



Primary Lithium Battery

Equal lifetime to electronic devices



Lithium Battery

Company Introduction

Founded in 2002 by Mr. Dai Jianguhua, an initiator of primary lithium battery in China, Fanso Battery is the most qualified manufacturer of primary lithium batteries in China with experienced specialists and technicians in this field for over 30 years. Accumulated experience and application data leads constantly innovation of technologies and equipment for lithium battery industry.

Our main products are 3.6V Li-SOCl₂ batteries and 3.0V Li-MnO₂ batteries. Equipped with 20 advanced production lines, we have the capability of 120 million units annually.

Our batteries are mainly applied to wireless market——LWD&MWD for oil exploration, electronic pressure gauge, flow meter, TPMS, smart water meters, smart gas meters, smart electricity meter, security, alarm system, RFID, RAM and CMOS circuit, geothermal heat detector, underwater ordnance, sonar, GPS and various force stations.

Fanso is ISO9001 certified and our batteries are approved by UL, IEC, CE, RoHs, UN and many other international standards. Fanso is awarded as Hi-Tech Company by Hubei Province.

Fanso sticks to continuously refining and innovating, satisfying our customers by utmost service.

Choose Fanso, choose what you need.

FANSO History

- (1) 2002---Fanso Technology founded;
- (2) 2005---Fanso spiral battery own China Torch Project;
- (3) 2006---Fanso own Hubei Hi-tech Enterprises;
- (4) 2007---Start to solve voltage delay issues;
- (5) 2008---Fanso get UL1642 approval(MH46165);
- (6) 2008---Fanso patented safety vent for Li-Socl₂ spiral batteries;
- (7) 2008---Fanso invent 1st Ultrathin Li-Mno₂ in China;
- (8) 2010---Fanso start the automatic production lines;
- (9) 2015---Fanso get EN60084-4:2007 under CE standards;
- (10) 2018---Fanso draft standard for high temperature and RFID batteries;
- (11) 2019---Fanso start the 1st Ultrathin Li-Mno₂ production line in China;
- (12) 2019---Fanso gain IOTE Golden Praise



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Li-SOCl₂ Battery – Coin Types

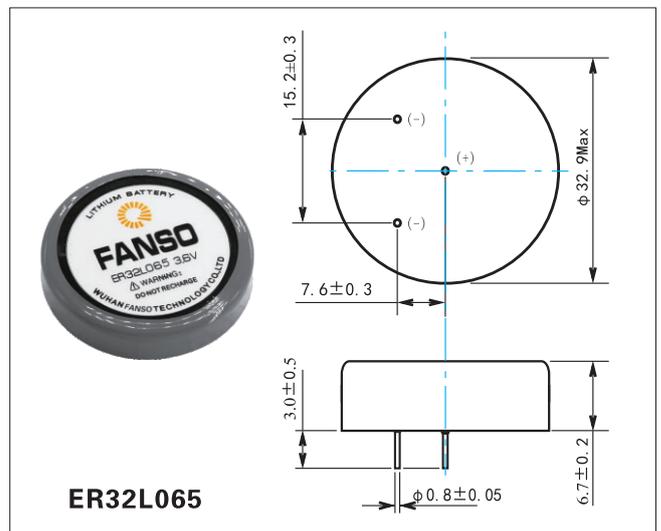
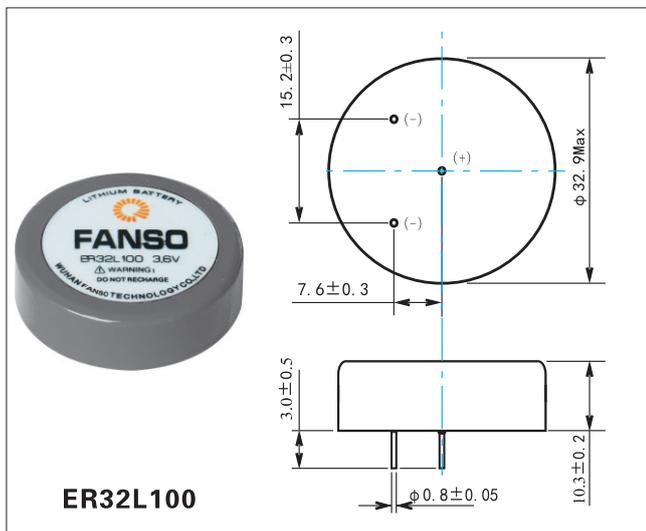
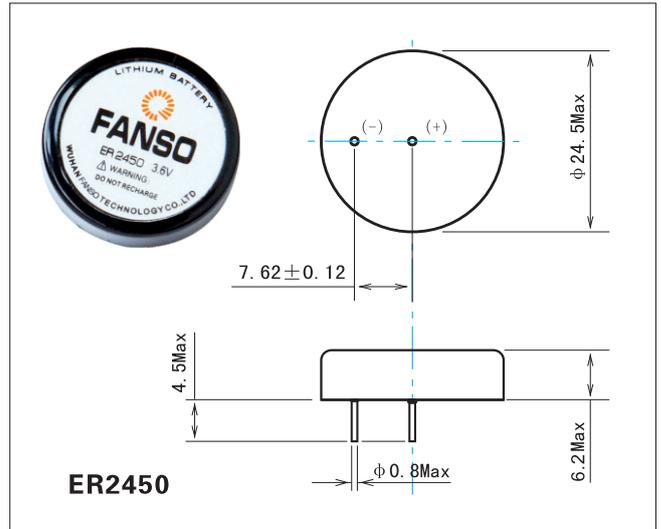
Operate Temperature: -55°C ~+125°C

