Архангельск (8182)63-90-72
Астана (7172)727-132
Астрахань (8512)99-46-04
Барнаул (3852)73-04-60
Белгород (4722)40-23-64
Брянск (4832)59-03-52
Владивосток (423)249-28-31
Волгоград (844)278-03-48
Вологда (8172)26-41-59
Воронеж (473)204-51-73
Екатеринбург (343)384-55-89
Иваново (4932)77-34-06
Ижевск (3412)26-03-58
Иркутск (395)279-98-46
Казань (843)206-01-48
Калининград (4012)72-03-81
Калуга (4842)92-23-67
Кемерово (3842)65-04-62
Киров (8332)68-02-04
Краснодар (861)203-40-90
Красноярск (391)204-63-61
Курск (4712)77-13-04
Липецк (4742)52-20-81
Киргизия (996)312-96-26-47
Магнитогорск (3519)55-03-13
Москва (495)268-04-70
Мурманск (8152)59-64-93
Набережные Челны (8552)20-53-41
Нижний Новгород (831)429-08-12
Новокузнецк (3843)20-46-81
Новосибирск (383)227-86-73
Омск (3812)21-46-40
Орел (4862)44-53-42
Оренбург (3532)37-68-04
Пенза (8412)22-31-16
Россия (495)268-04-70
Пермь (342)205-81-47
Ростов-на-Дону (863)308-18-15
Рязань (4912)46-61-64
Самара (846)206-03-16
Санкт-Петербург (812)309-46-40
Саратов (845)249-38-78
Севастополь (8692)22-31-93
Симферополь (3652)67-13-56
Смоленск (4812)29-41-54
Сочи (862)225-72-31
Ставрополь (8652)20-65-13
Казахстан (772)734-952-31
Сургут (3462)77-98-35
Тверь (4822)63-31-35
Томск (3822)98-41-53
Тула (4872)74-02-29
Тюмень (3452)66-21-18
Ульяновск (8422)24-23-59
Уфа (347)229-48-12
Хабаровск (4212)92-98-04
Челябинск (351)202-03-61
Череповец (8202)49-02-64
Ярославль (4852)69-52-93

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Технические характеристики на литий-диоксид-марганцевые батареи 2.M20, 1S2P, M (цилиндрические первичные литиевые элементы)

2.M20 CV stick pack

Primary Li-MnO_2 battery

6 V lithium manganese dioxide battery

2.M20 CV stick pack is based on D size Li-MnO_2 cells with spiral electrode design. It is ideally suited for applications requiring high energy with stable voltage under high discharge rate in –40 °C / +72 °C environment.

Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- High capacity even at high current and low temperature
- High energy density
- No voltage delay
- Low self-discharge compatible with long shelf-life of 10+ years (less than 1% after 1 year of storage at + 20 °C)

Key features

- Two M20 CV cells in 2S1P configuration and longitudinal orientation
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and nickel-plated steel container
- Alternative versions with M20 SV cells featuring stainless-steel container, superior resistance to corrosion and low magnetic signature available on request
- Short-circuit proof due to integrated polyswitch [6]
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environment standards

- Safety: IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Tracking systems
- Data loggers

Electrical characteristics	
(Typical values related to batteries stored up to one year at + 30 °C max)	
Typical capacity (at 150 mA, +20 °C, 4.0 V cut-off) [1]	12.5 Ah
Open circuit voltage	6.4 V
Nominal voltage (under 1 mA, at +20 °C)	6.0 V
Nominal energy (at 150 mA, +20 °C, 4.0 V cut-off voltage)	70 Wh
Maximum continuous discharge current [2]	2.0 A

Operating conditions		
Operating temperature range [3]		-40 °C / +72 °C (-40 °F / +161 °F)
Storage temperatures	Recommended	+30 °C (+86 °F) max.
	Allowable [4]	-55 °C / +90 °C (-67 °F / +194 °F)

Physical characteristics	
Length (max)	128.5 mm / 5.06 in
Diameter (max)	36 mm / 1.42 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	260 g
Li metal content	7.0 g

References		
part numbers [5]	with JST PHR-2 connector	4422080148
	stainless steel version / 3-pol connector	4423080154

[1] Can vary depending on current drain, temperature and cut-off voltage.

[2] Hold current of the polyswitch at +72 °C. Higher currents are possible for pulses, at lower temperatures or with different polyswitch types. Consult .

[3] Operating temperatures up to +85 °C can be achieved. Consult .

[4] Long-time storage at high temperature may affect performance. Consult .

[5] Other versions with different part numbers are available on request. Consult . [6] Other protection elements can be integrated on request. Consult .

2.M20 CV

Primary Li-MnO_2 battery

6 V lithium manganese dioxide battery

2.M20 CV battery is based on D size Li-MnO_2 cells with spiral electrode design. It is ideally suited for applications requiring high energy with stable voltage under high discharge rate in –40 °C / +72 °C environment.

Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- High capacity even at high current and low temperature
- High energy density
- No voltage delay
- Low self-discharge compatible with long shelf-life of 10+ years (less than 1% after 1 year of storage at + 20 °C)

Key features

- Two M20 CV cells in 2S1P configuration and side-to-side orientation
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and nickel-plated steel container
- Alternative versions with M20 SV cells featuring stainless-steel container, superior resistance to corrosion and low magnetic signature available on request
- Short-circuit proof due to integrated polyswitch [6]
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environment standards

- Safety: IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Tank level monitoring
- Metering

Electrical characteristics		
(Typical values related to batteries stored up to one year at + 30 °C max)		
Typical capacity (at 150 mA, +20 °C, 4.0 V cut-off) [1]		12.5 Ah
Open circuit voltage		6.4 V
Nominal voltage (under 1 mA, at +20 °C)		6.0 V
Nominal energy (at 150 mA, +20 °C, 4.0 V cut-off voltage)		70 Wh
Maximum continuous discharge current [2]		2.0 A

Operating conditions		
Operating temperature range [3]		-40 °C / +72 °C (-40 °F / +161 °F)
Storage temperatures	Recommended	+30 °C (+86 °F) max.
	Allowable [4]	-55 °C / +90 °C (-67 °F / +194 °F)

Physical characteristics	
Length (max)	68 mm / 2.68 in
Width (max)	34.5 mm / 1.36 in
Height (max)	64.5 mm / 2.54 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	255 g
Li metal content	7.0 g

References		
part numbers [5]	with JST XHP-2 connector	4422080137
	with JST 03 connector	4422080145

[1] Can vary depending on current drain, temperature and cut-off voltage.
[2] Hold current of the polyswitch at +72 °C. Higher currents are possible for pulses, at lower temperatures or with different polyswitch types. Consult .
[3] Operating temperatures up to +85 °C can be achieved. Consult .
[4] Long-time storage at high temperature may affect performance. Consult . [5] Other versions with different part numbers are available on request. Consult . [6] Other protection elements can be integrated on request. Consult .

