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Primary lithium batteries

Li-SOCl₂ range



Li-SOCl₂ cells

Production site	Size	Open circuit voltage	Nominal voltage	Nominal capacity (drain) (2.0 V cut-off)	Maximum recommended continuous current	Operating temperature range	Outside diameter max.	Height max.	Typical weight	UL recognition	Transport status
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Small LS/LST/LSX cells

LS 14250	F	1/2 AA	3.67 V	3.6 V	1.2 Ah (1 mA)	35 mA	-60/+ 85°C*	14.65 mm	24.8 mm	8.9 g	yes	Non-restricted
LST 14250	UK	1/2 AA	3.67 V	3.6 V	1.2 Ah (1 mA)	35 mA	-60/+ 85°C*	14.20 mm	25.15 mm	8.8 g	yes	Non-restricted
LS 14250C	F	1/2 AA	3.67 V	3.6 V	1.2 Ah (1 mA)	15 mA	-60/+ 70°C*	14.65 mm	24.8 mm	8.9 g	yes	Non-restricted
LS 14250W	F	1/2 AA	3.67 V	3.6 V	1.2 Ah (1 mA)	35 mA	-60/+ 95°C*	14.65 mm	24.8 mm	8.9 g	—	Non-restricted
LS 14500	F	AA	3.67 V	3.6 V	2.6 Ah (2 mA)	70 mA	-60/+ 85°C*	14.65 mm	50.3 mm	16.7 g	yes	Non-restricted
LST 14500	UK	AA	3.67 V	3.6 V	2.45 Ah (2 mA)	70 mA	-60/+ 85°C*	14.20 mm	49.85 mm	16.3 g	yes	Non-restricted
LS 14500C	F	AA	3.67 V	3.6 V	2.7 Ah (2 mA)	25 mA	-60/+ 70°C*	14.65 mm	50.3 mm	16.2 g	yes	Non-restricted
LS 14500W	F	AA	3.67 V	3.6 V	2.6 Ah (1 mA)	60 mA	-60/+ 95°C*	14.65 mm	50.3 mm	16.2 g	yes	Non-restricted
LSX 14500	F	AA	3.67 V	3.6 V	2.1 Ah (1 mA)	150 mA	-60/+ 85°C*	14.65 mm	50.3 mm	17.5 g	yes	Non-restricted
LST 17330	UK	2/3 A	3.67 V	3.6 V	2.1 Ah (3 mA)	25 mA	-60/+ 85°C*	16.50 mm	33.4 mm	14.4 g	yes	Non-restricted
LS 17500	F	A	3.67 V	3.6 V	3.6 Ah (3 mA)	130 mA	-60/+ 85°C*	17.00 mm	50.9 mm	21.9 g	yes	Non-restricted

*Cells leakproof up to +130°C

Large LS cells

LS 26500	F	C	3.67 V	3.6 V	7.7 Ah (4 mA)	150 mA	-60/+ 85°C*	26.00 mm	49.1 to 50.4 mm***	48 g	yes	Class 9
LS 33600**	F	D	3.67 V	3.6 V	17.0 Ah (5 mA)	250 mA	-60/+ 85°C*	33.40 mm	60.2 to 61.6 mm***	90 g	yes	Class 9
LS 33600C**	F	D	3.67 V	3.6 V	18.5 Ah (1 mA)	80 mA	-60/+ 70°C*	33.40 mm	60.2 to 61.6 mm***	90 g	yes	Class 9

*Cells leakproof up to +120°C

**Low Magnetic cell versions available

*** Depending on cell finish

LSH spiral cells

LSH 26180	F	1/3 C	3.67 V	3.6 V	1.2 Ah (10 mA)	0.4 A	-60/+ 85°C*	26.20 mm	18.6 mm	24 g	—	Non-restricted
LSH 14	F	C	3.67 V	3.6 V	5.8 Ah (15 mA)	1.3 A	-60/+ 85°C*	26.00 mm	50.4 mm	51 g	yes	Class 9
LSH 14 "light"	F	C	3.67 V	3.6 V	3.6 Ah (15 mA)	1.3 A	-60/+ 85°C*	26.00 mm	50.4 mm	51 g	—	Non-restricted
LSH 20**	F	D	3.67 V	3.6 V	13.0 Ah (15 mA)	1.8 A	-60/+ 85°C*	33.40 mm	61.6 mm	100 g	yes	Class 9
LSH 20-150	F	D	3.67 V	3.6 V	14.0 Ah (100 mA)	300 mA	-20/+ 150°C	32.05 mm	61.7 mm	100 g	—	Class 9

* Cells leakproof up to +120°C

**High Temperature (120°C max) LSH 20 HTS cell version available

All LSH cells are fitted with individual 5 Amp fuse protection

Primary cells and batteries are not rechargeable.

Their internal impedance may rise versus time, especially in case of exposure at elevated temperature.



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Li-SOCl₂ Military battery packs

	Cell type construction *	Open circuit voltage	Nominal voltage	Voltage cut-off	Rated capacity	Maximum dimensions	Typical weight	Safety features	NATO Stock Number (NSN)	Typical applications
PS 31 A	1s1p LSH 26180	3.67 V	3.6 V	2.0 V	1.2 Ah	26.2 x 18.9 mm	25 g	5 A fuse	6135-14-376-4875	Night vision
PS 38 A	5s1p LSH 26180	18.3 V	17.5 V	10.0 V	1.2 Ah	110.7 x 37 mm	155 g	5 A fuse	6135-14-389-9050	Laser telemetry
PS 40 A	4s1p LSH 14	14.7 V	14.0 V	10.0 V	4.6 Ah	108 x 65 x 49 mm	285 g	PTC 1.1 A**	6135-14-420-1760	Radiocommunication (TRPP 11/13)
PS 42 A	2s1p LSH 20	7.3 V	7.0 V	5.0 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)
PS 48 B	5s2p 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)
PS 52 A	2s1p LSH 20	7.3 V	7.2 V	5.0 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)
PS 53 B	6s1p LSH 20	22.0 V	21.0 V	15.0 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

Li-SOCl₂ Civil battery packs

	Cell type construction *	Open circuit voltage	Nominal voltage	Rated capacity	Maximum dimensions	Typical weight	Typical applications
LS 14250 MLB	1s1p LS 14250	3.67 V	3.6 V	1.2 Ah	16.8 x 28.6 mm	15 g	Metering, professional electronics
LS 9V	3s1p LS 14250	11.0 V	9.0 V	1.2 Ah	49.1 x 46.8 x 26.8 mm	29 g	Memory back-up, metering, smoke detectors, professional electronics
Lithopack	2s1p LS 14500	7.3 V	7.2 V	2.6 Ah	56.6 x 31.6 x 17.3 mm	34 g	Memory back-up, metering, professional electronics

Primary cells and batteries are not rechargeable.

