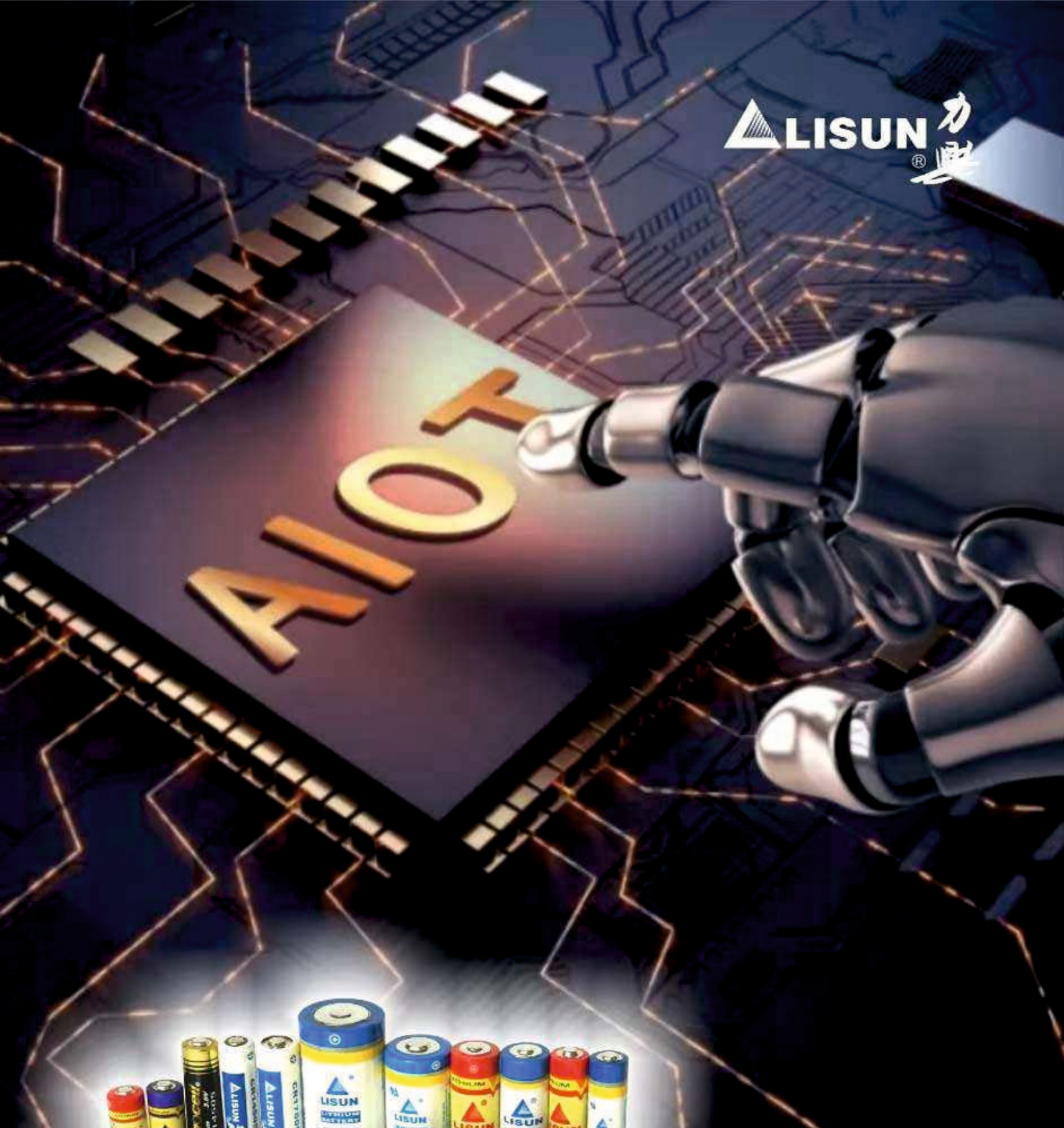




Lithium Batteries

锂 电 池

Giga-tek BATTERIES
கிகாடெக் பேட்டரி | गीगाटेक बैटरी

Marketed in India exclusively by : **GIGATEK BATTERIES PVT. LTD.,**
For Customer feedback and enquiries, please contact : 8344221177
customercare@gigatekbatteries.com 9840221177
www.gigatekbatteries.com