1S2P.M20

Primary Li-MnO_2 battery

3 V lithium manganese dioxide battery

1S2P.M20 battery is based on D size Li-MnO_2 cells with spiral electrode design. It is ideally suited for applications requiring high energy and capacity with stable voltage under very high discharge rate in –40 °C / +72 °C environment.

Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- High capacity even at high current and low temperature
- High energy density
- No voltage delay
- Low self-discharge compatible with long shelf-life of 10+ years (less than 1% after 1 year of storage at + 20 °C)
- Superior resistance to corrosion

Key features

- Two M20 cells in 1S2P configuration and side-to-side orientation
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and stainless steel container
- Alternative versions with M20 CV cells having nickel-plated steel containers available on request
- Integrated protection elements (e.g. polyswitch) available on request
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642 (File MH 61234), IEC 60086-4
- Transport: UN 3090 and UN 3091
- Military: VG96915 parts 2 and 154
- Quality: ISO 9001, World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Data loggers
- Metering

Electrical characteristics	
(Typical values related to batteries stored up to one year at + 30 °C max)	
Typical capacity (at 300 mA, +20 °C, 4.0 V cut-off) [1]	25.2 Ah
Open circuit voltage	3.2 V
Nominal voltage (under 1 mA, at +20 °C)	3.0 V
Nominal energy (at 300 mA, +20 °C, 4.0 V cut-off voltage)	72 Wh
Pulse capacity [2]	up to 16.0 A
Recommended maximum continuous discharge current [3]	7.0 A

Operating conditions		
Operating temperature range [4]		-40 °C / +72 °C (-40 °F / +161 °F)
Storage temperatures	Recommended	+30 °C (+86 °F) max.
	Allowable [5]	-55 °C / +90 °C (-67 °F / +194 °F)

Physical characteristics	
Length (max)	70.0 mm / 4.07 in
Width (max)	34.5 mm / 1.36 in
Height (max)	64.5 mm / 2.60 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	248 g
Li metal content	7.0 g

References		
part numbers [6]	with JST PHR-5 connector	4423080151

[1] Can vary depending on current drain, temperature and cut-off voltage.
[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.
[4] Operating temperatures up to +85 °C can be achieved. Consult .
[5] Long-time storage at high temperature may affect performance. Consult .
[6] Other versions with different part numbers are available on request. Consult .

4.M52 cube pack

Primary Li-MnO_2 battery

12 V lithium manganese dioxide battery

4.M52 battery is based on C size Li-MnO_2 cells with spiral electrode design. It is ideally suited for applications requiring high energy with stable voltage under high discharge rate in –40 °C / +72 °C environment.

Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- High capacity even at high current and low temperature
- High energy density
- No voltage delay
- Low self-discharge compatible with long shelf-life of 10+ years (less than 1% after 1 year of storage at + 20 °C)
- Superior resistance to corrosion
- Low magnetic signature

Key features

- Four M52 cells in 4S1P configuration and side-to-side quadratical arrangement
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and stainless steel container
- Short-circuit proof due to integrated polyswitch [6]
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642 (File MH 61234), IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Metering

Electrical characteristics		
(Typical values related to batteries stored up to one year at + 30 °C max)		
Typical capacity (at 60 mA, +20 °C, 8.0 V cut-off) [1]		5.6 Ah
Open circuit voltage		12.8 V
Nominal voltage (under 1 mA, at +20 °C)		12.0 V
Nominal energy (at 60 mA, +20 °C, 8.0 V cut-off voltage)		64 Wh
Maximum continuous discharge current [2]		1.2 A

Operating conditions		
Operating temperature range [3]		-40 °C / +72 °C (-40 °F / +161 °F)
Storage temperatures	Recommended	+30 °C (+86 °F) max.
	Allowable [4]	-55 °C / +90 °C (-67 °F / +194 °F)

Physical characteristics	
Length (max)	53.0 mm / 2.07 in
Width (max)	53.0 mm / 2.07 in
Height (max)	55.0 mm / 2.17 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	240 g
Li metal content	6.4 g

References		
part No. [5]	without connector	4443070153

[1] Can vary depending on current drain, temperature and cut-off voltage.

[2] Hold current of the polyswitch at +72 °C. Higher currents are possible for pulses, at lower temperatures or with different polyswitch types. Consult .

[3] Operating temperatures up to +85 °C can be achieved. Consult .

[4] Long-time storage at high temperature may affect performance. Consult . [5] Other versions with different part numbers are available on request. Consult .

[6] Other protection elements can be integrated on request. Consult .

4.M20 CV rhomboidal pack

Primary Li-MnO_2 battery

12 V lithium manganese dioxide battery

4.M20 CV battery is based on D size Li-MnO_2 cells with spiral electrode design. It is ideally suited for applications requiring high energy with stable voltage under high discharge rate in –40 °C / +72 °C environment.

