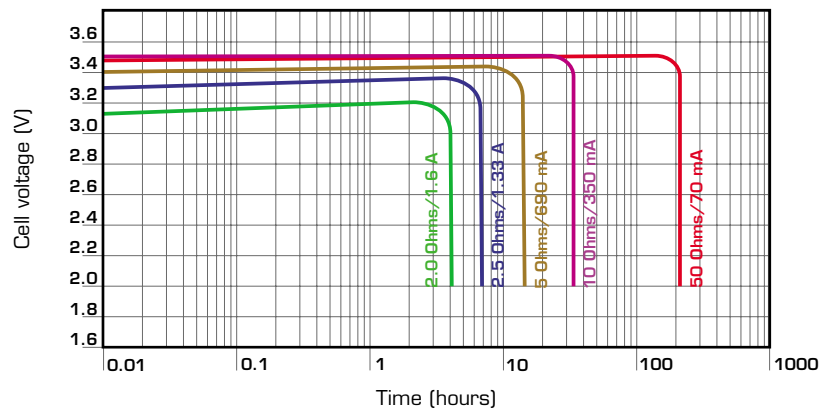
## Saft

12, rue Sadi Carnot  
93170 Bagnolet - France  
Tel +33 1 49 93 19 18  
Fax +33 1 49 93 19 69

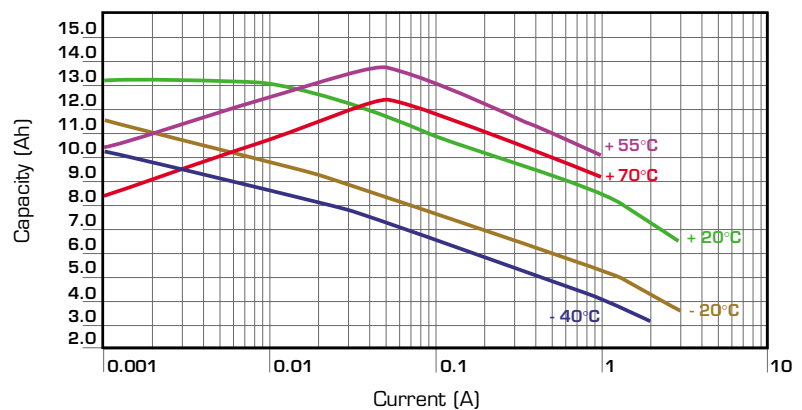
[www.saftbatteries.com](http://www.saftbatteries.com)



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



Typical discharge profiles at +20°C



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

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