Lithium Battery
一次锂电池



武汉力兴（火炬）电源有限公司是国家级高新技术企业。公司主要产品有锂锰电池、锂亚电池、锂离子电池，广泛应用于各种仪器、仪表、便携式设备、计算机、照相机、玩具等。

公司于1998年开始相继通过英国BSI公司ISO9001质量保证体系认证，ISO14001环境管理体系认证，OHSAS18001职业健康安全认证，以及美国UL认证，欧盟CE认证，华硕公司供应商资质认证。

公司产品先后被列为国家科委火炬计划，国家经贸委工业性实验计划、湖北省重大新产品专项计划和武汉市重大新产品

人工智能物联网在社会活动中的应用　Application of AI +IoT (artificial intelligence internet of things) in social activities.



开发计划项目，并荣誉获得湖北省名牌产品称号。

公司近几年一直被列为湖北省重点机电产品出口企业。产品出口市场遍及欧洲、北美、东南亚及台湾、香港等地区。

Wuhan Lixing (Torch) Power Sources Co., Ltd , is a national hi-tech enterprise located in the Guandong Technical & Industrial Zone. It is one of the key export enterprises for mechanical and electrical products , of which the most are exported to Europe , North America,South-east Asia and Hongkong , etc.

Its products cover Li-MnO_2, Li-$SOCL_2$ and Li-ion batteries that are applied to instruments, meters ,computers,cameras.etc.The main products have been listed in the National torch Project , the Industrial production.The National Economic and Trading Committee , and the Major New Products Project of Hubei Province.

From 1998 to 2001 , the company successively passed ISO9001 Quality System Authentication , the Security Authentication of American Underwriter Laboratories(UL) , the Security Authrntication of Europe(CE) , ISO14001 Environment System Authentication , OHSAS18001 Occupational Health and security Managemenrt , and ASUS Green Partner.



LIXING®

Button-type Li/MnO_2 Battery

锂二氧化锰扣式电池



● Application

1.Memory power for Notebook PC, CMOS
2.Main power for electronic products (e.g. Electronic dictionary)
3.Main power for small craftwork (e.g. Flash tour shoes, Necklace, etc)
4.Watch, Remote Controller etc

● 用途

1、计算机主板记忆电源、税控机、笔记本电脑、遥控器等
2、卡片式电子产品的工作电源（如电子字典等）
3、小型工艺品的工作电源（如闪光旅游鞋、项链等）
4、电子手表、遥控器等

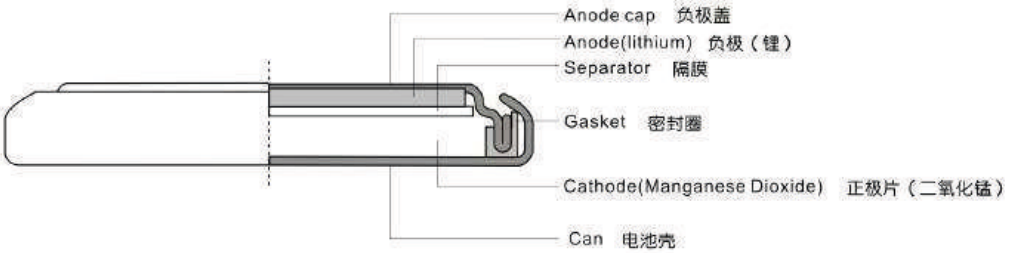
● Characteristics

1.High-voltage (3V) 2.Wide working temperature range
3.Stable discharge voltage 4.Excellent safety performance
5.Excellent storage performance and low self-discharge rate