Benefits

- High drain and pulse capability
- High voltage response, stable even after long dormant periods
- High capacity even at high current and low temperature
- High energy density
- No voltage delay
- Low self-discharge compatible with long shelf-life of 10+ years (less than 1% after 1 year of storage at + 20 °C)

Key features

- Four M20 CV cells in 4S1P configuration and side-to-side rhomboidal arrangement
- Safe, hermetic and non-pressurized cell construction with glass-to-metal seal, safety vent and nickel-plated steel container
- Alternative version with M20 SV cells featuring stainless-steel container, superior resistance to corrosion and low magnetic signature available on request
- Integrated charge-protection diode [6]
- Short-circuit proof due to integrated polyswitch [6]
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environment standards

- Safety: IEC 60086-4
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, World Class continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- Wireless outdoor sirene

Electrical characteristics		
(Typical values related to batteries stored up to one year at + 30 °C max)		
Typical capacity (at 150 mA, +20 °C, 8.0 V cut-off) [1]		12.5 Ah
Open circuit voltage		12.8 V
Nominal voltage (under 1 mA, at +20 °C)		12.0 V
Nominal energy (at 150 mA, +20 °C, 8.0 V cut-off voltage)		140 Wh
Maximum continuous discharge current [2]		1.2 A

Operating conditions		
Operating temperature range [3]		-40 °C / +72 °C (-40 °F / +161 °F)
Storage temperatures	Recommended	+30 °C (+86 °F) max.
	Allowable [4]	-55 °C / +90 °C (-67 °F / +194 °F)

Physical characteristics	
Length (max)	94.5 mm / 3.72 in
Width (max)	69.0 mm / 2.72 in
Height (max)	66.0 mm / 2.60 in
Battery case	Shrink sleeve
Terminals	Cables with optional connectors
Battery weight	500 g
Li metal content	14.0 g

References		
part No. [5]	with 3 cables for 3 V / 12 V output and 3-pol connector JST 03R-JWPF-VSLE-S	4442080147

[1] Can vary depending on current drain, temperature and cut-off voltage.
[2] Hold current of the polyswitch at +72 °C. Higher currents are possible for pulses, at lower temperatures or with different polyswitch types. Consult .
[3] Operating temperatures up to +85 °C can be achieved. Consult .
[4] Long-time storage at high temperature may affect performance. Consult .
[5] Other versions with different part numbers are available on request. Consult . [6] Other protection elements can be integrated on request. Consult .

LM 33600

Primary Li-MnO_2 cell

3 V lithium manganese dioxide D-size spiral cell

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

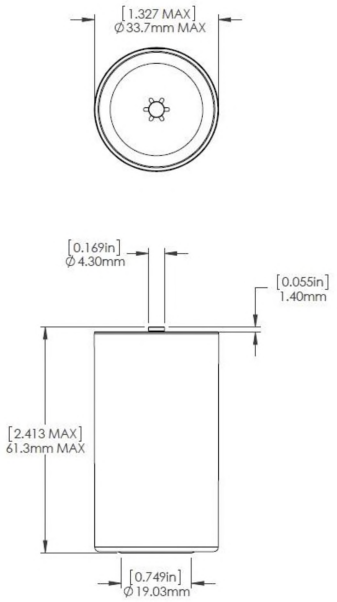
Operating conditions		
Operating temperature range [3]		-40°C to +85°C
Storage temperatures	Recommended [4]	+30°C MAX

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



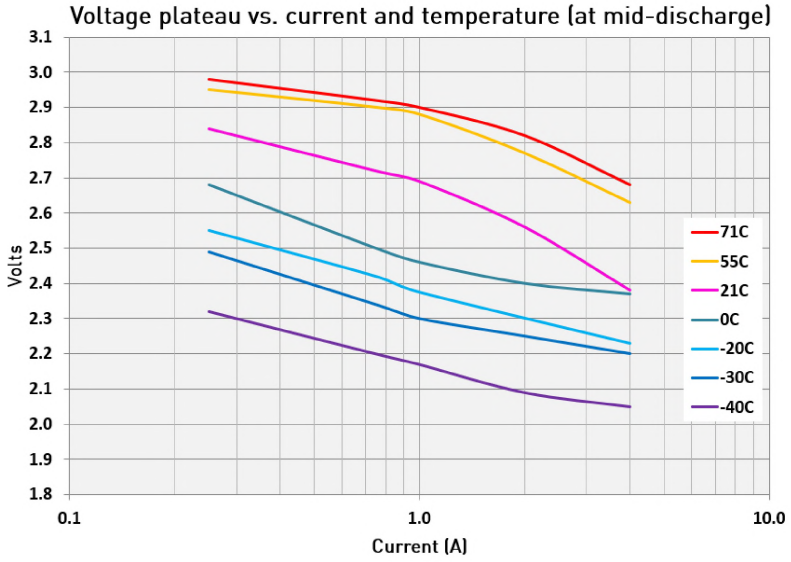
Storage

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

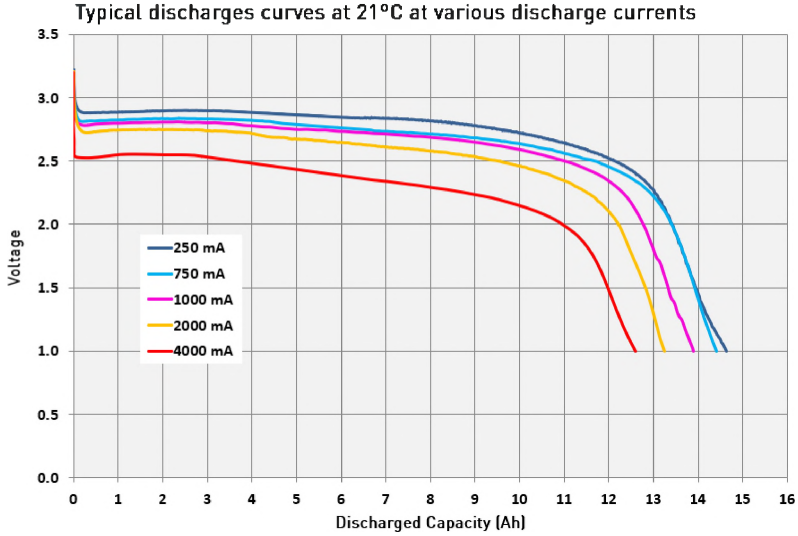
Warning

- 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.

