

# LM 33600

## Primary Li-MnO<sub>2</sub> cell

### 3 V lithium manganese dioxide D-size spiral cell

Saft's LM 33600 cell is ideally suited for applications requiring high energy and long operating life, with stable voltage under high discharge rates in -40°C / +85°C environment.

#### Benefits

- High drain/ high pulse capability
- High voltage response, stable during most of the lifetime of the application even after long dormant periods
- High capacity at high current and low temperature
- Low self-discharge compatible with long operating life (less than 1% after 1 year of storage at +20°C)
- Superior resistance to corrosion
- Low magnetic signature

#### Key features

- Spiral construction
- Hermetic construction with glass to metal seal
- Stainless steel container
- Integrated safety vent
- Non corrosive electrolyte
- Non pressurized at room temperature
- Restricted for transport (Class 9)
- RoHS and REACH compliant
- Made in USA

#### Designed to meet all major quality, safety and environment standards

- Safety: UL 1642 and IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft World Class Continuous program

#### Typical applications

- Utility Metering
- Alarms and security
- GSM/GPRS communication
- Radio communications systems
- Medical devices
- IoT devices



#### Electrical characteristics

(Typical values relative to cells stored up to one year at +30°C max)

Nominal capacity (at 20 mA (160 Ω), +20°C, 2.0 V cut-off) <sup>(1)</sup>	13.4 Ah
Open circuit voltage (at +20 °C)	3.2 V
Nominal voltage (under 1 mA, + 20°C)	3.0 V
Nominal energy (at 20 mA (160 Ω), +20°C, 2.0 V cut-off)	37 Wh
Pulse capability <sup>(2)</sup>	up to 8.0 A
Maximum recommended continuous current	4.0 A

#### Operating conditions

Operating temperature range <sup>(3)</sup>	-40°C to +85°C
Storage temperatures	Recommended <sup>(4)</sup> +30°C MAX

#### Physical characteristics

Diameter (max)	33.7 mm
Height (max)	61.3 mm
Typical weight	113 g
Li metal content	approx. 4.4 g

#### Termination

Available termination suffix	CNR	radial tabs
	3 PF, 3 PF RP, 4 PF	radial pins
	FL	flying leads
	Other configurations upon request	

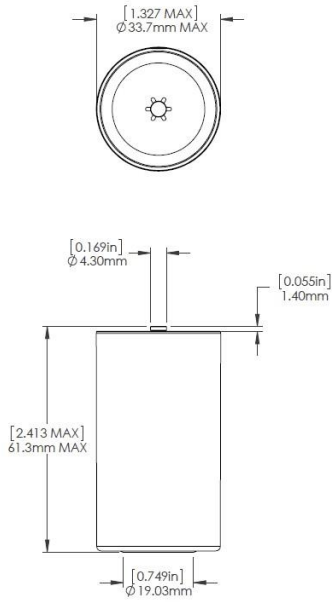
<sup>(1)</sup> Dependent upon current drain, temperature and cut-off.

<sup>(2)</sup> Dependent upon pulse characteristics, temperature, cell history and application. Higher rates are available under certain circumstances.

<sup>(3)</sup> To maintain cell heating within safe limits. Battery packs may imply lower level of maximum current and may require specific thermal protection. Consult Saft.

<sup>(4)</sup> Long-time storage at high temperature may affect performances. Consult Saft.

## LM 33600 dimensions



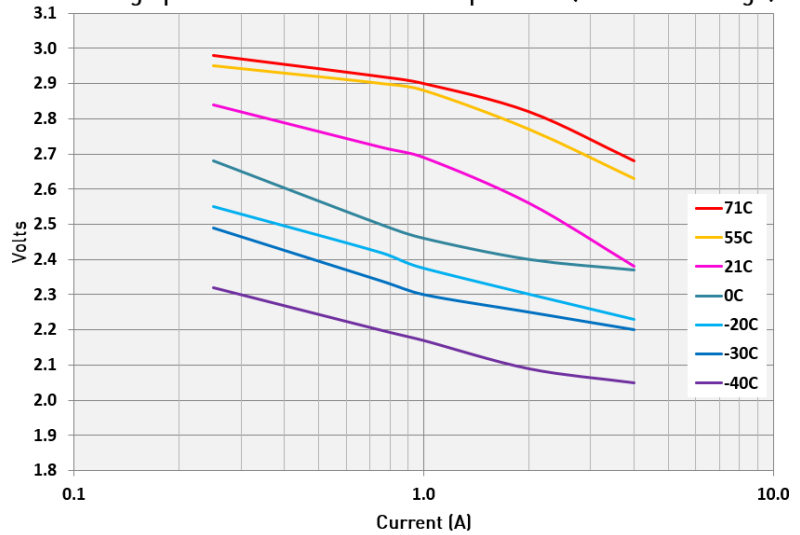
### Storage

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

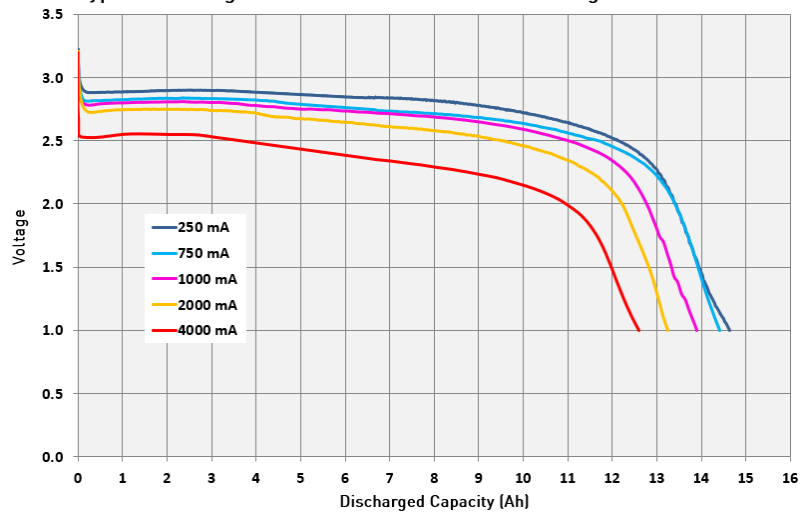
### Warning

- Fire, explosion and burn hazard.
- Do not recharge, short circuit, crush, disassemble, heat above +85°C, incinerate, or expose contents to water.
- Do not solder directly to the cell (use tabbed cell versions instead).
- Do not obstruct venting mechanism.
- Minimum clearance 2 mm (0.08 in) at negative end of cell.

Voltage plateau vs. current and temperature (at mid-discharge)



Typical discharges curves at 21°C at various discharge currents



Restored Capacity versus Current and Temperature (2V cutoff)