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

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Doc N° 31049-2-0508

Edition: May 2008

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Société anonyme au capital de 31 944 000 €

RCS Bobigny B 383 703 873

Produced by Arthur Associates Limited.



SAFT

Primary lithium battery

LSH 20

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

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		13.0 Ah
<i>(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)</i>		
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		1800 mA
<i>(to maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may request specific thermal protection. Consult Saft)</i>		

Storage	<i>(recommended)</i> <i>(for more severe conditions, consult Saft)</i>	+30°C (+86°F) max
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Operating temperature range		-60°C/+85°C (-76°F/+185°F)
<i>(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)</i>		

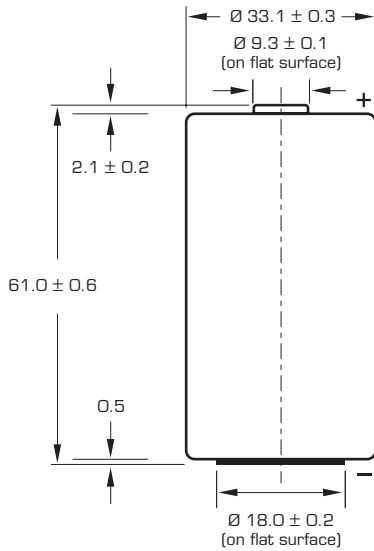
Physical characteristics

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

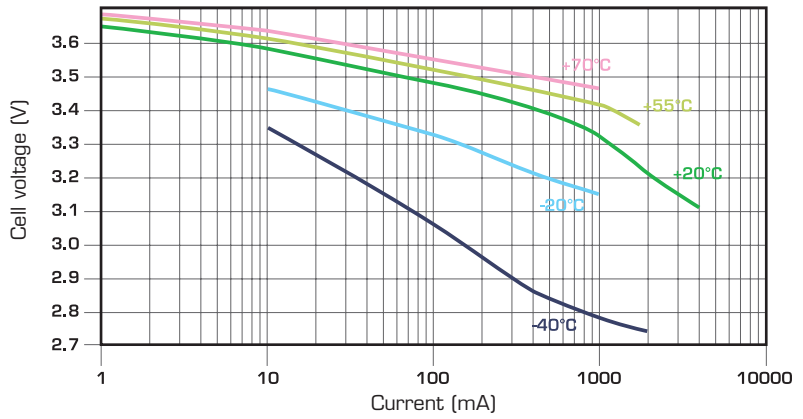
Available termination suffix		
CN, CNR		radial tabs
CNA (AX)		axial leads
FL		flying leads ...etc.



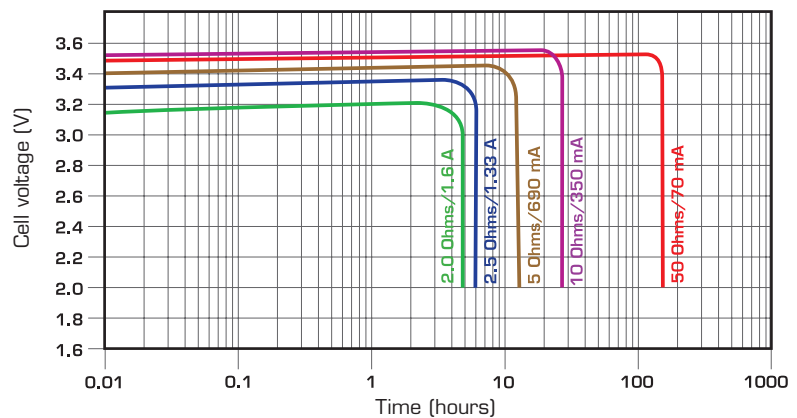
LSH 20



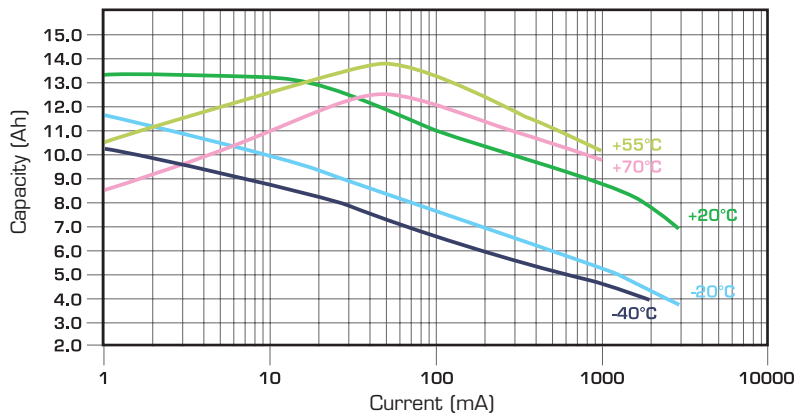
Dimensions in mm.



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)

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 (210°F), incinerate, or expose contents to water.
- Do not solder directly to the cell (use tabbed cell versions instead).

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www.saftbatteries.com

Doc. N° 31015-2-1006

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For more details on primary lithium technologies please refer to Primary Lithium Batteries Selector Guide Doc N° 31048-2.

Published by the Communications Department.