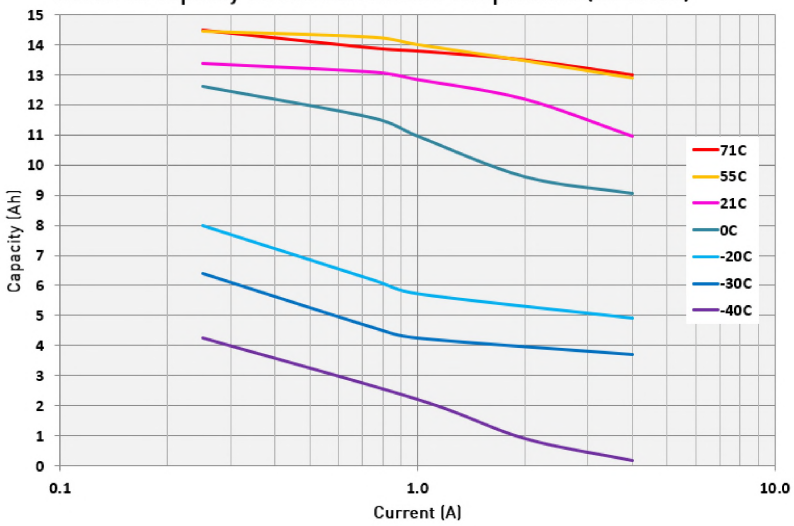
Voltage plateau vs. current and temperature (at mid-discharge)



Typical discharges curves at 21°C at various discharge currents



Restored Capacity versus Current and Temperature (2V cutoff)



LM26500-M

Primary Li-MnO_2 cell

3 V lithium manganese dioxide C-size spiral cell

The LM26500-M cell is approved for use in the MIDS-LVT. All three cells must be replaced at the same time. Do not mix SAFT LM26500-M cells with other manufacturer's cells.

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
- Equipped with 4.5A resettable PTC
- Safety Shutdown Separator
- Sleeve – Mylar for durability
- 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

Applications

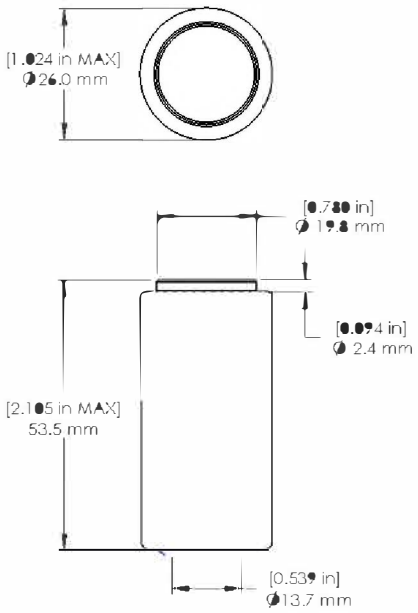
- Military, MIDS-LVT[5]

Electrical characteristics	
(Typical values relative to cells stored for one year or less at +30°C max)	
Nominal Capacity (at 150mA +20°C 2.0V cut-off)[1]	7.4 Ah
Open circuit voltage (at +20°C)	3.2 V
Nominal voltage (under 1mA at +20°C)	3.0 V
Nominal energy (at 150mA +20°C 2.0 V cut-off)	20.9 Wh
Pulse capability[2]	Up to 4.0 A
Recommended maximum continuous current	2.0 A
Operating conditions	
Operating Temperature Range[3]	-40°C to +85°C
Storage temperatures	
Recommended	+30°C (86°F) max
Allowable[4]	-55°C to +90°C
Physical Characteristics	
Diameter (max)	26.0 mm
Height (max)	53.5 mm
Typical weight	61 g
Li metal content	approx. 2.8 g
Terminations	
Flat Ni - Plated	

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.
5 Export License: ECCN 3A611.x export license required to export from the United States.

LM26500-M

LM26500-M dimensions



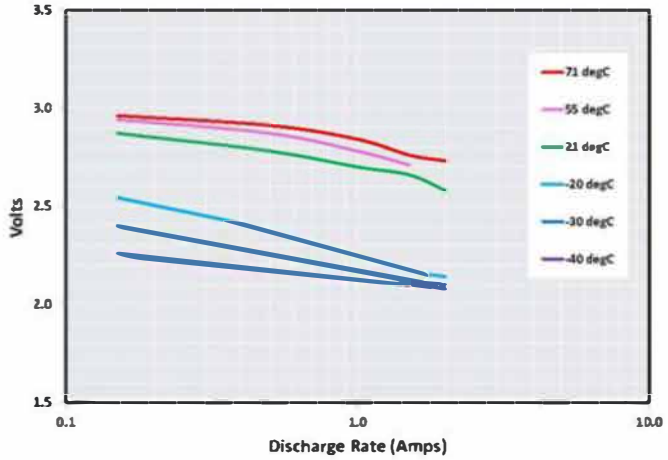
Storage

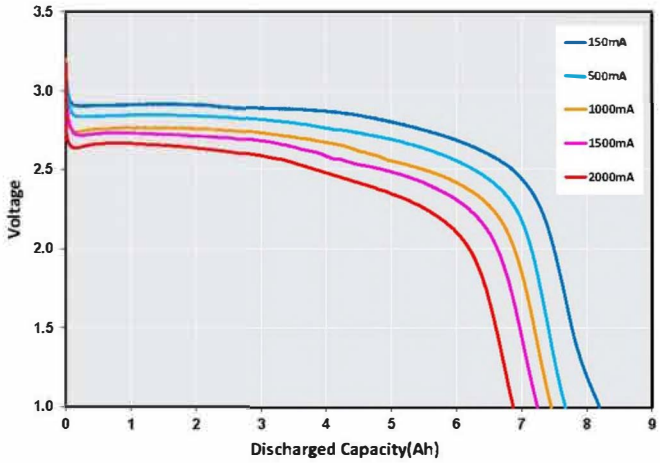
- The storage area should be clean, cool (preferably not exceeding +30°C), dry and ventilated.

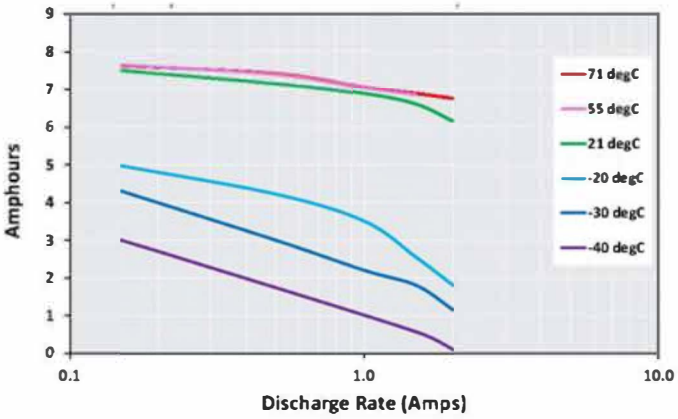
Warning

- 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
- Do not mix Saft LM26500-M cells with other manufacturer's cells.
- All three cells must be replaced at the same time.

