

# Primary lithium batteries

## Selector guide



# Saft Lithium batteries

## meeting your needs...

*For more than 31 years,  
Saft has pioneered the  
development and production  
of primary lithium cells and  
battery packs in Europe,  
North America and  
Asia/Pacific.  
Autonomy, power, voltage,  
shape, weight, service life,  
price... Saft knows how to  
tailor battery solutions you  
can count on.*

With more than 4,000 employees, 2 R&D centers, 9 manufacturing facilities and 26 local sales organizations, a product range offer covering the 3 main primary lithium chemistries of today, Saft is a truly international player in the field of batteries and power supply systems for professional, industrial, space and military uses.

Among recognized characteristics of the Saft spirit worldwide are quality, performance, reliability, openness and an ability to meet the most demanding challenges. Take advantage of them for your applications!

### **Lithium power at your service**

Lithium is a light metal which exhibits an exceptional specific capacity (3.86 Ah/gram) and unique electrochemical characteristics.

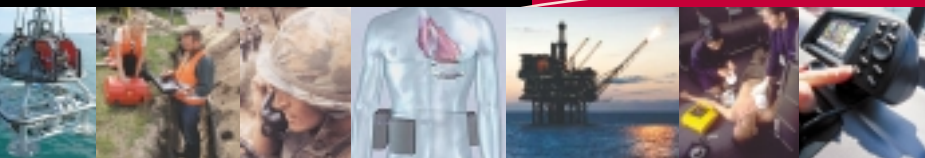
Combining lithium with manganese dioxide ( $MnO_2$ ) powder or low-freezing point liquid cathode

materials such as thionyl chloride ( $SOCl_2$ ) or sulfur dioxide ( $SO_2$ ), results in batteries with high energy, low weight, reduced self-discharge rate, and ability to operate under extreme conditions.

### **Saft's lithium products**

3 lithium chemistries are currently available:

- Lithium-thionyl chloride ( $Li-SOCl_2$ ) in *LS/LST/LSX/LSH* 3.6 V cells,
- Lithium-sulfur dioxide ( $Li-SO_2$ ) in *G/LO* 3.0 V cells,
- Lithium-manganese dioxide ( $Li-MnO_2$ ) in *LM* 3.0 V cells.



# ...exceeding your expectations

The LS and LST cells are *cylindrical* and based on the high-energy concentric "bobbin" electrode configuration. They are available in *standard* and *high capacity "C"* versions, both adapted to low current applications.

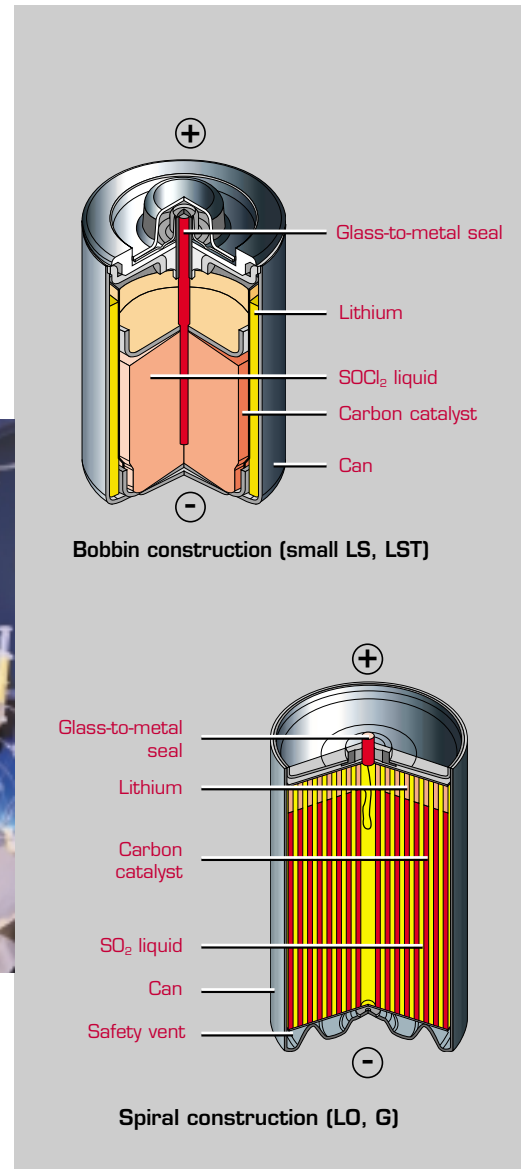
The LSX, LSH, G, LO and LM cells are also *cylindrical* but use the power-optimized "coiled" and "spiral" electrode constructions. The Li-SO<sub>2</sub> cells are available in "SX" and "G" standard versions and in *high pulse capability "SHX"* versions.

The spiral LM cell series is completed with 3 button cells aimed at memory back-up.

Corrosion-proof containers, hermetic sealing based on rugged glass-to-metal seals and TIG or laser welds, built-in safety vents and individual protection fuses are design features common to most of Saft's lithium cells.

