



Primary lithium battery

LM 33550

3 V Primary lithium-manganese dioxide

High power

D-size spiral cell

For applications requesting excellent voltage response and operating life in -40 °C/+70 °C environments.



Benefits

- High voltage response, stable during most of the lifetime of the application
- High drain/pulse capability
- Minimum voltage delay after long dormant periods
- Competitive capacity at high current and low temperature
- Easy integration into compact systems
- Low self-discharge rate (less than 3 % after 1 year of storage at +20°C)

Key features

- Steel container
- Hermetic glass-to-metal sealing
- Built-in safety vent
- Non-corrosive electrolyte
- Restricted for transport (Class 9)
- Made in the USA

Main applications

- Radiocommunication
- Measuring equipment
- Marine equipment
- ELTS, EPIRBS, etc...

Cell size reference

R20 – D

Electrical characteristics

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

Nominal capacity (at 250 mA +20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)	12 Ah
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Open Circuit Voltage (at +20°C)	3.2 V
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Nominal voltage (under 1 mA at +20°C)	3.0 V
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Pulse capability : Typically up to 8 A
 (The voltage 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)	4 A
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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 below ambient T may lead to reduced capacity and lower voltage readings)	-40°C/ +70°C (-40°F/+158°F)
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Physical characteristics (with sleeve)

Diameter (max)	34.2 mm (1.35 in)
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Height (max, without tabs)	61.4 mm (2.42 in)
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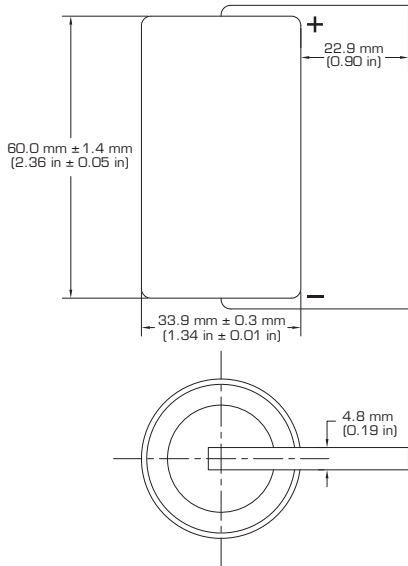
Typical weight	120 g (4.23 oz)
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Li metal content	approx. 3.7 g
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Standard cell comes with vent washer at the bottom and two radial 0.15 mm thick nickel tabs
 Other configurations available on request



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Storage

- The storage area should be clean, cool, dry and ventilated.

Warning

- Fire, explosion and burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above 70°C (158°F), incinerate, or expose contents to water.
- Do not solder directly to the cell (use tabbed cell versions instead).

Saft

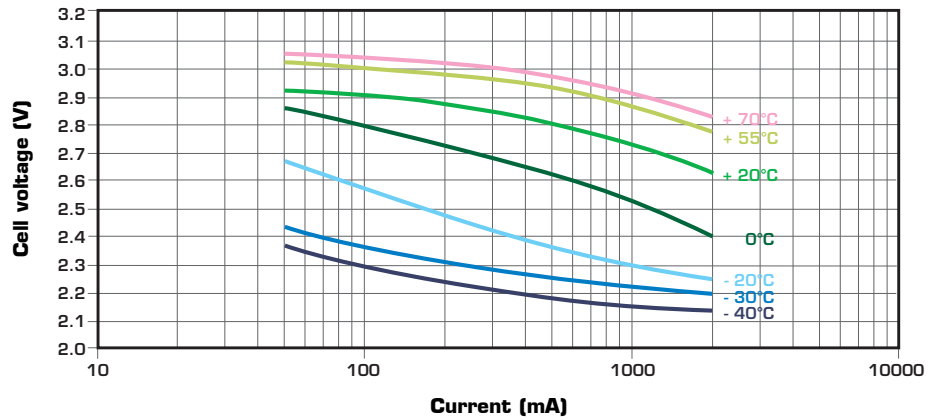
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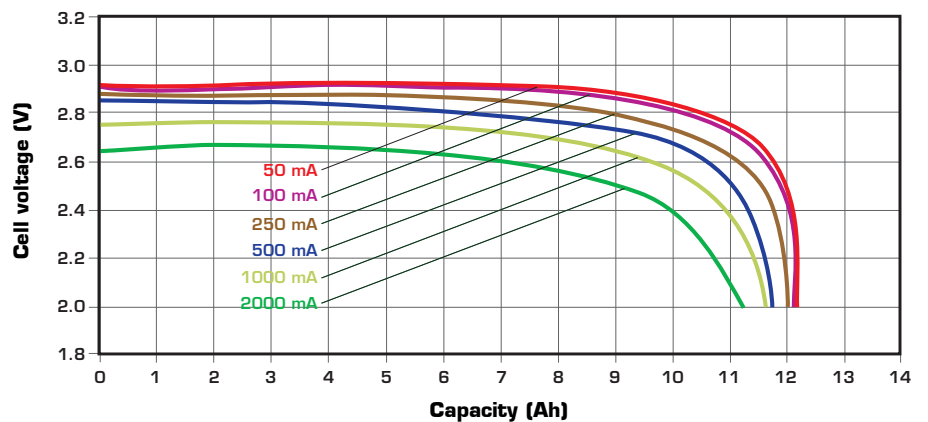
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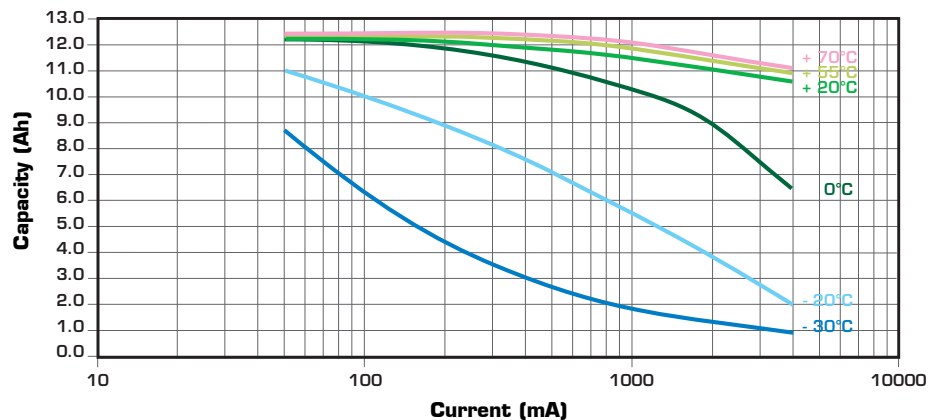
Voltage plateau versus Current and Temperature (at mid-discharge)



Typical discharge profiles at +20°C



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



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Information in this document is subject to change without notice and becomes contractual only after written confirmation by Saft.

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

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