Voltage plateau vs. rate at various temperatures at mid-discharge







LM 26500

Primary Li-MnO_2 cell

3 V lithium manganese dioxide C-size spiral cell

LM 26500 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
- Tracking systems
- 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 10 mA (320 Ω), +20°C, 2.0 V cut-off)[1]	7.4 Ah
Open circuit voltage (at +20 °C)	3.2 V
Nominal voltage (under 1 mA, +20°C)	3.0 V
Nominal energy (at 10 mA (320 Ω), +20°C, 2.0 V cut-off)	20.9 Wh
Pulse capability [2]	up to 4.0 A
Maximum recommended continuous current	2.0 A

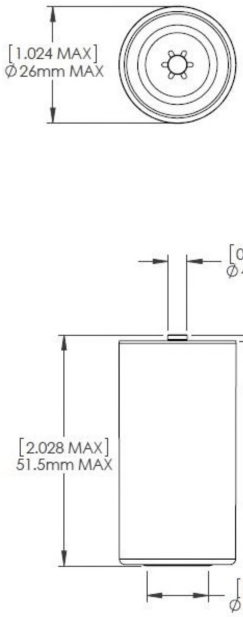
Operating conditions		
Operating temperature range [3]		-40°C to +85°C
Storage temperatures	Recommended [4]	+30°C MAX

Physical characteristics	
Diameter (max)	26.0 mm
Height (max)	51.5 mm
Typical weight	61 g
Li metal content	approx. 2.8 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 26500 dimensions



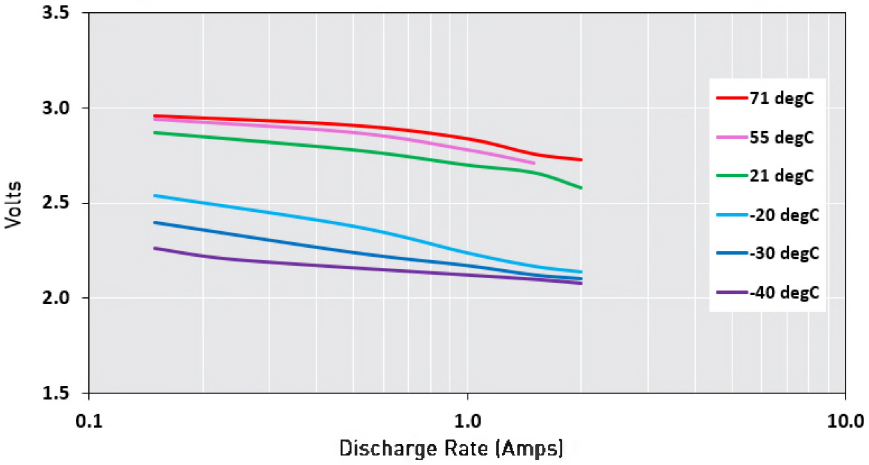
Storage

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

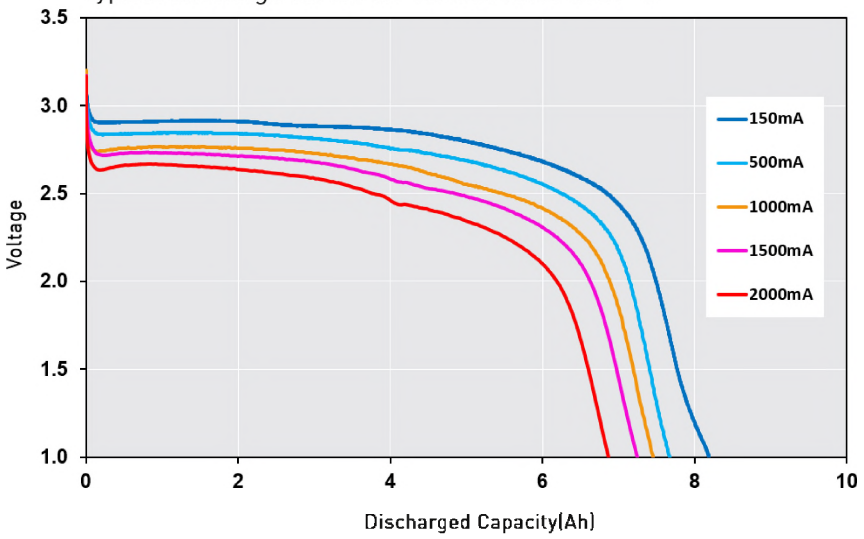
Warning

- 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.

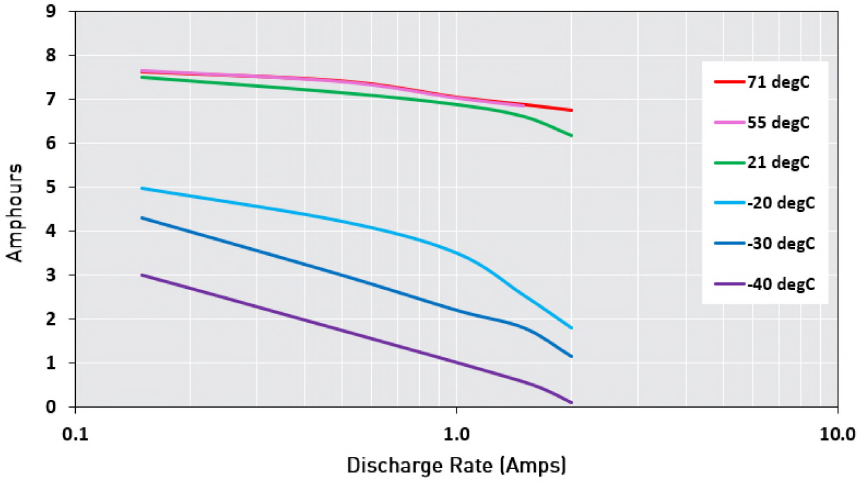
Voltage plateau vs. rate at various temperatures at mid-discharge



Typical discharge curves for various rates at 21° C



Capacity vs. rate at various temperatures



LM 17500

Primary Li-MnO_2 cell

3 V lithium manganese dioxide A-size spiral cell

M 17500 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
- RoHS and REACH compliant
- Made in USA