The LS/LST/LSX/LSH/G/LO/LM cells are available as single units (with different optional finishes) or assembled within battery packs.

Whatever your application, you will probably find a Saft lithium battery able to meet your particular requirements. If not, custom-made solutions can be developed within your time-to-market constraints.



## Saft primary lithium batteries: applications

|  | Memory back-up | Real-time clocks | Utility metering AMR | Security Alarms | Electronic toll collection | Automotive electronics | Radio communication | Emergency location Buoys | Lighting Night vision | Medical defibrillators | Downhole logging | Meteorology Space | Professional electronics | GPS/GSM tracking |
|--|----------------|------------------|----------------------|-----------------|----------------------------|------------------------|---------------------|--------------------------|-----------------------|------------------------|------------------|-------------------|--------------------------|------------------|
| LM buttons                               | ●              | ●                |                      | ○               |                            |                        |                     |                          |                       |                        |                  |                   | ●                        |                  |
| LM spirals                               |                |                  | ○                    | ●               |                            | ●                      | ●                   | ●                        | ●                     | ●                      |                  | ●                 | ●                        | ●                |
| LS, LST small bobbins (½ AA, AA, ¾ A, A) | ●              | ●                | ●                    | ●               | ●                          | ●                      |                     | ●                        | ●                     |                        | ●                |                   | ●                        | ●                |
| LS large bobbins (C, D)                  | ●              |                  | ●                    | ●               |                            | ○                      |                     | ●                        | ●                     |                        | ○                | ●                 | ●                        |                  |
| LSH spirals                              |                |                  | ○                    | ●               |                            | ○                      | ●                   | ●                        | ●                     |                        | ●                | ●                 | ●                        | ●                |
| LSX small coils (AA)                     |                |                  | ●                    | ●               | ●                          | ●                      |                     |                          | ●                     |                        |                  |                   | ●                        |                  |
| G/LO spirals                             |                |                  | ○                    | ●               |                            | ●                      | ●                   | ●                        | ●                     | ●                      |                  | ●                 | ●                        | ●                |

● recommended

○ possible

# Key features

- **High and stable operating voltage**
    - Above 3 V for LS/LST/LSX/LSH cells.
    - Above 2 V for LO/G/LM cells.
  - **Wide current capability range**

From a few microamperes base current for the LM buttons and small LS/LST cells to more than 10 A pulses for some LO, G, and LM cells.
  - **Wide operating temperature range**

From – 60°C up to +85°C depending on cell type, current drain and environment conditions.
  - **Long shelf life**

Capacity loss in storage at +20°C below 1% (LS, LST, LM), 2% (LSX) and 3% (LSH, G, LO) per year.
  - **Extended operating life**

Typically above 5 years, and up to 15 years for some applications.
  - **High energy densities**

3-10 times greater than the non-lithium systems.
  - **Disposal**

According to local regulations.
  - **Adequate safety**

Most of Saft's lithium cells are UL (Underwriters Laboratories) recognized, non-restricted for transport and EN 50020 approved. Most battery packs comply with European and US Army standards.
  - **Storage**

The storage area should be clean, cool (not exceeding +30°C), dry and ventilated.
- \* **Primary cells and batteries are not rechargeable.**

## Saft primary lithium chemistries: specific qualities

- **Li-SOC<sub>2</sub>** (LS, LST, LSX, LSH cell series)
    - Operating voltage > 3 V
    - Ability to operate from – 60 to +85°C
    - Non-flammable electrolyte
    - Cells non-pressurized at room temperature
    - Hermeticity guaranteed up to +110°C
    - Unrivaled nominal capacities (LS, LST)
  - **Li-SO<sub>2</sub>** (G, LO cell series)
    - Non-flammable electrolyte
    - Superior pulse capability
    - Excellent capacity above 1 A
    - Superior power at – 40°C
    - Hermeticity guaranteed up to +95°C
    - Wide military acceptance
  - **Li-MnO<sub>2</sub>** (LM cell series)
    - Non-corrosive electrolyte
    - Cells non-pressurized at room temperature
    - Spiral cells with good pulse capability
    - Minimal voltage delay
    - Competitive capacity at high current and low temperature (– 40°C)
- ▶ “C” cell versions are recommended for use in cool environments, typical of indoor applications. They yield higher voltage during pulsing at temperature not exceeding repeatedly +55°C.
- ▶ “SHX” cell versions offer superior pulse capability for discharges not exceeding the declared voltage cut-off.

## Saft lithium cell series: performance data

Data given on following pages relates to batteries aged up to 12 months and properly stored. Consult Saft regarding specific pulse conditions or usage following prolonged storage and/or exposure to extreme temperatures.