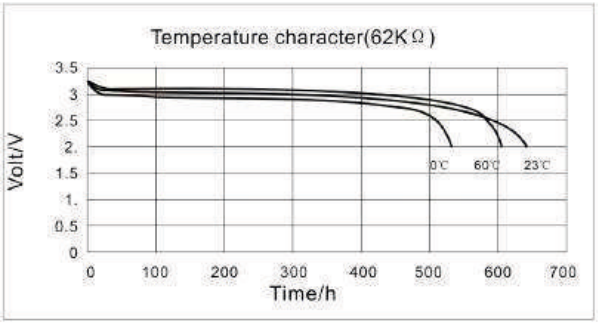
● 特性

1、单只电池电压高（3V） 2、放电电压稳定可靠
3、储存性能好，年自放电率低 4、使用温度范围广
5、安全性能优良

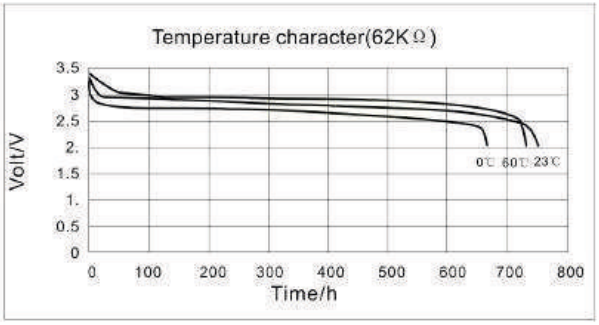
Cross section 剖面图



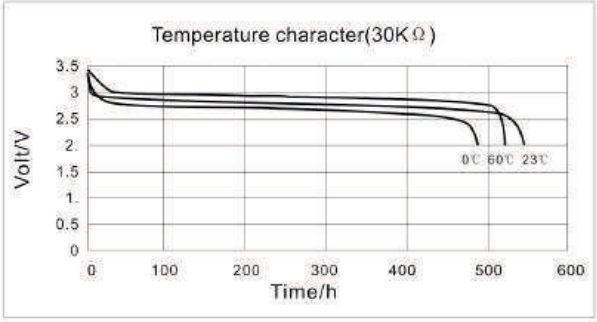
CR1216 Discharge curve



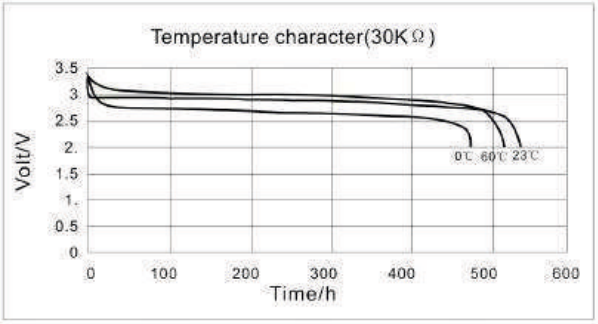
CR1220 Discharge curve



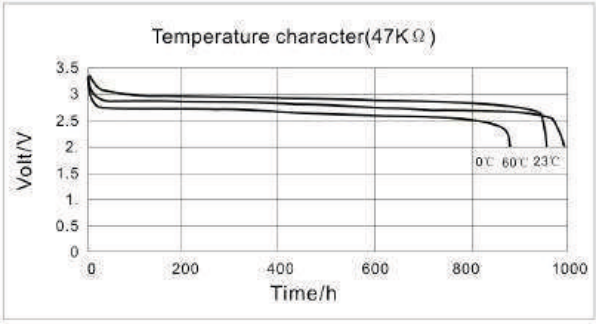
CR1225 Discharge curve



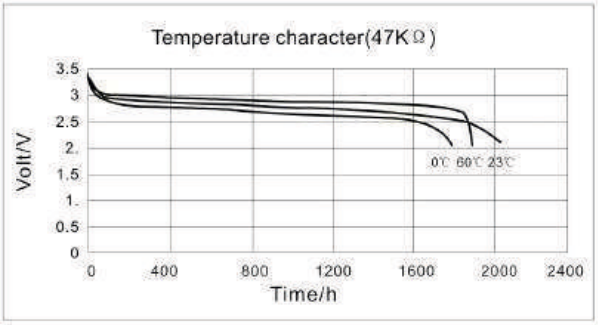
CR1616 Discharge curve



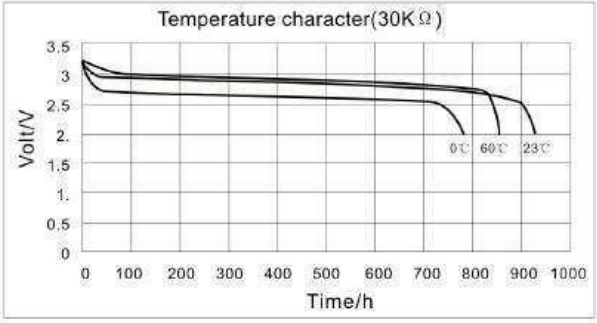
CR1620 Discharge curve



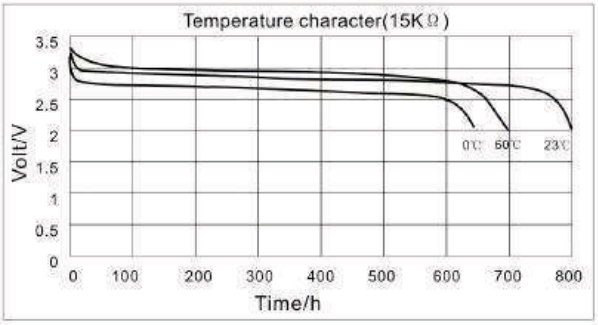
CR1632 Discharge curve



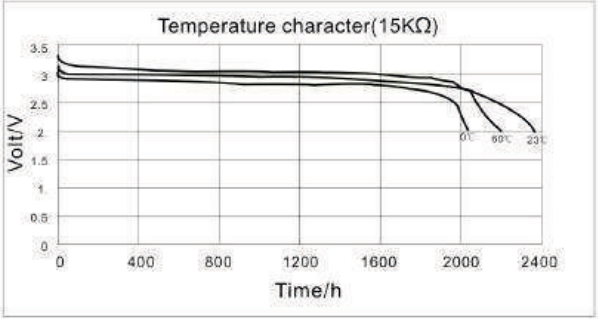