Designed to meet all major quality, safety and environment standards

- Safety: UL 1642 and IEC 60086-4
- ATEX: Compliant with IEC 60079-11 (T4 rating at +70°C). Consult Saft.
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, Saft World Class Continuous program

Typical applications

- Utility Metering
- Alarms and security
- Tracking systems
- 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 5 mA (640 Ω), +20°C, 2.0 V cut-off)[1]		3.0 Ah
Open circuit voltage (at +20°C)		3.2 V
Nominal voltage (under 1 mA, +20°C)		3.0 V
Nominal energy (at 5 mA (640 Ω), +20°C, 2.0 V cut-off)		8.7 Wh
Pulse capability [2]		up to 2.0 A
Maximum recommended continuous current		1.5 A

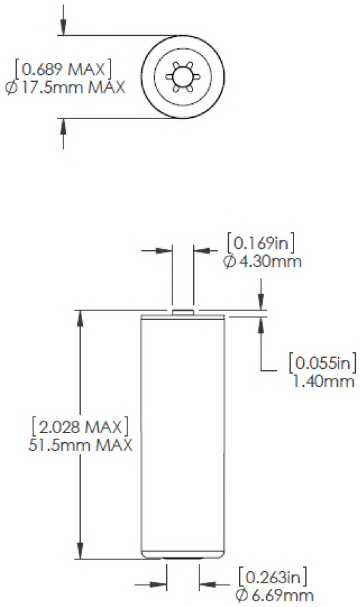
Operating conditions		
Operating temperature range [3]		-40 °C to + 85 °C
Storage temperatures	Recommended [4]	+ 30 °C MAX

Physical characteristics	
Diameter (max)	17.5 mm
Height (max)	51.5 mm
Typical weight	approx. 28 g
Li metal content	1.0 g max

Termination		
Available termination suffix		
	CN, CNR	radial tabs
	2 PF, 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 17500 dimensions



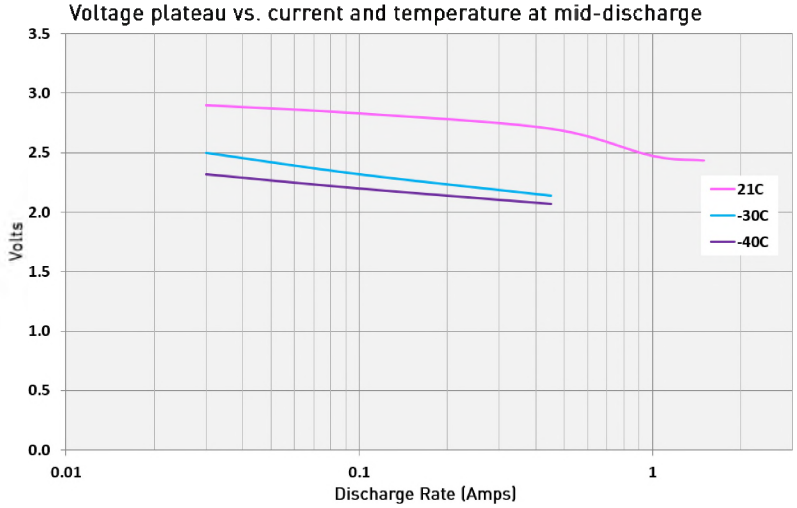
Storage

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

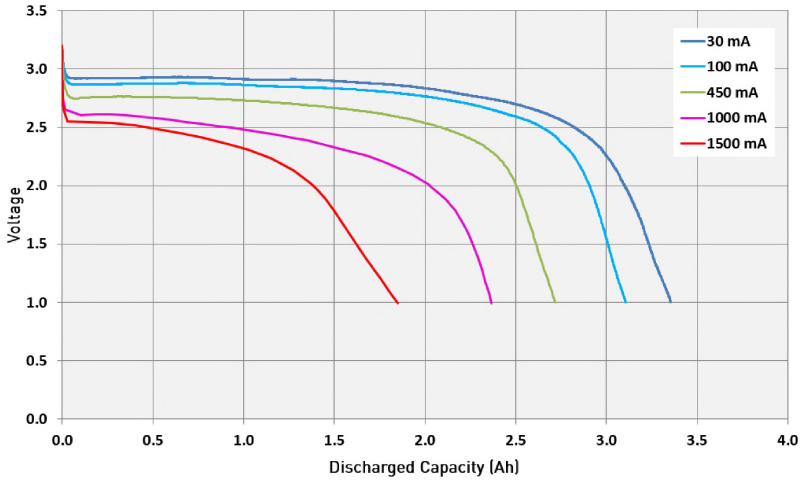
Warning

- 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).

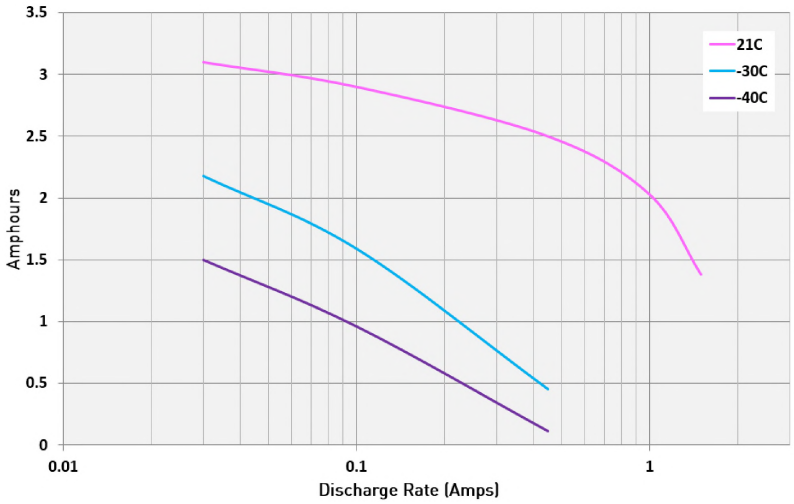
Voltage plateau vs. current and temperature at mid-discharge



Discharge curves at 21°C and various discharge currents



Restored Capacity vs Current and Temperature (2V Cutoff)



Primary lithium battery
LM 17130

3 V Primary lithium-manganese dioxide (Li-MnO_2)
High power
⅓ A-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
- 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 2 % after 1 year of storage at + 20°C)*