- Nominal capacity at +20°C and 2 V discharge cut-off (continuous current).
- Maximum recommended continuous current:
  - LS/LST/LSX bobbin and coiled cells : the current providing 50% of the nominal capacity at +20°C and 2 V cut-off.
  - LSH/G/LO/LM spirals : the above definition or the current that keeps the cells self-heating within safe limits, whichever is smaller.
- Maximum recommended pulse current : varies according to pulse characteristics (duration, frequency), temperature conditions, cell storage conditions prior to usage and the application's acceptable minimum voltage. The use of parallel capacitor to enhance the voltage at the beginning of pulses might be recommended. Consult Saft.
- Transport status: according to UN model Regulations Ref. ST/SG/AC.10/1 Revision 13 (2003) and Manual of Tests and Criteria Ref. ST/SG/AC.10/11 Revision 3, Amendment 1 “Lithium Batteries” – 2002.

# Primary lithium batteries

## Li-SOCl<sub>2</sub> range



## Li-SOCl<sub>2</sub> cells

| Production site | Size | Open circuit voltage | Nominal voltage | Nominal capacity* (drain) | Maximum recommended continuous current | Operating temperature range | Outside diameter max. | Height max. | Weight | UL recognition | Transport status |
|-----------------|------|----------------------|-----------------|---------------------------|--|-----------------------------|-----------------------|-------------|--------|----------------|------------------|
|-----------------|------|----------------------|-----------------|---------------------------|--|-----------------------------|-----------------------|-------------|--------|----------------|------------------|

### Small LS/LST/LSX cells

|                  |    |        |        |       |                 |        |             |          |         |        |         |                |
|------------------|----|--------|--------|-------|-----------------|--------|-------------|----------|---------|--------|---------|----------------|
| <b>LS 14250</b>  | F  | 1/2 AA | 3.67 V | 3.6 V | 1.1 Ah (1.5 mA) | 40 mA  | -60/+85°C** | 14.65 mm | 24.8 mm | 8.9 g  | yes     | Non-restricted |
| <b>LST 14250</b> | UK | 1/2 AA | 3.67 V | 3.6 V | 1.1 Ah (1.5 mA) | 40 mA  | -60/+85°C** | 14.4 mm  | 25.1 mm | 9.4 g  | yes     | Non-restricted |
| <b>LS 14250C</b> | F  | 1/2 AA | 3.67 V | 3.6 V | 1.2 Ah (1.5 mA) | 15 mA  | -60/+55°C** | 14.65 mm | 24.8 mm | 8.9 g  | yes     | Non-restricted |
| <b>LS 14500</b>  | F  | AA     | 3.67 V | 3.6 V | 2.25 Ah (2 mA)  | 100 mA | -60/+85°C** | 14.65 mm | 50.3 mm | 16.2 g | yes     | Non-restricted |
| <b>LST 14500</b> | UK | AA     | 3.67 V | 3.6 V | 2.25 Ah (2 mA)  | 100 mA | -60/+85°C** | 14.4 mm  | 49.8 mm | 17.4 g | yes     | Non-restricted |
| <b>LS 14500C</b> | F  | AA     | 3.67 V | 3.6 V | 2.7 Ah (2 mA)   | 25 mA  | -60/+55°C** | 14.65 mm | 50.3 mm | 16.2 g | yes     | Non-restricted |
| <b>LSX 14500</b> | F  | AA     | 3.67 V | 3.6 V | 1.9 Ah (2 mA)   | 200 mA | -60/+85°C** | 14.65 mm | 50.3 mm | 17.5 g | pending | Non-restricted |
| <b>LST 17330</b> | UK | 2/3 A  | 3.67 V | 3.6 V | 2.1 Ah (3 mA)   | 25 mA  | -60/+85°C** | 16.5 mm  | 33.4 mm | 14.4 g | yes     | Non-restricted |
| <b>LS 17500</b>  | F  | A      | 3.67 V | 3.6 V | 3.4 Ah (4 mA)   | 150 mA | -60/+85°C** | 17.0 mm  | 50.9 mm | 21.9 g | yes     | Non-restricted |

\* 2 V cut-off

\*\* Cells leakproof up to +120°C

### Large LS cells

|                  |   |   |        |       |                |        |             |         |                    |      |     |         |
|------------------|---|---|--------|-------|----------------|--------|-------------|---------|--------------------|------|-----|---------|
| <b>LS 26500</b>  | F | C | 3.67 V | 3.6 V | 7.7 Ah (4 mA)  | 150 mA | -60/+85°C** | 26.0 mm | 49.1 to 50.4 mm*** | 48 g | yes | Class 9 |
| <b>LS 33600</b>  | F | D | 3.67 V | 3.6 V | 17.0 Ah (5 mA) | 250 mA | -60/+85°C** | 33.4 mm | 60.2 to 61.6 mm*** | 90 g | yes | Class 9 |
| <b>LS 33600C</b> | F | D | 3.67 V | 3.6 V | 18.5 Ah (1 mA) | 80 mA  | -60/+55°C** | 33.4 mm | 60.2 to 61.6 mm*** | 90 g | yes | Class 9 |