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RCS Bobigny B 383 703 873

Produced by Arthur Associates



SAFT

Primary lithium battery

LSH 14

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

High power

C-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 in compact system
- 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
- Micropipettes

NATO stock number
6135 12 306 4125

Cell size references

UM2 - R14 - C

Electrical characteristics

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

Nominal capacity 5.5 Ah
(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)

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

Nominal voltage (at 1mA +20°C) 3.6 V

Pulse capability: Typically up to 2000 mA
(2000 mA/D. 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 1300 mA
(to maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may request specific thermal protection. Consult Saft)

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

Operating temperature range -60°C/+85°C
(Operation at extreme T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)
(-76°F/+185°F)

Physical characteristics

Diameter (max) 26.0 mm (1.02 in)

Height (max) 50.4 mm (1.98 in)

Typical weight 51 g (1.8 oz)

Li metal content approx. 1.7 g

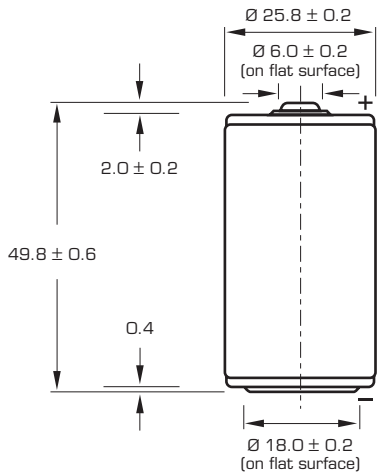
Available termination suffix

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

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



LSH 14



Dimensions in mm.

Storage

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

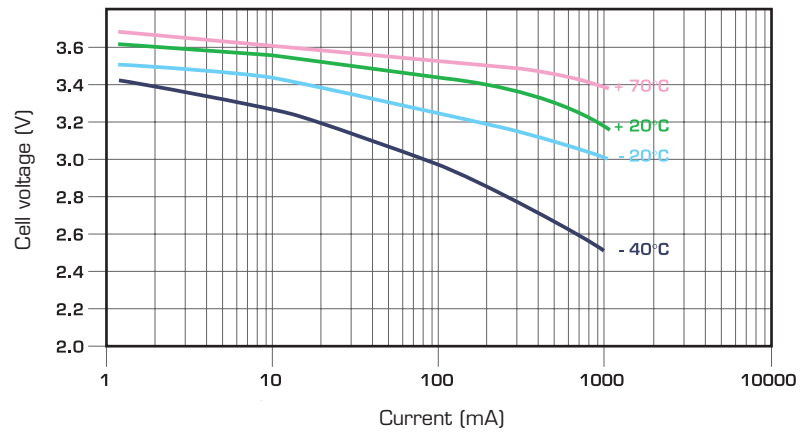
Warning

- 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).

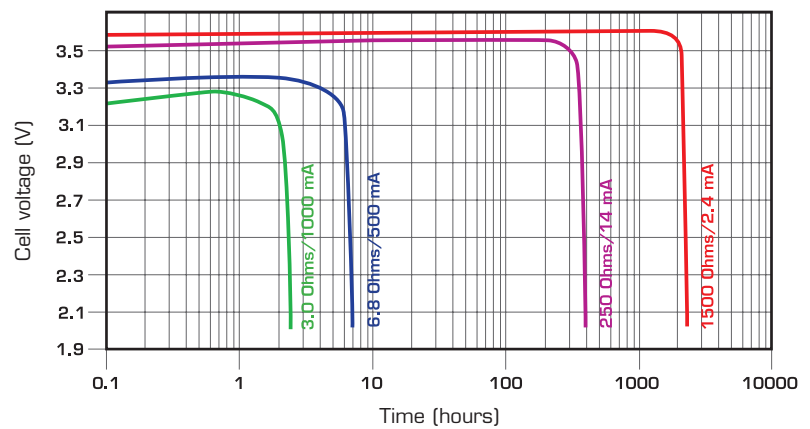
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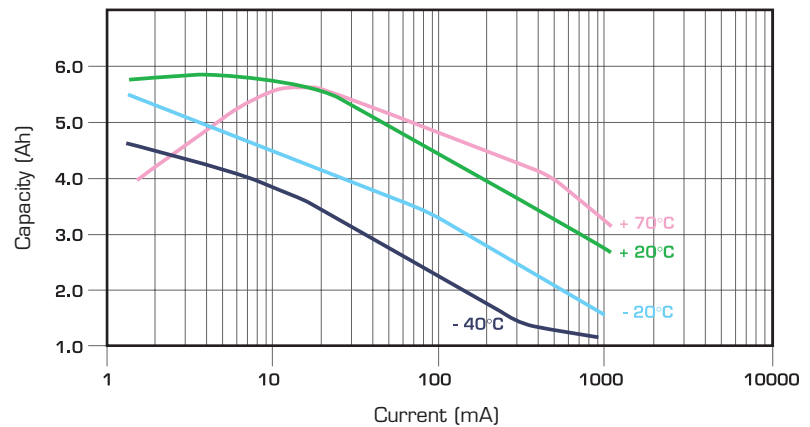
www.saftbatteries.com



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



Typical discharge profiles at +20°C



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

Doc. N° 31013-2-1006

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RCS Bobigny B 383 703 873

Produced by Arthur Associates



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Primary lithium battery

LS 33600

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

High energy

D-size bobbin cell



Benefits

- High voltage response, stable during most of the lifetime of the application
- Wide operating temperature range (-60°C/85°C)
- Easy integration in compact system
- 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 or without flat positive end
- Non-flammable electrolyte
- Compliant with IEC 86-4 safety standard and EN 50020 intrinsic safety standard
- Underwriters Laboratories (UL) Component Recognition (File Number MH 12609)
- Restricted for transport (Class 9)

Main applications

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

Optional upon request

- Low magnetic version

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 17.0 Ah

(at 5 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 0.7 mA +20°C) 3.6 V

Pulse capability: Typically up to 400 mA

(400 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)

Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0 V cut off. 250 mA

(to maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may request specific thermal protection. Consult Saft)

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

Operating temperature range -60°C/+85°C
(-76°F/+185°F)
(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)

Physical characteristics

Diameter (max) 33.4 mm (1.32 in)

Height (max) 60.2 or 61.6 mm
(2.37 in or 2.42 in)
depending on finish type

Typical weight 90 g (3.2 oz)

Li metal content approx. 4.5 g

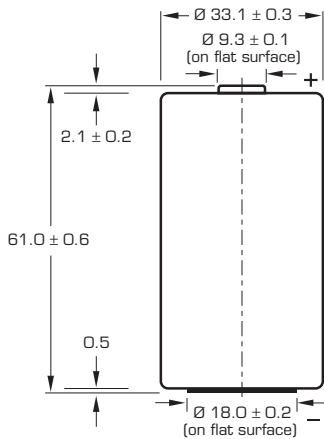
Available termination suffix

CN, CNR
CNA (AX)
FL

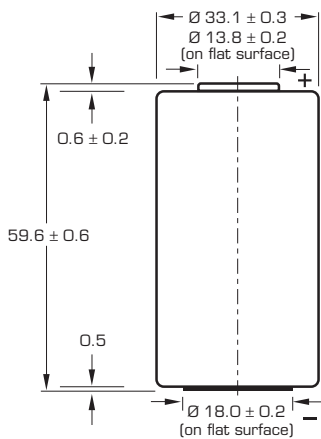
radial tabs
axial leads
flying leads... etc.