Key features:

- Non-restricted for transport
- Long operating life
- Compliant with IEC86-4 safety standard
- Stainless steel container and end caps
- Non-flammable electrolyte
- Wide temperature range
- High and stable operating voltage
- High energy density(700wh/kg)
- Hermetic glas-to-metal sealing

Main Application

- Utility metering
- Alarm and security devices
- Memory backup power
- Professional electronics
- Automotive electronics
- Real-time clock
- Tracking system



Model	Size	Max dimension (Ømm*mm)	Weight (g)	Nominal Voltage	Nominal capacity/current (mAh/ mA)	Max continuous Discharge current (mA)	Operate temperature (°C)	End voltage (V)
Coin bobbin type								
ER2450	--	$\phi 24.5 \times 6.2$	9	3.6	500 \ 0.5	8	-55~+125	2.0
ER32L065	1/10D	$\phi 32.9 \times 6.9$	17	3.6	1000 \ 1.0	20	-55~+125	2.0
ER32L100	1/6D	$\phi 32.9 \times 10.5$	24	3.6	1700 \ 1.0	30	-55~+125	2.0



Li-SOCl₂ High Temperature Battery

FANSO high temperature batteries can operate well under extra-low temperature environment. Discharging platform and capability reach or approach the world's highest level. Equipped with a team of industry specialists

Mainly applied for : Downhole storage apparatus, electronic pressure gauge, flow meter, and MWD/LWD/FEWDQ (e.g. APS, GE, HL) in oil industry; TPMS; Geothermal meter; Aerospace, sonar, navigation and radio station for military using.

Model	Size	Max dimension (Φmm*mm)	Nominal Voltage (V)	Max continuous Discharge current (mA)	Nominal capacity/current (mAh/mA)	Max pulse current (mA)	Operate temperature (°C)
ER14250S	1/2AA	14.65X25.2	3.6	10	700 \ 10	50	-20~150
ER14505S	AA	14.65X50.5	3.6	50	1800 \ 20	100	-20~150
ER25500S	C	24.8X50.0	3.6	50	5000 \ 50	100	-20~150
ER251020S	CC	24.8X102.0	3.6	100	14000 \ 100	200	-20~150
ER34615S	D	33.5X61.5	3.6	100	14000 \ 100	200	-20~150
ER341245S	DD	33.5X124.5	3.6	100	30000 \ 200	300	-20~150

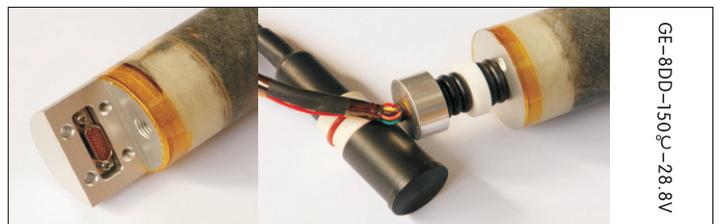
There is no specification of high/middle/low discharge current here. If more information needed, please feel free to contact us.



