

LM 33600

Primary Li-MnO₂ 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) ⁽¹⁾ | 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 ⁽²⁾ | up to 8.0 A |
| Maximum recommended continuous current | 4.0 A |

Operating conditions

| | |
|--|--------------------------------------|
| Operating temperature range ⁽³⁾ | -40°C to +85°C |
| Storage temperatures | Recommended ⁽⁴⁾ +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 | |

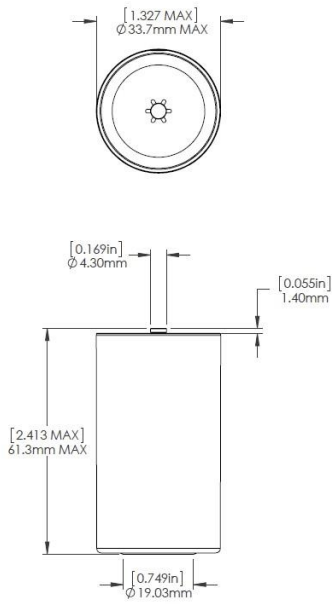
⁽¹⁾ Dependent upon current drain, temperature and cut-off.

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

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

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

LM 33600 dimensions



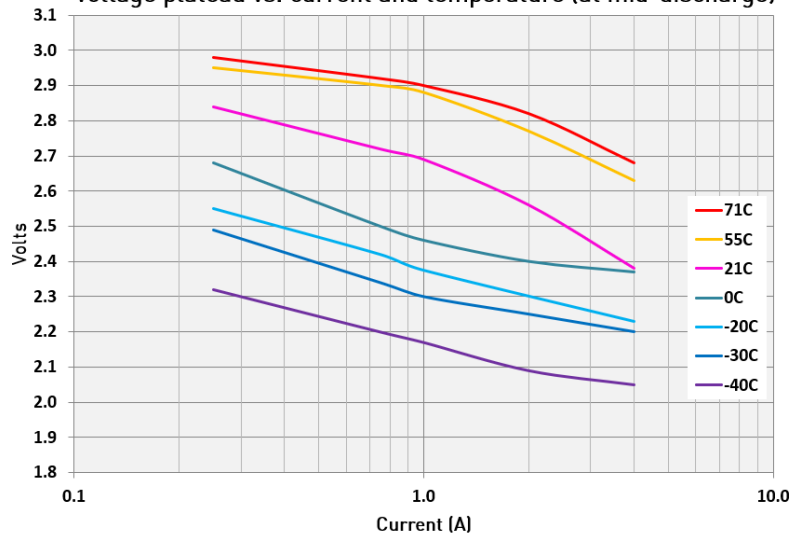
Storage

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

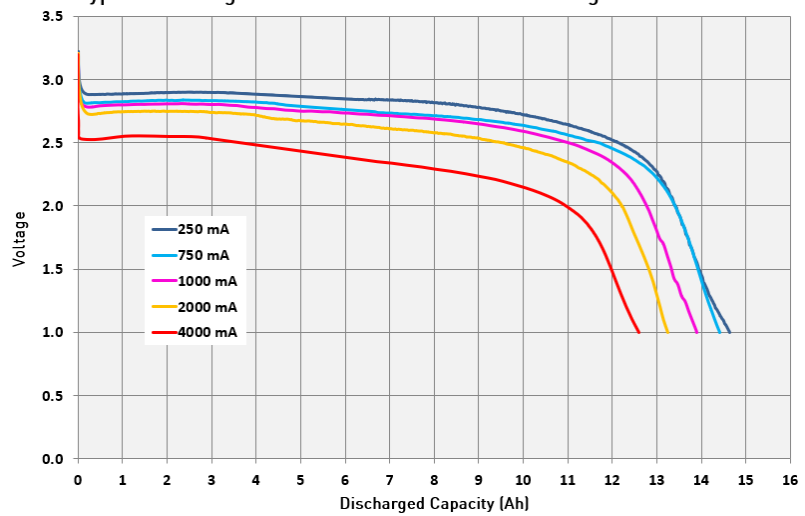
Warning

- 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)