LS 33600



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

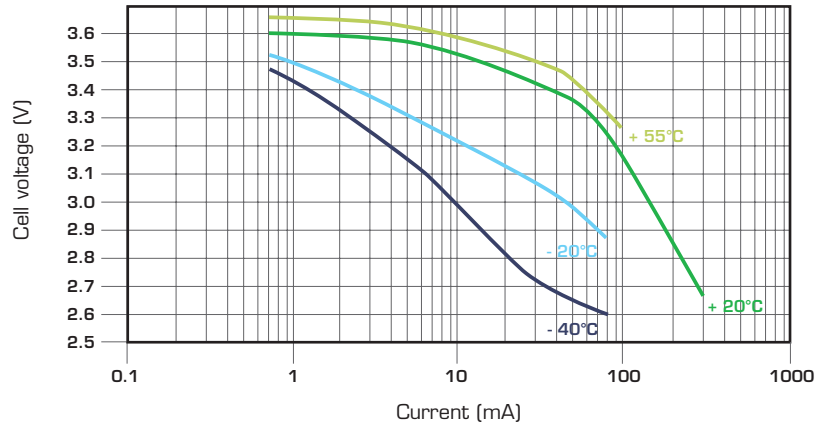
- Fire, explosion and burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above 100°C (212°F), incinerate, or expose contents to water.
- Do not solder directly to the cell (use tabbed cell versions instead).

Saft

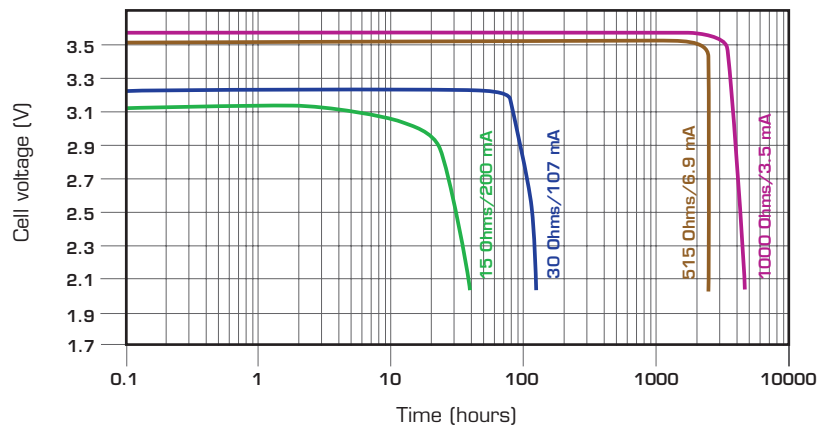
Specialty Battery Group

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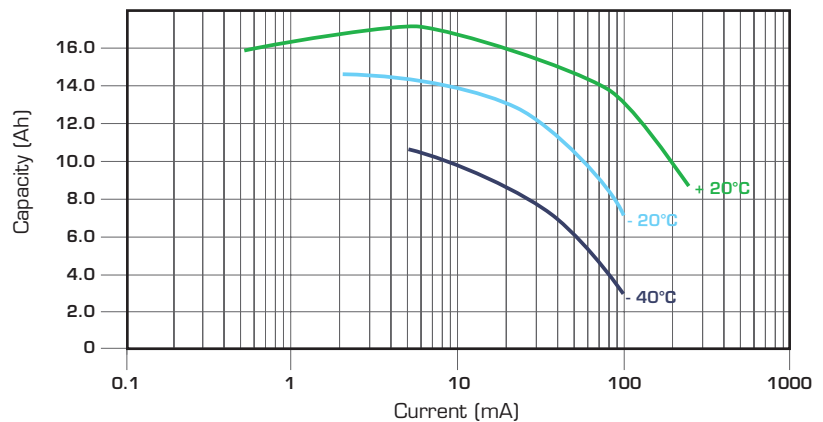
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Voltage plateau versus Current and Temperature (at mid-discharge)



Typical discharge profiles at +20°C



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

Doc. N° 31007-2-1106

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Produced by Arthur Associates



SAFT

Primary lithium batteries

LS 26500

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

High energy

C-size bobbin cell

For applications requesting good voltage response and operating life in -60°C/+85°C environments.



Key features

- High and stable operating voltage
- Low self-discharge rate
(less than 1% after 1 year of storage at +20°C)
- Stainless steel container
- Hermetic glass-to-metal sealing
- Built-in safety vent
- Finish with or without flat positive end
- Non-flammable electrolyte
- Compliant with IEC 86-4 safety standard and EN 50020 intrinsic safety standard
- Underwriters Laboratories (UL) Component Recognition (File Number MH 12609)
- Restricted for transport (Class 9)

Main applications

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

etc...