High Temperature Li-SOCl₂ Battery Packs



FOR APS-10DD
-150°C-36V



GE-8DD-150C-28.8V



FOR HL-8DD-150°C
-28.8V

Li-ion Capacitor Battery

With the increasing demand of the market for the capacity and power of battery, lithium batteries and capacitors have become popular and applicable. Lithium battery has the advantages of high energy density and low self discharge rate, but the power density is low. While the capacitor has the features of high power density and long cycle life, but the energy density is low. In order to meet the demand of high energy density and high output demands, combination of lithium battery and capacitor.

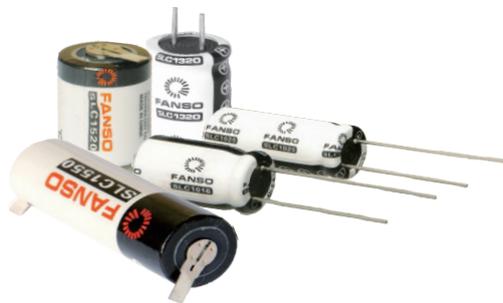


Li-Socl2 battery + capacitor

Model	Nominal voltage/V	Nominal capacity/mAh	Max. pulse current/mA	Dimension/mm
ER14250H+SLC1520	3.6	1200	1	Φ16.5*47
ER26500H+SLC1520	3.6	8500	2	Φ29.0*47
ER34615H+SLC1520	3.6	19000	5	Φ34.0*78.0
ER14250H+SLC1550	3.6	1200	1	55.0*32.0*16.0
ER26500H+SLC1550	3.6	8500	2	55.0*44.0*28.0
ER34615H+SLC1550	3.6	19000	5	64.0*50.0*35.0
ER14250H+SLC1016	3.6	1200	1	27.0*25.0*15.0
ER26500H+SLC1016	3.6	8500	2	52.0*37.0*27.0
ER34615H+SLC1016	3.6	19000	5	63.0*45.0*35.0
ER14250H+SLC1025	3.6	1200	1	27.0*25.0*158.0
ER26500H+SLC1025	3.6	8500	2	52.0*37.0*28.0
ER34615H+SLC1025	3.6	19000	5	63.0*45.0*35.0

Warning: Do not recharge, over discharge, short circuit, crush, disassemble, heat above work temperature, incinerate, or expose contents to water. Dispose of used batteries properly in case of explosion, burn and leakage.

Li-ion Capacitor



FANSO super lithium-ion capacitor(SLC) can deliver high pulse and work at a wide temperature range from -40°C to 85°C). Combination consists of long life Li-soc12 battery and li-ion capacitor in parallel connection, which is an ideal power source for intelligent meters and other applications requiring high pulse current.

- Key features:**
- Low self-discharge rate
 - Excellent performance at high and low temperature
 - Excellent high pulse capability
 - Minimized passivation effect
 - Utilized electric characteristics from both ER batteries and SLC
 - Reliability and safety
 - Long operating life

- Main application:**
- Data collection and recording
 - Emergency rescue system
 - GPS tracking system
 - Radio frequency identification(RFID)
 - Remote wireless transmission system
 - Communication device
 - Intelligent transportation

Model	Max charging voltage/V	Capacity (3.65V)/mAh	Max Current		End voltage/V	ESR/ Ω	Dimension/mm			
			Constant	Pulse			D	p	L	d
SLC1016	3.95	12	500	1000	3.0	250	10.0 \pm 0.5	5.0 \pm 0.5	16.0 \pm 0.2	0.6 \pm 0.05
SLC1025	3.95	25	1000	2000	3.0	100	10.0 \pm 0.5	5.0 \pm 0.5	25.0 \pm 0.2	0.6 \pm 0.05
SLC1520	3.95	60	500	2000	3.0	150	15.1 \pm 0.1		21.0 \pm 0.1	
SLC1550	3.95	170	2000	5000	3.0	100	15.1 \pm 0.1		51.0 \pm 0.1	

Lithium Battery 9V



- Key features:**
- Wide temperature range
 - Low self-discharge rate(less than 1% at 25°C)
 - Non-restricted transport
 - Compliant with IEC86-4 safety standard
 - High and stable operating voltage
 - Non-flammable electrolyte
 - High energy density
 - Compliant with IEC86-4 safety standard
 - Long operating life

- Main application:**
- Utility metering
 - Alarm and security
 - Smoke detector
 - Memory backup power
 - Medical