\* 2 V cut-off

\*\* Cells leakproof up to +110°C

\*\*\* Depending on cell finish

### LSH spiral cells

|                       |   |       |        |       |                 |         |             |         |         |       |     |                |
|-----------------------|---|-------|--------|-------|-----------------|---------|-------------|---------|---------|-------|-----|----------------|
| <b>LSH 26180</b>      | F | 1/3 C | 3.67 V | 3.6 V | 1.2 Ah (10 mA)  | 400 mA  | -60/+85°C** | 26.2 mm | 18.6 mm | 24 g  | —   | Non-restricted |
| <b>LSH 14</b>         | F | C     | 3.67 V | 3.6 V | 5.5 Ah (15 mA)  | 1300 mA | -60/+85°C** | 26.0 mm | 50.4 mm | 51 g  | yes | Class 9        |
| <b>LSH 14 "light"</b> | F | C     | 3.67 V | 3.6 V | 3.6 Ah (15 mA)  | 1300 mA | -60/+85°C   | 26.0 mm | 50.4 mm | 51 g  | —   | Non-restricted |
| <b>LSH 20</b>         | F | D     | 3.67 V | 3.6 V | 13.0 Ah (15 mA) | 1800 mA | -60/+85°C** | 33.4 mm | 61.6 mm | 100 g | yes | Class 9        |

\* 2 V cut-off

\*\* Cells leakproof up to +110°C

All LSH cells are fitted with individual 5 Amp fuse protection

Primary cells and batteries are not rechargeable.

## Li-SOCl<sub>2</sub> Military battery packs

|                | Cell type construction* | Open circuit voltage | Nominal voltage | Voltage cut-off | Rated capacity | Maximum dimensions     | Weight | Safety features | NATO stock number | Typical applications               |
|----------------|-------------------------|----------------------|-----------------|-----------------|----------------|------------------------|--------|-----------------|-------------------|------------------------------------|
| <b>PS 31 A</b> | 1s1p<br>LSH 26180       | 3.67 V               | 3.5 V           | 2 V             | 1.2 Ah         | 26.2 x 18.9 mm         | 25 g   | 5 A fuse        | 6135-14-376-4875  | Night vision                       |
| <b>PS 38 A</b> | 5s1p<br>LSH 26180       | 18 V                 | 17.5 V          | 10 V            | 1.2 Ah         | 110.7 x 37 mm          | 155 g  | 5 A fuse        | 6135-14-389-9050  | Laser telemetry                    |
| <b>PS 40 A</b> | 4s1p<br>LSH 14          | 14.7 V               | 14 V            | 10 V            | 4.6 Ah         | 108 x 65 x 49 mm       | 285 g  | PTC 1.1 A**     | 6135-14-420-1760  | Radiocommunication (TRPP 11/13)    |
| <b>PS 42 A</b> | 2s1p<br>LSH 20          | 7.3 V                | 7 V             | 5 V             | 9.0 Ah         | 69.9 x 67.2 x 34 mm    | 230 g  | PTC 3.5 A**     | 6135-14-434-0766  | Radiocommunication (TRPP 39)       |
| <b>PS 48 B</b> | 5s2p<br>LSH 20          | 18.3 V               | 17.5 V          | 12.6 V          | 18.0 Ah        | 212.4 x 72.7 x 68.5 mm | 1150 g | PTC 1.85 A**    | 6135-14-451-7198  | Radiocommunication (TRC 350)       |
| <b>PS 52 A</b> | 2s1p<br>LSH 20          | 7.3 V                | 7.2 V           | 5 V             | 12.5 Ah        | 77.5 x 63.5 x 34.6 mm  | 225 g  | PTC 2.0 A**     | 6135-14-459-9265  | Radiocommunication (Portable PR4G) |
| <b>PS 53 B</b> | 6s1p<br>LSH 20          | 22 V                 | 21 V            | 15 V            | 12.5 Ah        | 210.5 x 68.5 x 37.5 mm | 720 g  | PTC 2.5 A**     | 6135-14-459-9266  | Radiocommunication (Portable PR4G) |

\* Xs Yp = Y parallel branches of X cells in series per branch

\*\* Maximum hold current

Primary cells and batteries are not rechargeable.

This data sheet is an insert part of the **Primary lithium batteries Selector guide (ref 31048-2-0604)**, where complementary information and data on features, safety and storage can be found.

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Single cells mentioned in this document may have their own specific data sheet with complementary data. Please check website.

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Société anonyme au capital de 31 944 000 € RCS Bobigny B 383 703 873

Produced by Arthur Associates Limited.