CR2016 Discharge curve



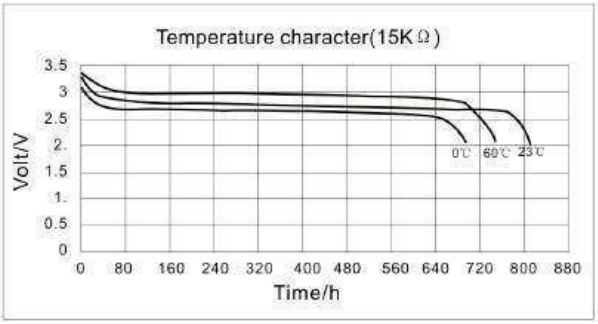
CR2025 Discharge curve



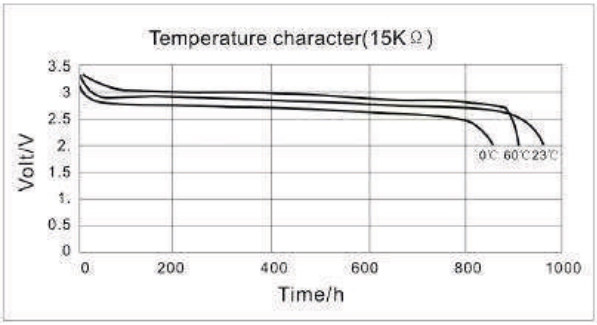
CR2032 Discharge curve



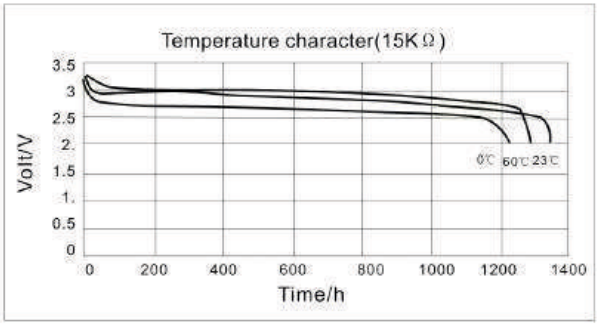
CR2320 Discharge curve



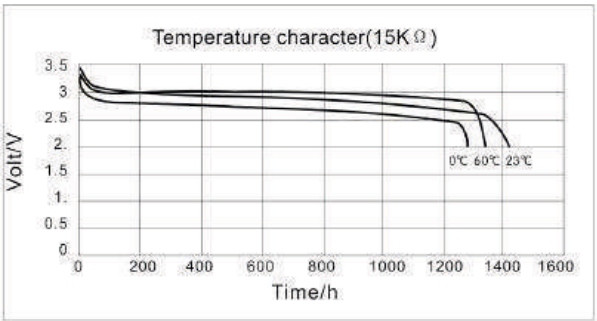
CR2325 Discharge curve



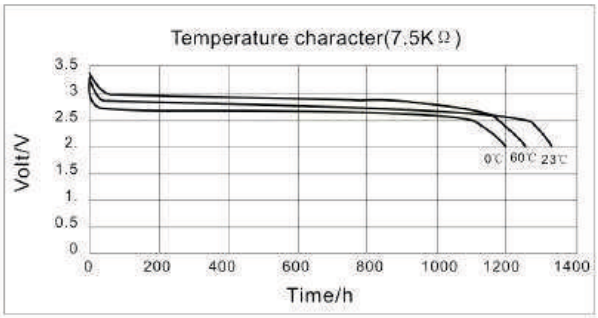
CR2330 Discharge curve



CR2430 Discharge curve



CR2450 Discharge curve





托盘包装 pallet packaging



糖果包装 Candy packaging



可充电锂离子扣式电池
Lithium ion button cell for smart wearable device

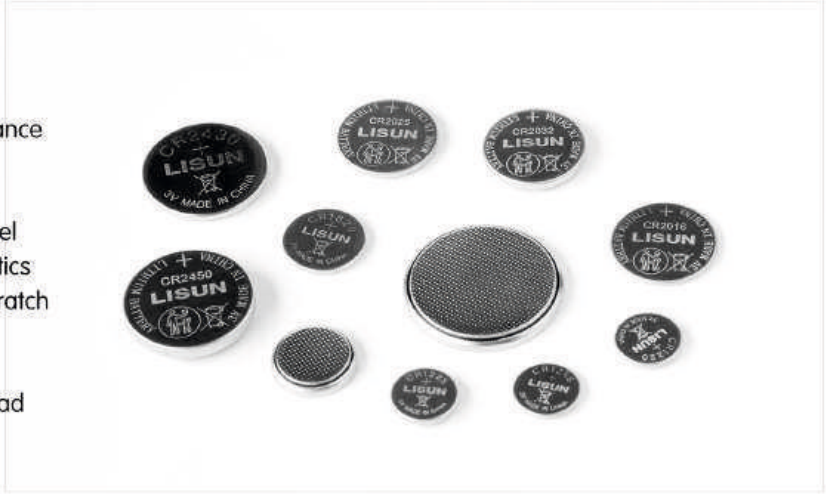


锂二氧化锰可充电扣式电池