Optional upon request

- Low magnetic version

Cell size references

UM2 - R14 - C

Electrical characteristics

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

Nominal capacity (at 4 mA +20°C 2.0V cut off. The capacity restored by the cell varies according to current drain, temperature and cut off).	7.7 Ah
Open circuit voltage (at +20°C)	3.67V
Nominal voltage (at 0.5 mA +20°C)	3.6V

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 3.0V. 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)

Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0V cut off. (Higher currents possible, consult Saft)	150 mA
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Storage (recommended) (for more severe conditions, consult Saft)	+30°C (+86°F) max
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Operating temperature range (Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)	-60°C/+85°C (-76°F/+185°F)
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Physical characteristics

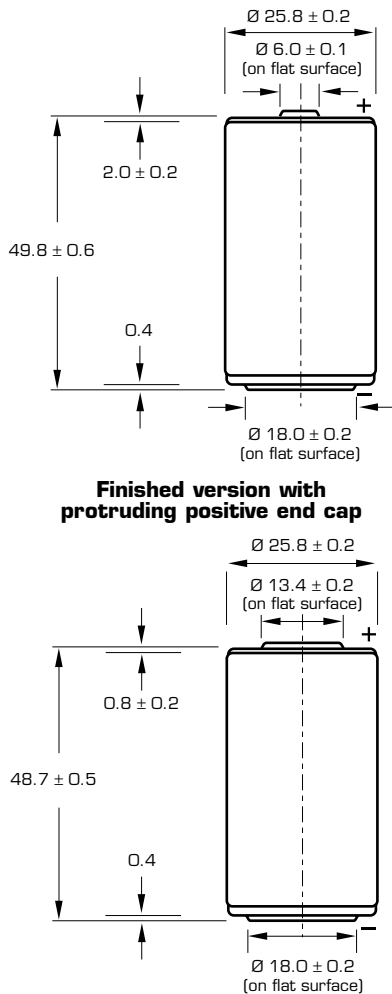
Diameter (max)	26.0 mm (1.02 in)
Height (max)	49.1 mm or 50.4 mm (1.93 in or 1.98 in) depending on finish type
Typical weight	48 g (1.7 oz)
Li metal content	approx. 2.0 g

Available termination suffix

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

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

LS 26500



Finished version with flat positive end cap

Dimensions in mm.

Storage

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

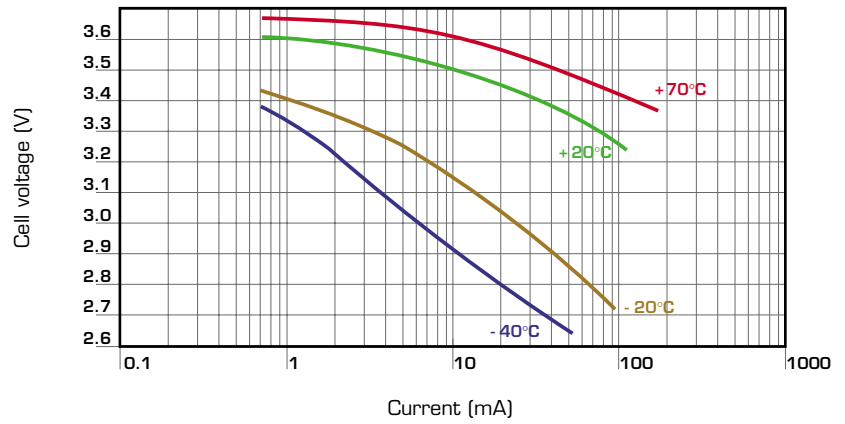
Warning

- 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.

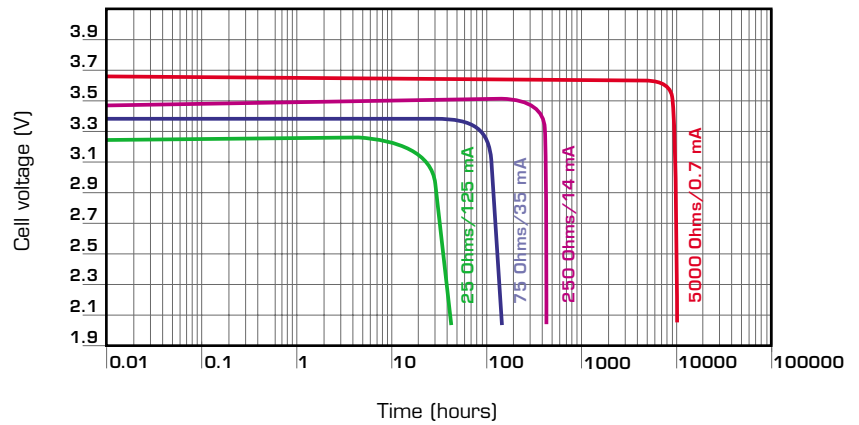
Saft

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

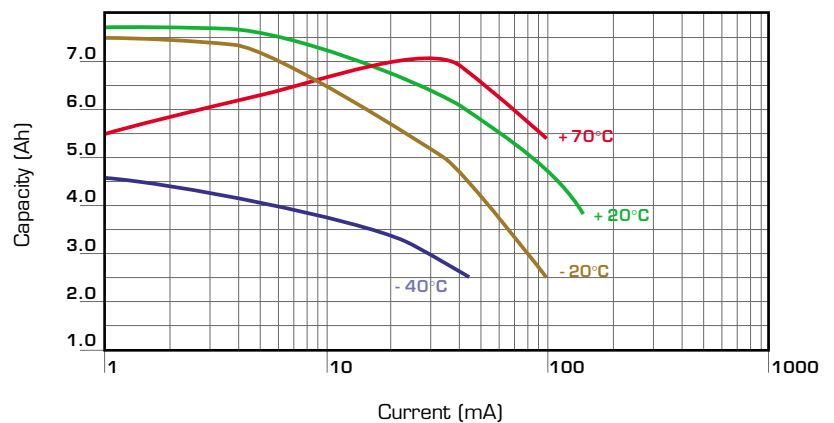
www.saftbatteries.com



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)

Doc. N° 31016-2-0904
Published by the Communications Department

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



Primary lithium battery

LS 17500

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

High energy density

A-size bobbin cell



Benefits

- High and stable operating voltage
- Low self-discharge rate
(less than 1% after 1 year of storage at +20°C)
- Wide operating temperature range
(-60/+85°C)
- Easy integration in compact system

Key features

- Stainless steel container and end caps
(low magnetic signature)
- Non-flammable electrolyte
- Underwriters Laboratories (UL) Component Recognition
(File Number MH 12609)
- Compliant with IEC 86-4 safety standard and EN 50020 intrinsic safety standard
- Non-restricted for transport

Main applications

- Utility metering
- Automatic meter reading
- Alarms and security devices
- Tollgate systems
- Identification tags
- Tracking systems
- Automotive electronics
- Professional electronics