# Primary lithium batteries

## Li-SO<sub>2</sub> range



## Li-SO<sub>2</sub> cells

| Production site | Size | Open circuit voltage | Nominal voltage | Nominal capacity (drain) | Maximum recommended continuous current | Operating temperature range | Outside diameter max. | Height max. | Weight | UL recognition | Transport status |
|-----------------|------|----------------------|-----------------|--------------------------|--|-----------------------------|-----------------------|-------------|--------|----------------|------------------|
|-----------------|------|----------------------|-----------------|--------------------------|--|-----------------------------|-----------------------|-------------|--------|----------------|------------------|

### G/LO spiral cells

|                  |     |               |     |       |                     |         |            |         |          |       |     |                |
|------------------|-----|---------------|-----|-------|---------------------|---------|------------|---------|----------|-------|-----|----------------|
| <b>G 04/3</b>    | UK  | 1/2 AA        | 3 V | 2.9 V | 450 mAh (50 mA)     | 250 mA  | -60/+70°C* | 14.2 mm | 27.9 mm  | 8 g   | -   | Non-restricted |
| <b>G 06/2</b>    | UK  | AA            | 3 V | 2.9 V | 950 mAh (100 mA)    | 1000 mA | -60/+70°C* | 14.2 mm | 50.3 mm  | 15 g  | -   | Non-restricted |
| <b>G 32/3</b>    | UK  | 2/3 A         | 3 V | 2.9 V | 800 mAh (80 mA)     | 750 mA  | -60/+70°C* | 16.3 mm | 34.5 mm  | 12 g  | -   | Non-restricted |
| <b>G 36/2</b>    | UK  | "long" A      | 3 V | 2.9 V | 1700 mAh (100 mA)   | 1500 mA | -60/+70°C* | 16.3 mm | 57.7 mm  | 18 g  | -   | Non-restricted |
| <b>LO 34 SX</b>  | USA | 1/3 C         | 3 V | 2.9 V | 860 mAh (80 mA)     | 1000 mA | -60/+70°C* | 25.9 mm | 20.3 mm  | 18 g  | yes | Non-restricted |
| <b>LO 35 SX</b>  | USA | 2/3 C         | 3 V | 2.9 V | 2000 mAh (120 mA)   | 2000 mA | -60/+70°C* | 25.9 mm | 35.9 mm  | 30 g  | yes | Class 9        |
| <b>G 52/3</b>    | UK  | C             | 3 V | 2.9 V | 3200 mAh (1000 mA)  | 2500 mA | -60/+70°C* | 25.6 mm | 49.5 mm  | 47 g  | -   | Class 9        |
| <b>LO 29 SHX</b> | USA | C             | 3 V | 2.9 V | 3750 mAh (270 mA)   | 2500 mA | -60/+70°C* | 25.9 mm | 50.4 mm  | 40 g  | yes | Class 9        |
| <b>G 54/3</b>    | UK  | 5/4 C         | 3 V | 2.9 V | 5000 mAh (200 mA)   | 2500 mA | -60/+70°C* | 25.6 mm | 60.2 mm  | 58 g  | -   | Class 9        |
| <b>LO 43 SHX</b> | USA | 5/4 C         | 3 V | 2.9 V | 5000 mAh (200 mA)   | 2500 mA | -60/+70°C* | 25.9 mm | 59.3 mm  | 53 g  | yes | Class 9        |
| <b>LO 40 SHX</b> | USA | 2/3"Thin"D    | 3 V | 2.9 V | 3500 mAh (120 mA)   | 2000 mA | -60/+70°C* | 29.1 mm | 41.6 mm  | 40 g  | yes | Class 9        |
| <b>LO 30 SHX</b> | USA | "Thin"D       | 3 V | 2.9 V | 5750 mAh (200 mA)   | 3000 mA | -60/+70°C* | 29.1 mm | 59.9 mm  | 63 g  | yes | Class 9        |
| <b>G 20/2</b>    | UK  | D             | 3 V | 2.9 V | 7750 mAh (250 mA)   | 3000 mA | -60/+70°C* | 33.3 mm | 61.0 mm  | 88 g  | -   | Class 9        |
| <b>LO 26 SX</b>  | USA | D             | 3 V | 2.9 V | 7750 mAh (250 mA)   | 3000 mA | -60/+70°C* | 34.2 mm | 59.3 mm  | 85 g  | yes | Class 9        |
| <b>LO 26 SXC</b> | USA | D             | 3 V | 2.8 V | 9200 mAh (250 mA)   | 2500 mA | -60/+70°C* | 34.2 mm | 59.3 mm  | 85 g  | -   | Class 9        |
| <b>LO 26 SHX</b> | USA | D             | 3 V | 2.9 V | 7500 mAh (1000 mA)  | 4000 mA | -60/+70°C* | 34.2 mm | 59.3 mm  | 85 g  | yes | Class 9        |
| <b>LO 25 SX</b>  | USA | "Fat"D        | 3 V | 2.9 V | 8000 mAh (270 mA)   | 2500 mA | -60/+70°C* | 39.5 mm | 50.3 mm  | 96 g  | yes | Class 9        |
| <b>LO 39 SHX</b> | USA | F             | 3 V | 2.9 V | 11000 mAh (300 mA)  | 3000 mA | -60/+70°C* | 30.7 mm | 99.4 mm  | 125 g | yes | Class 9        |
| <b>G 22/6</b>    | UK  | DD            | 3 V | 2.9 V | 16500 mAh (500 mA)  | 3000 mA | -60/+70°C* | 33.3 mm | 120.6 mm | 175 g | -   | Class 9        |
| <b>G 62/1</b>    | UK  | "Long Fat DD" | 3 V | 2.9 V | 34000 mAh (1000 mA) | 3000 mA | -60/+70°C* | 41.7 mm | 141.0 mm | 300 g | -   | Class 9        |

\* Cells leakproof up to +95°C

Primary cells and batteries are not rechargeable.