Model	Max dimension (Φ mm*mm)	Weight (g)	Nominal Voltage (V)	Nominal capacity/current (mAh/mA)	Max continuous Discharge current (mA)	Max pulse (mA)	Operate temperature (°C)	End voltage (V)
ER9V	49.1X26.8X17.4	31	10.8	1200/1.0	15	40	-55~+85	6.0V
CP9V	49.5X27.5X18.0	29	9	1200/1.0	120	400	-40~+60	5.4V
CP9V	48.5x25.7X17.0	28	9	800/1.0	100	300	-40~+60	5.4V



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Button-type Li/MnO₂ Battery



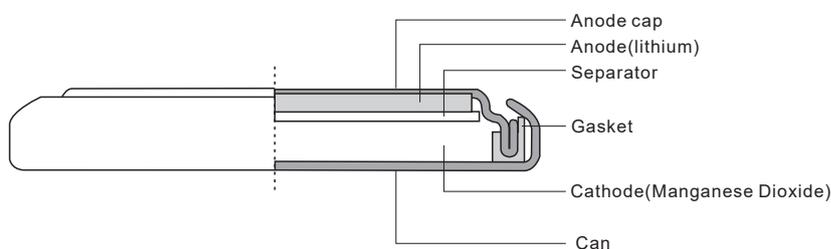
● Application

1. Mother board, control computer, notebook computer, remote control, etc.
2. Card electronic products, such as electronic dictionary. etc.
3. Small crafts, such as flash tourist shoes, necklaces, etc.
4. Electronic watch, flash light, etc.

● Features

- 1, High voltage, single to 3V
- 2, Stable self-discharge rate
- 3, Storage capability
- 4, Wide temperature range
- 5, Safety and reliability

P r o f i l e



Model	Voltage/V	Capacity/mAh	Load/kΩ	End voltage/V	Temperature(Diameter/mm	Height/mm	Weight/g
CR1616	3	55	30.0	2.0	23±3	16	1.6	1.1
CR1620	3	75	47.0	2.0	23±3	16	2.0	1.3
CR1632	3	130	47.0	2.0	23±3	16	3.2	1.8
CR2016	3	90	30.0	2.0	23±3	20	1.6	1.7
CR2025	3	150	15.0	2.0	23±3	20	2.5	2.7
CR2032	3	220	15.0	2.0	23±3	20	3.2	3.2
CR2450	3	550	7.5	2.0	23±3	24.5	5.0	7.2
CR2477	3	750	2.0	2.0	23±3	24.5	7.7	10

Warning: Do not recharge, over discharge, short circuit, crush, disassemble, heat above work temperature, incinerate, or expose contents to water. Dispose of used batteries properly in case of explosion, burn and leakage.

Soft package of 3.0V Li-MnO₂ battery



Key features:

- High and stable operating voltage
- Low self-discharge rate(less than 2% at 20°C)
- Compliant with IEC86-4 safety standard
- Nickel-clad steel container
- Non-restricted transport
- Hermetic glass-to-metal sealing

Main application:

- Active RFID
- Alarm and security
- Smoke detector
- Memory backup power
- Medical

Model	Max dimension (Ømm*mm)	Weight (g)	Nominal Voltage	Nominal capacity/current (mAh/mA)	Max continuous Discharge current (mA)	Operate temperature (°C)	End voltage (V)
Cp223830	30×39×2.2	4	3	350\1.0	80	-40~+60	1.8
CP224147	48.3×45.5×2.2	6.5	3	800\1.0	200	-40~+60	1.8
CP224348	48×43×2.2	6	3	750\1.0	200	-40~+60	1.8
CP305050	51×56.5×3.2	14	3	1600\1.0	600	-40~+60	1.8
CP353030	28.5×29×3.5	3	3	350\1.0	100	-40~+60	1.8
CP382025	20.5×25×4	3.5	3	350\1.0	80	-40~+60	1.8
CP383047	47.5×31×4	9.5	3	1350\1.0	400	-40~+60	1.8
CP404147	41×48×4	14	3	1800\1.0	600	-40~+60	1.8
CP405050	51×51×4.4	18	3	2400\1.0	800	-40~+60	1.8
CP502025	26×20.5×5.2	4	3	450\1.0	120	-40~+60	1.8
CP502425	26×24.5×5.2	5.5	3	550\1.0	150	-40~+60	1.8
CP502440	41×24.5×5.2	7.5	3	1200\1.0	300	-40~+60	1.8
CP502627	26×27×5.2	6.5	3	750\1.0	150	-40~+60	1.8
CP503448	35×49×5.2	15	3	2000\2.0	600	-40~+60	1.8
CP603448	35×49×6.2	18	3	2300\2.0	1000	-40~+60	1.8
CP702440	24.5×50.5×7	11	3	1500\1.0	500	-40~+60	1.8
CP754560	60.5×45×7.7	37	3	5000\5.0	1500	-40~+60	1.8
CP802432	32.5×24.5×8.2	9	3	1300\1.0	400	-40~+60	1.8
CP803665	66×36.5×8.2	38	3	5000\5.0	1500	-40~+60	1.8
CP904560	60×45×9.2	43	3	6200\5.0	1500	-40~+60	1.8
CP1003550	35.5×49×10.5	33	3	4200\5.0	1500	-40~+60	1.8
CP1003742	38×42×10.8	30	3	3800\2.0	2000	-40~+60	1.8
CP1004560	47×60×10.2	47	3	7200\5.0	2000	-40~+60	1.8
CP1202425	25.5×26×12	7.5	3	1100\1.0	300	-40~+60	1.8