Cell size reference

A

Electrical characteristics

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

Nominal capacity <i>(at 3 mA +20°C 2.0 V cut off. The capacity restored by the cell varies according to current drain, temperature and cut off)</i>	3.6 Ah
Open circuit voltage <i>(at +20°C)</i>	3.67 V
Nominal voltage <i>(at 0.3 mA +20°C)</i>	3.6 V

Pulse capability: Typically up to 250 mA
(250 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)

Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0 V cut off. <i>(Higher currents possible, consult Saft)</i>	130 mA
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Storage <i>(recommended)</i> <i>(for more severe conditions, consult Saft)</i>	+ 30°C (+ 86°F) max
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Operating temperature range <i>(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)</i>	- 60°C/+ 85°C <i>(- 76°F/+ 185°F)</i>
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Physical characteristics

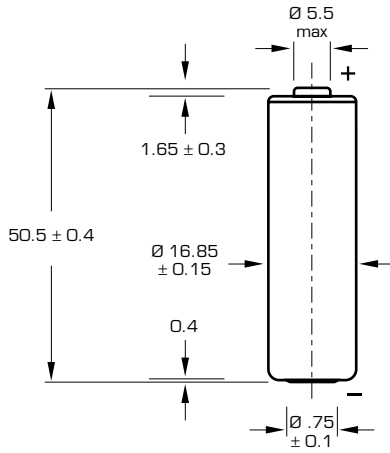
Diameter (max)	17.0 mm (0.67 in)
Height (max)	50.9 mm (2.00 in)
Typical weight	21.9 g (0.8 oz)
Li metal content	approx. 0.9 g

Available termination suffix

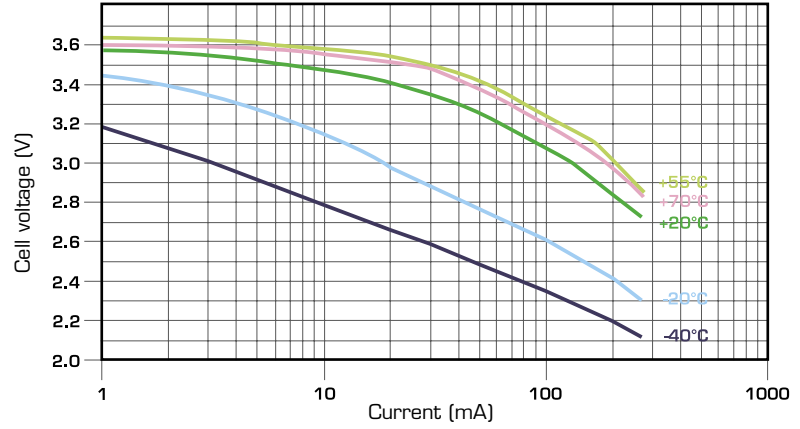
CN, CNR	radial tabs
2 PF, 3 PF, 3 PF RP, 4 PF	radial pins
CNA (AX)	axial leads
FL	flying leads... etc.



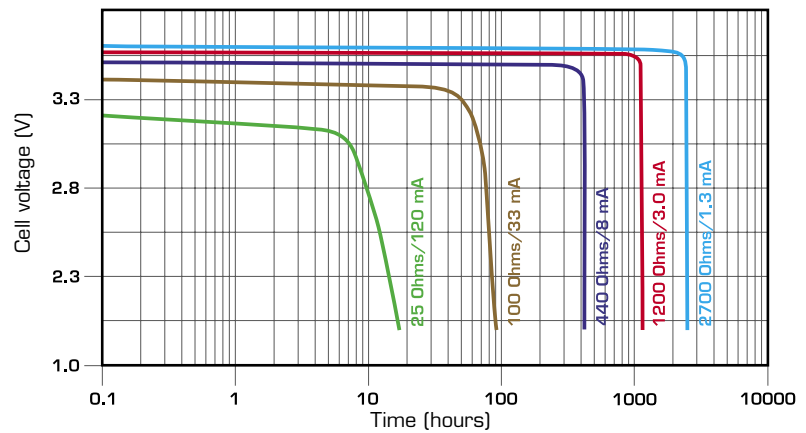
LS 17500



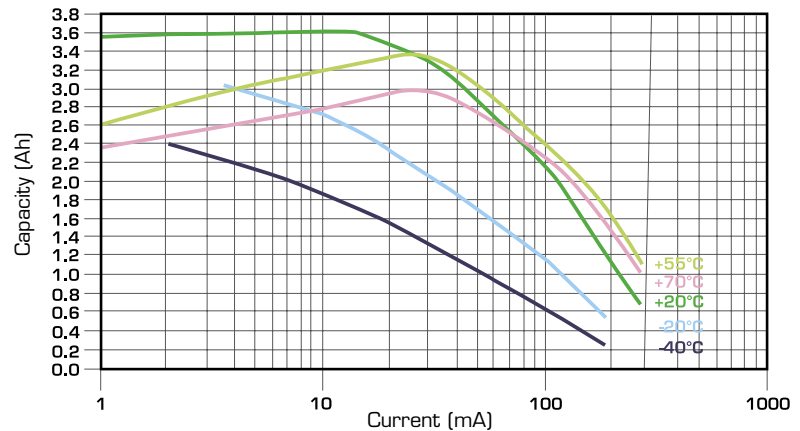
Dimensions in mm.



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)

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 (use tabbed cell versions instead).