## Li-SO<sub>2</sub> Military battery packs

| Cell type construction*                                | Open circuit voltage | Nominal voltage | Voltage cut-off | Rated capacity    | Maximum dimensions      | Weight  | NATO stock number | Typical applications                |
|--|----------------------|-----------------|-----------------|-------------------|-------------------------|---------|-------------------|-------------------------------------|
| BA 5112/U<br>4s1p<br>LO 35 SX                          | 11.8 V               | 11.2 V          | 8 V             | 2.0 Ah            | 77.8 x 57.2 x 39.1 mm   | 180 g   | 6135-01-235-4168  | Radiocommunication (PRC 112)        |
| BA 5557/U<br>5s2p<br>LO 35 SX                          | 14.7 V/<br>29.5 V    | 14 V/<br>28 V   | 10 V/<br>20 V   | 4 Ah/2 Ah         | 100.1 x 106.3 x 37.3 mm | 500 g   | 6135-01-088-2707  | Radiocommunication                  |
| BA 5567/U<br>1s1p<br>LO 34 SX                          | 2.95 V               | 2.9 V           | 2 V             | 0.86 Ah           | 25.9 x 19.9 mm          | 16 g    | 6135-01-090-5363  | Night vision                        |
| BA 5588/U<br>5s1p<br>LO 40 SX                          | 14.7 V               | 14 V            | 10 V            | 3.5 Ah            | 96 x 90 x 31 mm         | 295 g   | 6135-00-088-2708  | Radiocommunication (PRC 128)        |
| BA 5590/U<br>(2 sets of terminals)<br>5s2p<br>LO 26 SX | 14.7 V<br>29.5 V     | 14 V<br>28 V    | 10 V<br>20 V    | 7.5 Ah<br>15.0 Ah | 127 x 111.8 x 62 mm     | 1020 g  | 6135-01-036-3495  | Radiocommunication (PRC 104/119)    |
| BA 5598/U<br>5s1p<br>LO 25 SX                          | 14.7 V               | 14 V            | 14 V            | 8.0 Ah            | 120.7 x 92 x 54 mm      | 680 g   | 6135-01-034-2239  | Radiocommunication (PRC 25/74/77)   |
| BA 5599/U<br>3s1p<br>LO 26 SX                          | 8.8 V                | 8.4 V           | 6 V             | 7.5 Ah            | 152 x 38 x 64 mm        | 450 g   | 6135-01-034-2239  | Radio tester                        |
| BA 5600/U<br>3s1p<br>LO 26 SX                          | 8.8 V                | 8.4 V           | 4 V             | 7.5 Ah            | 185.9 x 39.4 mm         | 360 g   | 6135-01-168-2944  | Communication terminal AN/PSC 2/cap |
| BA 5790/U<br>5s1p<br>LO 26 SX                          | 14.7 V               | 14 V            | 10 V            | 7.5 Ah            | 186.5 x 35.7 x 66.7 mm  | 630 g   | N/A               | Radiocommunication                  |
| BA 5791/U<br>5s2p<br>LO 26 SX                          | 14.7 V               | 14 V            | 10 V            | 15 Ah             | 186.5 x 70.0 x 65.3 mm  | 1.2 kg  | N/A               | Radiocommunication                  |
| BA 5800/U<br>2s1p<br>LO 26 SX                          | 5.9 V                | 5.6 V           | 4 V             | 7.5 Ah            | 128.5 x 35.5 mm         | 220 g   | 6135-99-798-9851  | Compact Air Supply Unit (CASU), GPS |
| BA 5847/U<br>2s1p<br>LO 26 SX                          | 5.9 V                | 5.4 V           | 4 V             | 7.5 Ah            | 95 x 64.8 x 38 mm       | 240 g   | 6135-01-090-5364  | Radiocommunication Mine detector    |
| BT 5313/U<br>9s1p<br>LO 26 SX                          | 26.5 V               | 25.2 V          | 18 V            | 7.2 Ah            | Special                 | 1.1 kg  | N/A               | Missile launcher                    |
| Li/3<br>3s1p<br>LO 26 SX                               | 8.8 V                | 8.4 V           | 6 V             | 7.5 Ah            | 110 x 42 x 26.2 mm      | 450 g   | 6135-14-383-9768  | Missile launcher                    |
| G6-104<br>(/C,D,E,F,G,H)<br>2s1p<br>G20                | 5.9 V                | 5.6 V           | 4 V             | 7.5 Ah            | 128.5 x 35.5 mm         | 200 g   | -                 | CAM                                 |
| G6-105<br>2s1p<br>G52                                  | 5.9 V                | 5.6 V           | 4 V             | 3.2 Ah            | 55 x 28.1 x 56 mm       | 110 g   | 6135-99-658-9085  | Aircraft probe                      |
| G9-124<br>3s1p<br>G20                                  | 8.8 V                | 8.4 V           | 6 V             | 7.5 Ah            | 110 x 42 x 83 mm        | 370 g   | 6135-14-383-9768  | Missile                             |
| G15-114<br>5s2p<br>G06                                 | 14.7 V               | 14 V            | 9.6 V           | 1.9 Ah            | 90.6 x 40.3 x 71 mm     | 270 g   | 6135-99-795-4351  | Radiocommunication                  |
| G15-127<br>2 x 5s1p<br>G62                             | 2x14.7 V             | 2x14 V          | 2x10 V          | 34 or 68 Ah       | 216 x 152 x 92 mm       | 3.5 kg  | 6135-99-794-2896  | -                                   |
| G18-115<br>6s1p<br>G20                                 | 17.5 V               | 16.8 V          | 12 V            | 7.5 Ah            | 131.6 x 66.8 x 128 mm   | 0.85 kg | 6135-99-795-4350  | Radiocommunication                  |
| G30-101<br>10s1p<br>G20                                | 29.3 V               | 28 V            | 20 V            | 7.5 Ah            | 184.5 x 73.5 x 80 mm    | 1.5 kg  | 6135-99-747-4430  | Radiocommunication                  |
| G30-102/B<br>10s1p<br>G22                              | 29.3 V               | 28 V            | 20 V            | 16 Ah             | 184 x 72.5 x 133 mm     | 2.5 kg  | 6135-99-840-0109  | Radiocommunication                  |
| XSG 1493/1<br>5s1p<br>G32                              | 14.7 V               | 14 V            | 10 V            | 0.85 Ah           | 78.5 x 37.2 x 40 mm     | 170 g   | -                 | Personal locator beacon             |