Warning: Do not recharge, over discharge, short circuit, crush, disassemble, heat above work temperature, incinerate, or expose contents to water. Dispose of used batteries properly in case of explosion, burn and leakage.

Cylindrical Li-MnO₂ Battery with High Power



Key features:

- High and stable operating voltage
- Low self-discharge rate (less than 2% at 20°C)
- Compliant with IEC86-4 safety standard
- Nickel-clad steel container
- Non-restricted transport
- Hermetic glass-to-metal sealing

Main application:

- Alarm and security devices
- Smoke detector
- Medical devices
- Real-time clock
- Professional electronics

Storage: The storage area should be clean, cool (preferably below +20°C, not exceeding +30°C), dry and ventilated.

Model	Size	Max dimension (Φmm*mm)	Weight (g)	Nominal Voltage	Nominal capacity/current (mAh/mA)	Max continuous Discharge current (mA)	Operate temperature (°C)	End voltage (V)
CR14250H	1/2AA	14.5X25.6	12	3	850\0.5	7	-40~+70	2.0
CR14250E	1/2AA	14.5X25.2	8.5	3	650\5	250	-40~+70	2.0
CR14505E	AA	14.5X50.5	17	3	1400\5	1000	-40~+70	2.0
CR17335E	2/3A	17.0X33.5	17	3	1500\5	1000	-40~+70	2.0
CR17450E	AG	17.0X45.0	26	3	2200\10	1000	-40~+70	2.0
CR17505E	A	17.0X50.5	30	3	2400\10	1000	-40~+70	2.0
CR26500E	C	26.2X50.5	55	3	5000\10	1000	-40~+70	2.0
CR34615E	D	34.0X61.5	125	3	12000\10	2000	-40~+70	2.0



Li-MnO₂ 123A Batteries



Model	Size	Max dimension (Φmm*mm)	Weight (g)	Nominal Voltage	Nominal capacity/current (mAh/mA)	Max continuous Discharge current (mA)	Operate temperature (°C)	End voltage (V)
CR2		15.5X27.0	13	3	850\5	800	-40~+70	2.0
CR-P2		35X19.5X36	42	6	1500\5	1000	-40~+70	4.0
CR123A		17.0X34.5	16	3	1500\5	1000	-40~+70	2.0
2CR5		34X17X45	39	6	1500\5	1000	-40~+70	4.0

Warning: Do not recharge, over discharge, short circuit, crush, disassemble, heat above 100°C, incinerate, or expose contents to water. Dispose of used batteries properly in case of explosion, burn and leakage.

Li-SOCl₂ Battery with High Power



Patented Safety Technology

Directly connect positive and negative, current max up to 25A, surface temperature reach up to 110°C, battery bottom open up, no fire, explosion and other abnormal phenomena, other areas of the battery are normal

Key features

- Long shelf lifetime(self-discharge rate less than 1% at 25°C)
- High energy density
- Long operating life
- Stainless steel tank and end caps
- Wide temperature range
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Compliant with IEC86-4 standard
- Non-restricted for transport
- High and stable operating voltage

- Main applications:**
- Utility metering
 - Alarm and security devices
 - Memory backup power
 - Professional electronics
 - Real-time clock
 - Tracking/GPS system
 - Military system
 - Automotive electronic

Storage: The storage area should be clean, cool (preferably below +20°C, not exceeding +30°C), dry and ventilated.