Saft

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www.saftbatteries.com

Doc. N° 31029-2-0706

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Published by the Communications Department

Photo credit: Saft

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

Produced by Arthur Associates



SAFT

Primary lithium battery

LS 14500

3.6 V Primary lithium-thionyl chloride (Li-SOCl₂)
 High energy density
 AA-size bobbin cell



Benefits

- Enhanced capacity
- High voltage response, stable during most of the lifetime of the application
- Wide operating temperature range (-60°C/+85°C)
- Easy integration in compact system

Key features

- Stainless steel container and end caps (*low magnetic signature*)
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Low self-discharge rate (*less than 1% after 1 year of storage at +20°C*)
- Compliant with EN 50020 intrinsic safety standard
- Underwriters Laboratories (UL) Component Recognition (*File Number MH 12609*)
- Non-restricted for transport

Main applications

- Utility metering
- Automatic meter reading
- Alarms and security devices
- Tollgate systems
- Memory back-up
- Tracking systems
- Automotive electronics
- Professional electronics

Cell size references

UM3 - R6 - AA

Electrical characteristics

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

Nominal capacity <i>(at 2 mA +20°C 2.0 V cut off. The capacity restored by the cell varies according to current drain, temperature and cut off)</i>	2.45 Ah
Open circuit voltage (at +20°C)	3.67 V
Nominal voltage (at 0.2 mA +20°C)	3.6 V

Pulse capability: Typically up to 280 mA
(280 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)

Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0 V cut off. <i>(Higher currents possible, consult Saft)</i>	130 mA
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Storage <i>(recommended)</i> <i>(for more severe conditions, consult Saft)</i>	+30°C (+86°F) max
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Operating temperature range <i>(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)</i>	-60°C/+85°C (-76°F/+185°F)
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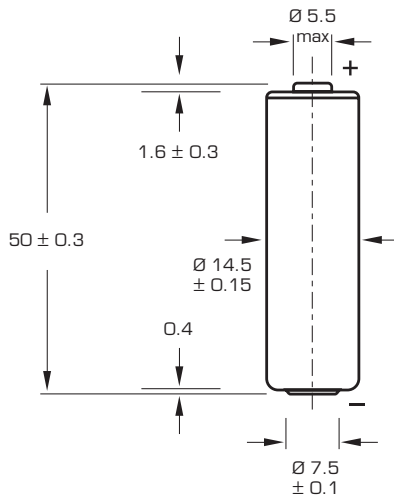
Physical characteristics

Diameter (<i>max</i>)	14.65 mm (0.58 in)
Height (<i>max</i>)	50.3 mm (1.98 in)
Typical weight	16.7 g (~ 0.6 oz)
Li metal content	approx. 0.7 g

Available termination suffix	
CN, CNR	radial tabs
2 PF, 3 PF, 3 PF RP, 4 PF	radial pins
CNA (AX)	axial leads...
FL	flying leads...etc.



LS 14500



Dimensions in mm.

Storage

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

Warning

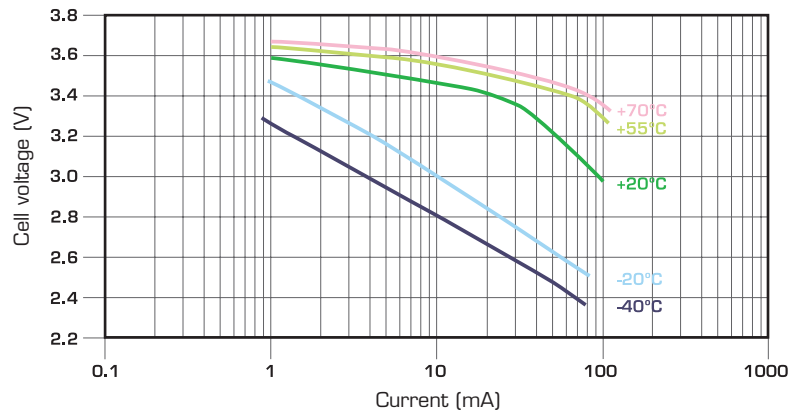
- Fire, explosion and severe burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above 100°C (212°F), incinerate, or expose contents to water.
- Do not solder directly to the cell.

Saft

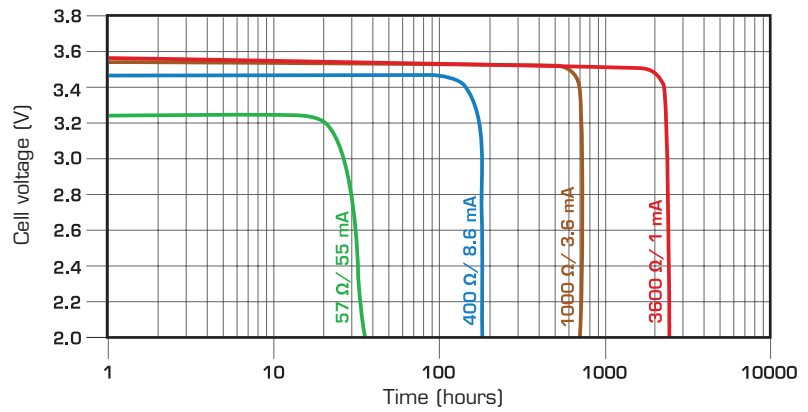
Specialty Battery Group

12, rue Sadi Carnot
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Fax +33 (0)1 49 93 19 69

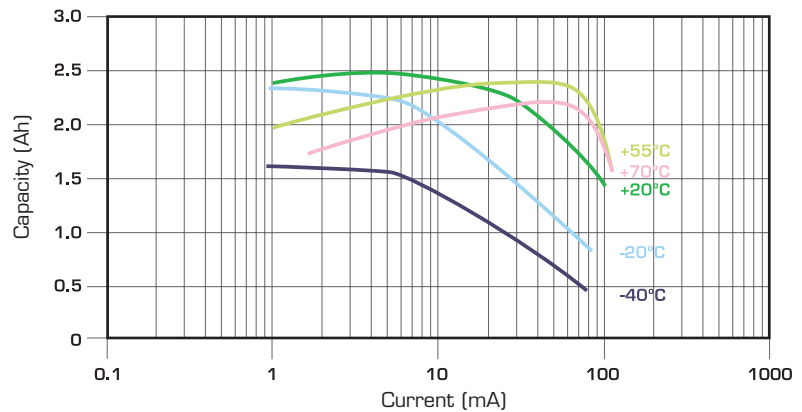
www.saftbatteries.com



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



Typical discharge profiles at +20°C



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

Doc. N° 31064-2-1205

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For more details on primary lithium technologies please refer to Primary Lithium Batteries Selector Guide Doc N° 31048-2.

Published by the Communications Department.

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Société anonyme au capital de 31 944 000€

RCS Bobigny B 383 703 873

Produced by Arthur Associates.