Key features

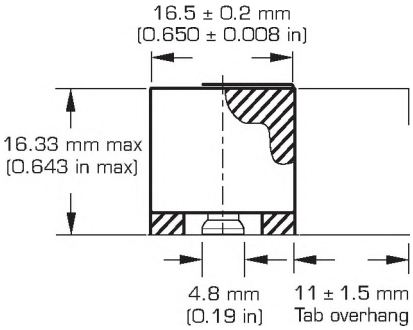
- Ni plated steel container
- Hermetic seal construction
- Integrated safety vent
- Non-corrosive electrolyte
- Non-restricted for transport

Main applications

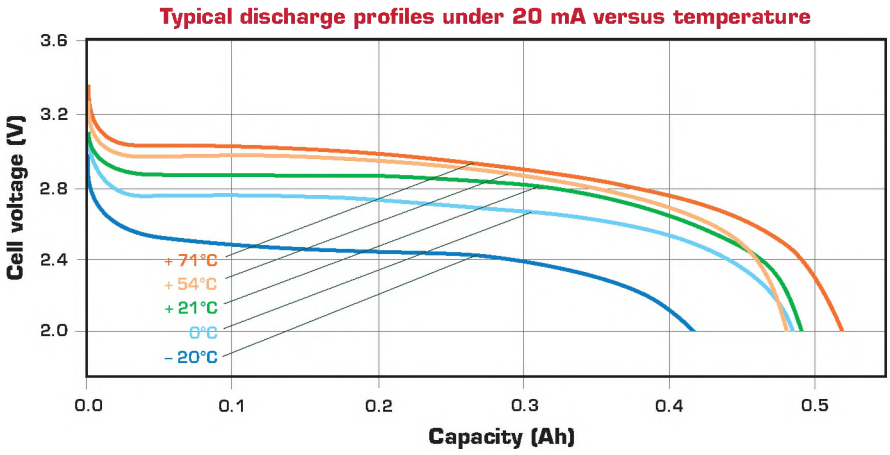
- Measuring equipment
- Industrial applications
- Professional electronics

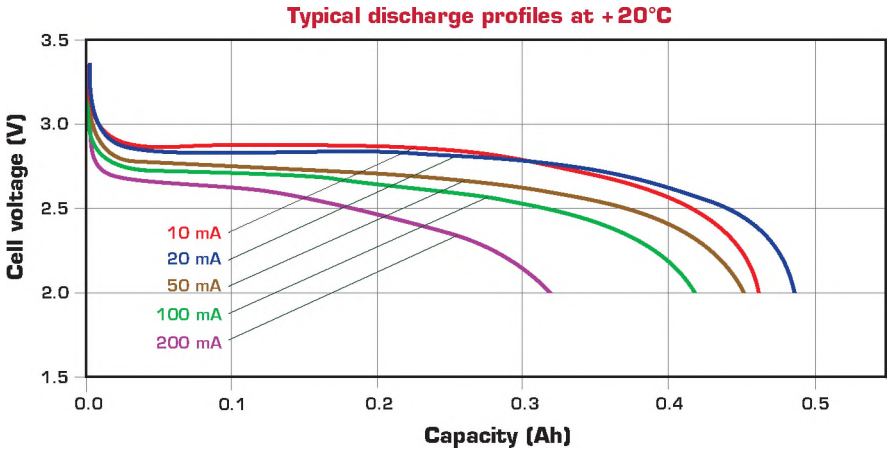
Cell size references	⅓ A
Electrical characteristics	
(typical values relative to cells stored for one year or less at + 30°C max.)	
Nominal capacity *(at 4.5 mA + 20°C 2.0 V cut-off. The capacity restored by the cell varies according to current drain, temperature and cut-off)*	500 mAh
Open Circuit Voltage (at + 20°C)	approx. 3.2 V
Nominal voltage (under 1 mA at + 20°C)	3.0 V
Pulse capability	400 mA
Maximum recommended continuous current *(to maintain cell heating within safe limits)*	300 mA
Storage (recommended) (for more severe conditions, consult Saft)	+ 30°C (+ 86°F) max
Operating temperature range *(Operation below ambient T may lead to reduced capacity and lower voltage readings)*	- 40°C/+ 70°C (- 40°F/+ 158°F)
Physical characteristics	
Diameter (max)	16.7 mm (0.658 in)
Height (max)	16.33 mm (0.643 in)
Typical weight	8 g (0.28 oz)
Li metal content	approx. 0.2 g
Available termination suffix CN, CNR radial tabs FL flying leads... etc. *(Other cell finishes available, consult Saft)*	

LM 17130



Overall dimensions





Storage

- Keep storage area 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)*.

EPIRB 3.M20

Primary Li-MnO_2 battery

9 V lithium manganese dioxide battery for EPIRBs

The EPIRB 3.M20 battery is based on M20 D-size spiral cells with high current and pulse capability. It is ideally suited for the demands of EPIRBs (Emergency Position Indicating Radio Beacons).

Benefits

- High drain / high pulse capability
- High voltage response, stable even after long dormant periods
- No voltage delay
- Low self-discharge compatible with long operating life (less than 1 % per year after 1 year of storage at 20 °C)
- High energy density
- Light weight
- Wide operating temperature range
- Superior resistance to corrosion
- Easy integration into EPIRBs

Key features

- 3 M20 cells in 3S1P configuration
- Safe, hermetic cell construction with glass-to-metal seal, safety vent and stainless steel container
- Non-pressurized cells
- Protection against abusive conditions with integrated polyswitch and diode
- Centered tube for secure mounting in EPIRBS
- Versions without centered tube and different cable configurations available on request
- Restricted for transport (class 9)
- Manufactured in Germany

Designed to meet all major quality, safety and environmental standards

- Safety: UL 1642 (File MH 12609)
- Transport: UN 3090 and UN 3091
- Quality: ISO 9001, World Class Continuous program
- Environment: ISO 14001, RoHS and REACH compliant