\* Xs Yp = Y parallel branches of X cells in series per branch

**Primary cells and batteries are not rechargeable.**

**This data sheet is an insert part of the Primary lithium batteries Selector guide (ref 31048-2-0604), where complementary information and data on features, safety and storage can be found.**

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# Primary lithium batteries

## Li-MnO<sub>2</sub> range



### Li-MnO<sub>2</sub> cells

| Production site | Size | Open circuit voltage | Nominal voltage | Nominal capacity (drain) | Maximum recommended continuous current | Operating temperature range | Outside diameter max. | Height max. | Weight | UL recognition | Transport status |
|-----------------|------|----------------------|-----------------|--------------------------|--|-----------------------------|-----------------------|-------------|--------|----------------|------------------|
|-----------------|------|----------------------|-----------------|--------------------------|--|-----------------------------|-----------------------|-------------|--------|----------------|------------------|

#### LM button cells

|                |   |          |       |     |                  |      |            |         |        |       |     |                |
|----------------|---|----------|-------|-----|------------------|------|------------|---------|--------|-------|-----|----------------|
| <b>LM 2032</b> | F | 20x3.2mm | 3.3 V | 3 V | 200 mAh (0.2 mA) | 3 mA | -20/+60°C  | 20.0 mm | 3.2 mm | 2.9 g | yes | Non-restricted |
| <b>LM 2430</b> | F | 24.5x3mm | 3.3 V | 3 V | 285 mAh (0.2 mA) | 3 mA | -20/+60°C* | 24.5 mm | 3.0 mm | 4.0 g | yes | Non-restricted |
| <b>LM 2450</b> | F | 24.5x5mm | 3.3 V | 3 V | 540 mAh (0.2 mA) | 3 mA | -20/+60°C  | 24.5 mm | 5.0 mm | 6.0 g | yes | Non-restricted |

\* Operating temperature range extended to -20/+70°C for the resin-encapsulated Memoguard 40 LH or LF 220 versions

#### LM spiral cells

|                 |     |           |       |     |                           |         |            |         |         |        |   |                |
|-----------------|-----|-----------|-------|-----|---------------------------|---------|------------|---------|---------|--------|---|----------------|
| <b>LM 17130</b> | USA | 1/3 A     | 3.3 V | 3 V | 500 mAh (4.5 mA to 2.0 V) | 300 mA  | -40/+70°C* | 16.7 mm | 16.6 mm | 8.0 g  | - | Non-restricted |
| <b>LM 22150</b> | USA | 1/3 sub-C | 3.3 V | 3 V | 900 mAh (40 mA to 2.0 V)  | 500 mA  | -40/+70°C* | 22.8 mm | 17.3 mm | 15.0 g | - | Non-restricted |
| <b>LM 26500</b> | UK  | C         | 3.3 V | 3 V | 4500 mAh (500 mA)         | 1000 mA | -40/+70°C* | 25.6 mm | 51.0 mm | 60 g   | - | Class 9        |
| <b>LM 26600</b> | UK  | 5/4 C     | 3.3 V | 3 V | 5500 mAh (500 mA)         | 1200 mA | -40/+70°C* | 25.6 mm | 61.5 mm | 72 g   | - | Class 9        |
| <b>LM 33570</b> | UK  | "short" D | 3.3 V | 3 V | 9000 mAh (1000 mA)        | 3000 mA | -40/+70°C* | 34.0 mm | 57 mm   | 107 g  | - | Class 9        |
| <b>LM 33600</b> | UK  | D         | 3.3 V | 3 V | 10500 mAh (1000 mA)       | 3000 mA | -40/+70°C* | 34.0 mm | 61.3 mm | 116 g  | - | Class 9        |