SAFT

Primary lithium battery

LS 14250

3.6 V Primary lithium-thionyl chloride (Li-SOCl₂)
 High energy density
 1/2 AA-size bobbin cell



Benefits

- High voltage, stable during most of the application's lifetime
- Wide operating temperature range
- Low self-discharge rate
(less than 1% per year of storage at +20°C)
- Easy integration into compact systems

Key features

- Stainless steel container and end caps
(low magnetic signature)
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Compliant with IEC 86-4 safety standard and EN 50020 intrinsic safety standard
- Underwriters Laboratories (UL) Component Recognition
(File Number MH 12609)
- Non-restricted for transport

Main applications

- Utility metering
- Automatic meter reading
- Alarms and security devices
- Toll collection
- Memory back-up
- Computer real-time clocks
- Tracking systems
- Automotive electronics
- Professional electronics

Cell size references

1/2 UM3 - 1/2 R6 - 1/2 AA

Electrical characteristics

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

Nominal capacity		1.10 Ah
<i>(at 1 mA + 20°C 2.0 V cut off. The capacity restored by the cell varies according to current drain, temperature and cut off)</i>		
Open circuit voltage	(at +20°C)	3.67 V
Nominal voltage	(at 0.1 mA + 20°C)	3.6 V

Pulse capability : Typically up to 100 mA (100 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)

Continuous current permitting 50% of the nominal capacity to be achieved at +20°C with 2.0 V cut off. <i>(Higher currents are possible, consult Saft)</i>	40 mA
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Storage <i>(recommended)</i> <i>(for more severe conditions, consult Saft)</i>	+30°C (+86°F) max
--	-------------------

Operating temperature range <i>(Operation above ambient T may lead to reduced capacity and lower voltage readings at the beginning of pulses. Consult Saft)</i>	-60°C/+85°C (-76°F/+185°F)
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Physical characteristics

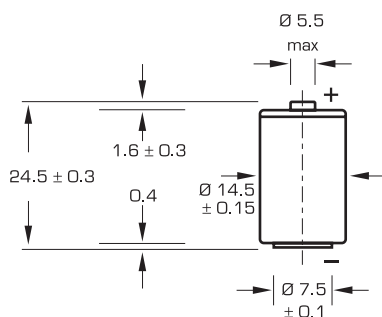
Diameter (max)	14.65 mm (0.58 in)
Height (max)	24.8 mm (0.98 in)
Typical weight	8.9 g (0.3 oz)
Li metal content	approx. 0.3 g

Available termination suffix

CN, CNR	radial tabs
2 PF, 3 PF, 3 PF RP, 4 PF	radial pins
CNA (AX)	axial leads
FL	flying leads ...etc.



LS 14250



Dimensions in mm.

Storage

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

Warning

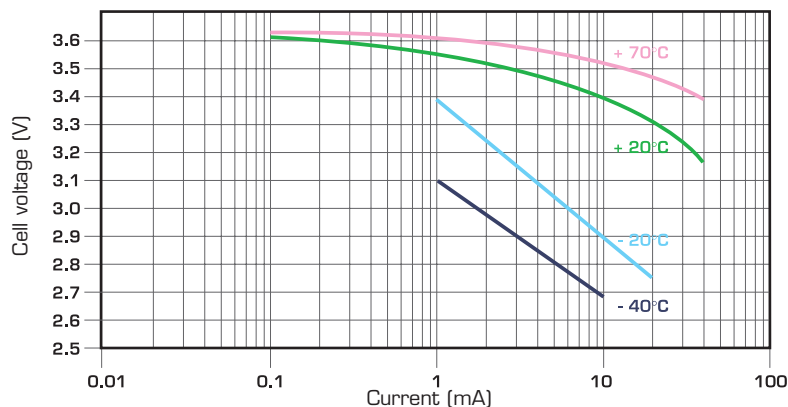
- Fire, explosion and severe burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above 100°C (212°F), incinerate, or expose contents to water.
- Do not solder directly to the cell (use tabbed cell versions instead).

Saft

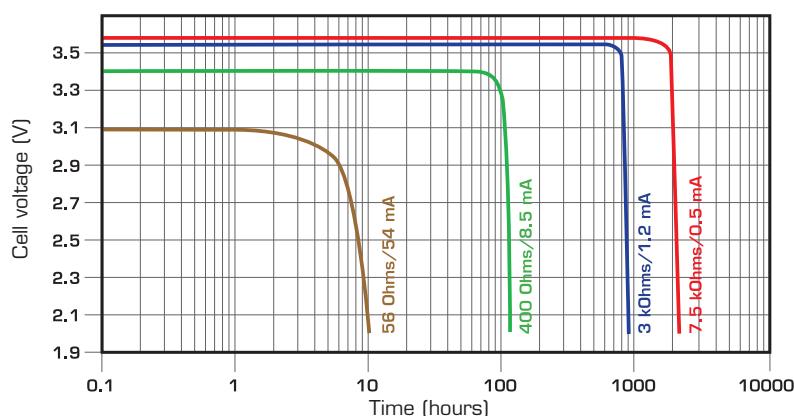
Specialty Battery Group

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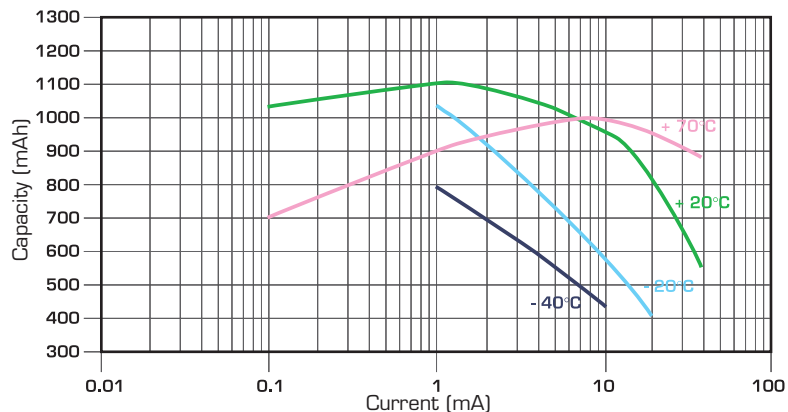
www.saftbatteries.com



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



Typical discharge profiles at +20°C



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

Doc. N° 31072-2-0506

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