ML Lithium Manganese Dioxide Rechargeable Battery

LISUN®

Button-type Li/MnO_2 Battery

高端锂二氧化锰扣式电池

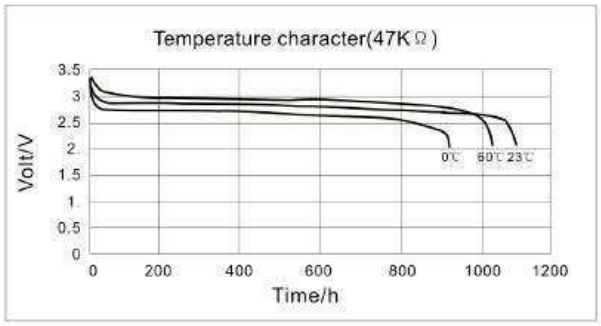


Lisun battery series is launched with high-performance reflected in the following features:

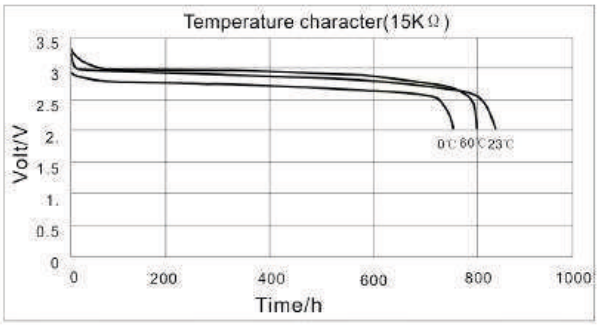
1. The battery shell is made of high quality nickel plated stainless steel band and has the characteristics of low contact resistance, excellent appearance, scratch resistance capability, etc
2. The battery has the high nominal capacity
3. The battery does a good job under heavy load discarge and pulse discharge.

