# 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 $+30^{\circ}$ 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 accord to the pulse characteristics, the temperature, and the cell's previous hist Fitting the cell with a capacitor may be recommended in severe condition Consult Saft)	ory.

Maximum recommended continuous current (to maintain cell heating within safe limits)	1800 m/
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)	

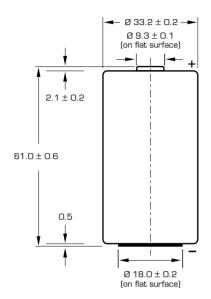
Storage	(recommended) (for more severe conditions, consult Saft)	+ 30°C (+ 86°F) max
Operating tem	perature range	-60°C/+85°C
(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Operation with current continuously above 1 A may restrict upper T range.		(-76°F/+185°F)
Consult Saft1		

## Physical characteristics

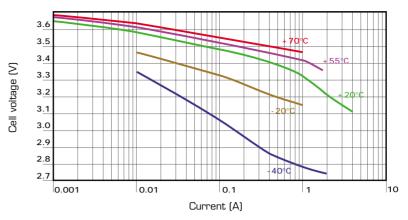
Diameter (max)	33.4 mm (1.32 in)
Height (max)	61.6 mm (2.42 in)
Typical weight	100 g (3.5 oz)
Li metal content	approx. 4.0 g
Available termination suffix	
CN, CNR	radial tabs
CNA (AX)	axial leads
FL	flying leadsetc.



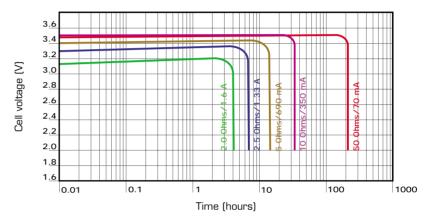
## **LSH 20**



Dimensions in mm.



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



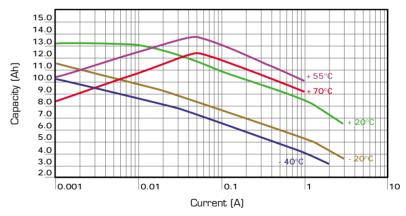
Typical discharge profiles at +20°C

## **Storage**

 The storage area should be clean, cool (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.



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

#### Saft

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