Model	Size	Max dimension (Ømm*mm)	Weight (g)	Nominal Voltage (V)	Nominal capacity/current (mAh/mA)	Max continuous Discharge current (mA)	Operate temperature (°C)	End voltage (V)
ER14335M	2/3AA	φ 14.5X33.5	13	3.6	1350\1.0	150	-55~+80	2.0
ER14505M	AA	φ 14.5X50.5	19	3.6	2100\1.0	400	-55~+80	2.0
ER17335M	2/3A	φ 17.0X33.5	19	3.6	1700\3.0	200	-55~+80	2.0
ER17505M	A	φ 17.0X50.5	26	3.6	2800\3.0	1000	-55~+80	2.0
ER18505M	—	φ 18.5X50.5	30	3.6	3500\5.0	1000	-55~+80	2.0
ER26500M	C	φ 26.2X50.0	57	3.6	6000\10	1500	-55~+80	2.0
ER34615M	D	φ 34.2X61.5	109	3.6	13000\15	1800	-55~+80	2.0

Warning: Do not recharge, over discharge, short circuit, crush, disassemble, heat above 100°C, incinerate, or expose contents to water. Dispose of used batteries properly in case of explosion, burn and leakage.



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Li-SOCl₂ Battery with High Capacity



Key features

- Long shelf lifetime (self-discharge rate less than 1% at 25°C)
- High energy density
- Long operating life
- Stainless steel tank and end caps
- Wide temperature range
- Hermetic glass-to-metal sealing
- Non-flammable electrolyte
- Compliant with IEC86-4 standard
- Non-restricted for transport
- High and stable operating voltage

Main applications: ● Utility metering ● Alarm and security devices ● Memory backup power ● Professional electronics
● Real-time clock ● Tracking/GPS system ● Military system ● Automotive electronic

Storage: The storage area should be clean, cool (preferably below +20°C, not exceeding +30°C), dry and ventilated.

Model	Size	Max dimension (Φmm*mm)	Weight (g)	Nominal Voltage (V)	Nominal capacity/current (mAh/mA)	Max continuous Discharge current (mA)	Operate temperature (°C)	End voltage (V)
ER14250H	1/2AA	φ 14.5X25.2	10	3.6	1200\1.0	20	-55~+85	2.0
ER14335	2/3AA	φ 14.5X33.5	13	3.6	1650\1.0	40	-55~+85	2.0
ER14505H	AA	φ 14.5X50.5	18	3.6	2600\1.0	50	-55~+85	2.0
ER17335	2/3A	φ 17.0X33.5	18	3.6	1900\1.0	50	-55~+85	2.0
ER17505	A	φ 17.0X50.5	24	3.6	3600\2.0	70	-55~+85	2.0
ER18505H	—	φ 18.5X50.5	30	3.6	4000\2.0	70	-55~+85	2.0
ER26500H	C	φ 26.2X50.0	53	3.6	8500\2.0	100	-55~+85	2.0
ER261020H	CC	φ 26.2X102.0	101	3.6	16000\2.0	150	-55~+85	2.0
ER34615H	D	φ 34.2X61.5	103	3.6	19000\5.0	150	-55~+85	2.0
ER341245H	DD	φ 34.2X124.5	200	3.6	36000\10	300	-55~+85	2.0

Warning: Do not recharge, over discharge, short circuit, crush, disassemble, heat above 100°C, incinerate, or expose contents to water.
Dispose of used batteries properly in case of explosion, burn and leakage.



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Terminals for single cells(can be customized)

<p>T=0.2</p> <p>+ -</p> <p>-/T</p>	<p>T=0.2</p> <p>+ -</p> <p>-/2PT</p>	<p>-/P</p>
<p>T=0.2</p> <p>+ -</p> <p>-/3PT</p>	<p>T=0.2</p> <p>+ -</p> <p>-/3TP</p>	<p>Connector Type1</p>
<p>T=0.2</p> <p>+ -</p> <p>-/3PF</p>	<p>T=0.2</p> <p>+ -</p> <p>-/3FP</p>	<p>Connector Type2</p>
<p>T=0.2</p> <p>+ -</p> <p>-/4PT</p>	<p>T=0.2</p> <p>+ -</p> <p>-/4PF</p>	<p>Case Type</p>

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