Typical applications

- EPIRB (Emergency Position Indicating Radio Beacon) COSPAS-SARSAT, 406 MHz

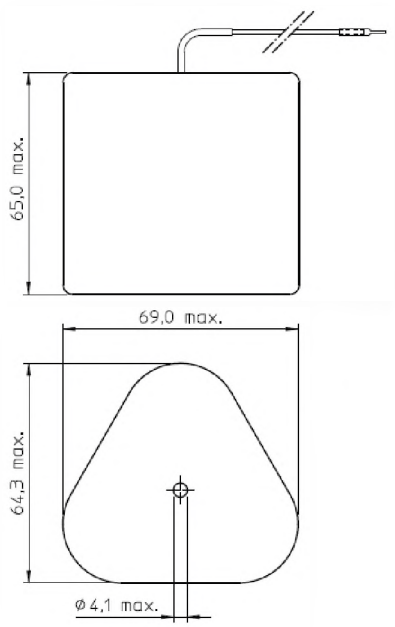
Electrical characteristics	
Typical capacity (at +20°C / +68°F, 150 mA discharge rate, 6.0 V cut-off voltage) [1]	12.6 Ah
Open-circuit voltage	9.9 V
Nominal voltage (under 1 mA at +20°C)	9.0 V
Nominal energy (at 150 mA, +20°C, 6.0 V cut-off voltage)	108 Wh
Maximum discharge current (continuous and pulse) [2]	2 A

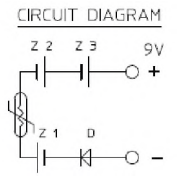
Physical characteristics	
Length	69.0 mm / 2.72 in
Width	64.3 mm / 2.53 in
Height	65.0 mm / 2.56 in
Typical weight	380 g
Terminals	Optional
Battery casing	Shrink sleeve

Operating conditions		
Operating temperature range		- 40°C / + 72°C (- 40°F / + 161°F)
Storage temperatures	Recommended	+ 35°C (+ 95°F) max.
	Allowable [3]	- 55°C / + 90°C (- 67°F / + 194°F)

[4]

[1] *Can vary depending on current drain, temperature and cut-off voltage.*
[2] *Packs for higher currents are optionally available. Consult .*
[3] *Long-time storage at high temperature may affect performance. Consult .*
[4] *The part numbers of modified versions (e.g. with terminals / without centered tube) may be different*





Built-in circuit protection elements

- Polyswitch preventing short-circuit / over-current and over-heating
- Charge protection diode

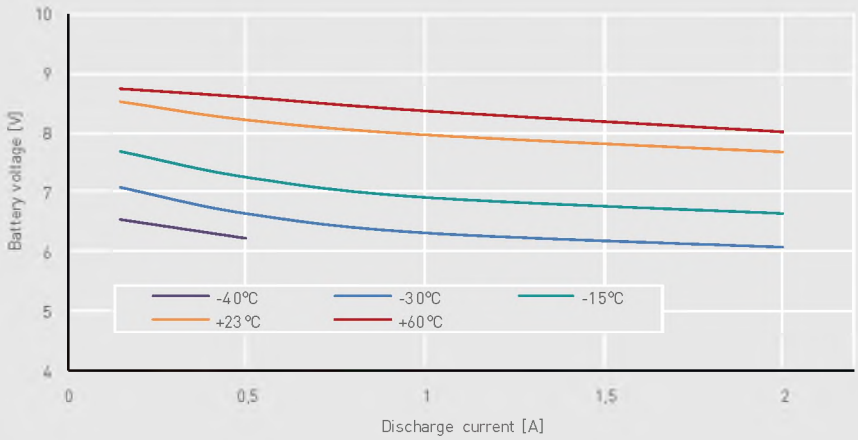
Storage

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

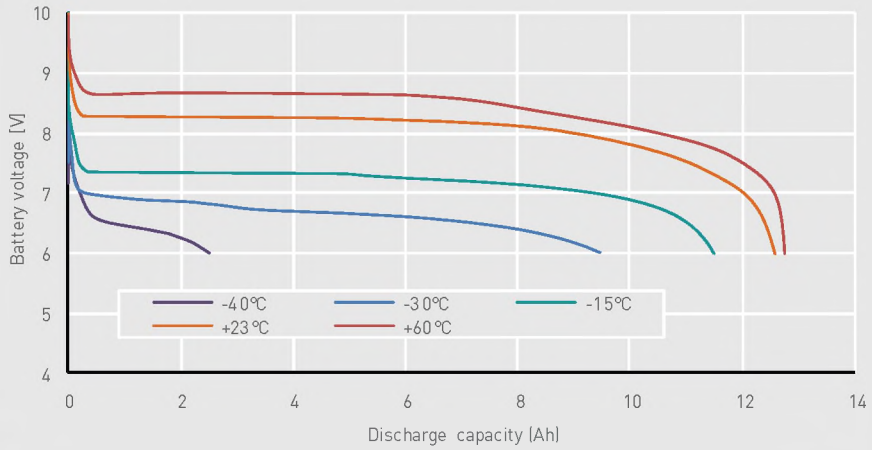
Warning

- Fire, explosion and burn hazard
- Do not charge, short-circuit, crush, disassemble, heat above +100°C (+212°F), incinerate, or expose cell contents to water

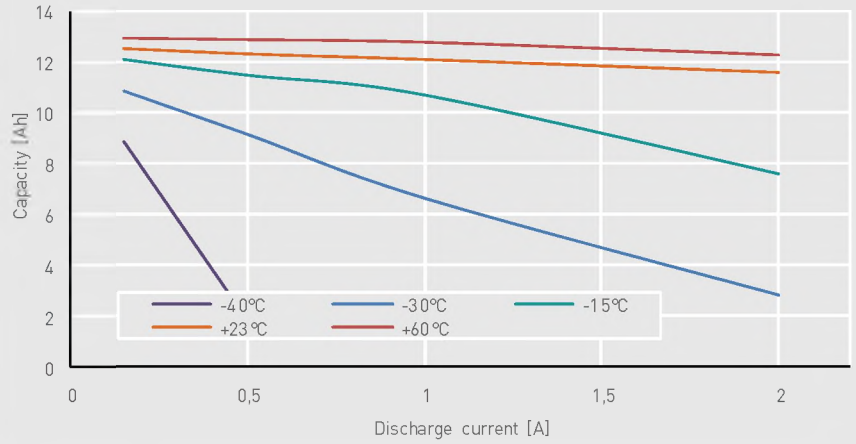
Voltage plateau vs. current and temperature (at mid-discharge)



Typical discharge profile vs. temperature under 0.5A



Capacity vs. current at various temperatures



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