\* Cells leakproof up to +80°C

### Li-MnO<sub>2</sub> Military battery packs

| Cell type construction* | Open circuit voltage | Nominal voltage | Voltage cut-off | Nominal capacity | Maximum dimensions | Weight | NATO stock number | Typical applications |
|-------------------------|----------------------|-----------------|-----------------|------------------|--------------------|--------|-------------------|----------------------|
|-------------------------|----------------------|-----------------|-----------------|------------------|--------------------|--------|-------------------|----------------------|

|                  |                  |        |      |     |         |                |       |                  |  |
|------------------|------------------|--------|------|-----|---------|----------------|-------|------------------|--|
| <b>BA 5368/U</b> | 4s1p<br>LM 22150 | 13.2 V | 12 V | 9 V | 900 mAh | 76.2 x 26.9 mm | 145 g | 6135-01-455-7947 | Radiocommunication<br>(PRC-90-103-106-195) |
| <b>BA 5372/U</b> | 2s1p<br>LM 17130 | 6.6 V  | 6 V  | 4 V | 500 mAh | 16.5 x 33.0 mm | 20 g  | 6135-01-214-6441 | Radiocommunication<br>(SINGARS)            |

\* Xs Yp = Y parallel branches of X cells in series per branch

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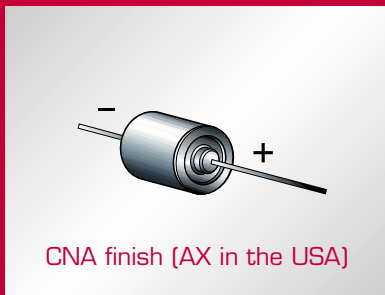
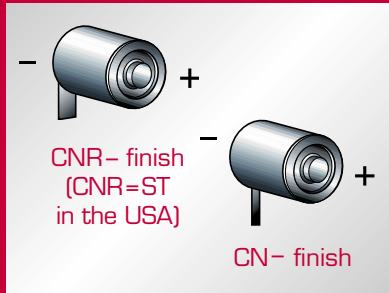
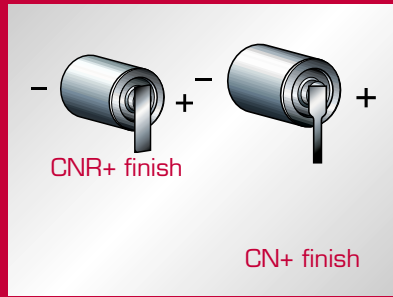
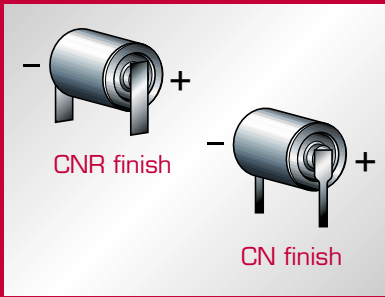
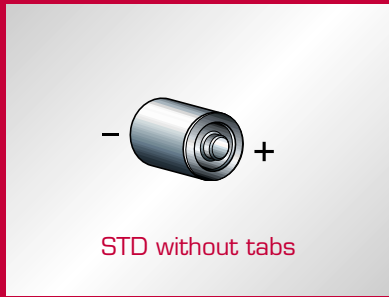
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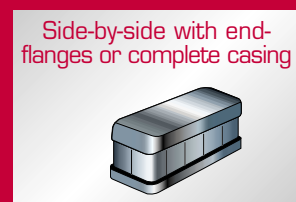
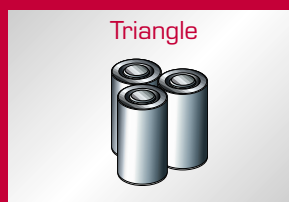
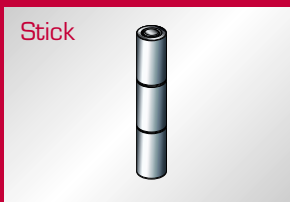
# Examples of standard individual cell tabbing arrangements



Other cell finishes are available upon request

Check availability and dimensions of tabbing arrangement for considered cell

# Examples of standard battery packs configurations



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