Lisun 品牌电池是我司推出的一款高性能品牌电池，具有以下特点：
1.电池外壳采用优质的专用不锈钢镀镍带，具有接触电阻低，外观优异，抗划伤能力强等特点。
2.电池具有较高的额定容量。
3.电池大电流放电及脉冲放电性能优异。

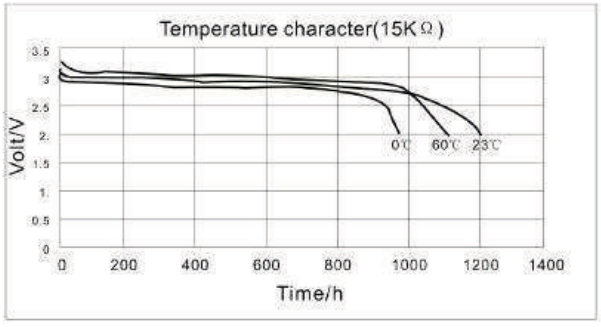
CR1620 Discharge curve



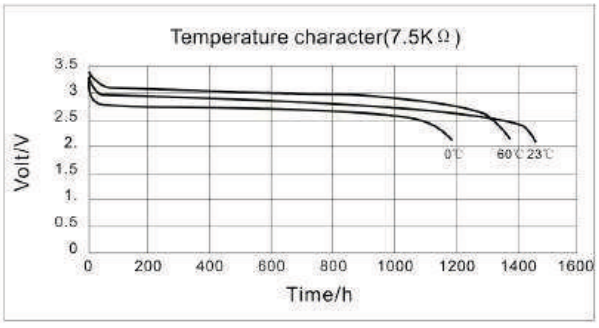
CR2025 Discharge curve



CR2032 Discharge curve



CR2450 Discharge curve



Brand	Model	Nominal Voltage (V)	Nominal Capacity (mAh)	Standard Discharge Load(KΩ)	End Voltage (V)	Test Temperature (℃)	Max. Diameter (mm)	Max. Height (mm)	Reference Weight (g)	Max.constant current (mA)	Max.pulse current (mA)	Operating temperature range
LIXING	CR1216	3	32	62	2.0V	23℃±3℃	12.5	1.6	0.7	2	5	-20℃~+60℃
	CR1220	3	40	62	2.0V	23℃±3℃	12.5	2.0	0.8	2	5	-20℃~+60℃
	CR1225	3	55	30	2.0V	23℃±3℃	12.5	2.5	0.9	2	5	-20℃~+60℃
	CR1616	3	55	30	2.0V	23℃±3℃	16.0	1.6	1.1	3	8	-20℃~+60℃
	CR1620	3	75	47	2.0V	23℃±3℃	16.0	2.0	1.3	3	8	-20℃~+60℃
	CR1632	3	130	47	2.0V	23℃±3℃	16.0	3.2	1.8	3	8	-20℃~+60℃
	CR2016	3	90	30	2.0V	23℃±3℃	20.0	1.6	1.7	5	17	-20℃~+60℃
	CR2025	3	150	15	2.0V	23℃±3℃	20.0	2.5	2.7	5	14	-20℃~+60℃
	CR2032	3	220	15	2.0V	23℃±3℃	20.0	3.2	3.2	4	12	-20℃~+60℃
	CR2320	3	155	15	2.0V	23℃±3℃	23.5	2.0	3.0	6	25	-20℃~+60℃
	CR2325	3	195	15	2.0V	23℃±3℃	23.0	2.5	3.5	6	25	-20℃~+60℃
	CR2330	3	260	15	2.0V	23℃±3℃	23.0	3.0	4.0	6	25	-20℃~+60℃
	CR2430	3	280	7.5	2.0V	23℃±3℃	24.5	3.0	4.5	6	21	-20℃~+60℃
	CR2450	3	550	7.5	2.0V	23℃±3℃	24.5	5.0	7.2	3	15	-20℃~+60℃
	CR2477	3	1000	7.5	2.0V	23℃±3℃	24.5	7.7	10	3	15	-20℃~+60℃
	CR3032	3	550	7.5	2.0V	23℃±3℃	30.0	3.2	7.0	6	25	-20℃~+60℃
	CR2032H	3	240	15	2.0V	23℃±3℃	20.0	3.2	3.0	5	15	-20℃~+60℃
	CR2450P	3	600	7.5	2.0V	23℃±3℃	24.5	5.0	7.2	8	20	-20℃~+60℃
LISUN	CR1620	3	75	47	2.0V	23℃±3℃	16.0	2.0	1.3	5	10	-20℃~+60℃
	CR2025	3	160	15	2.0V	23℃±3℃	20.0	2.5	2.5	5	20	-20℃~+60℃
	CR2032	3	240	15	2.0V	23℃±3℃	20.0	3.2	3.0	5	12	-20℃~+60℃
	CR2450	3	600	7.5	2.0V	23℃±3℃	24.5	5.0	7.0	3	15	-20℃~+60℃

Caution: Fire And Burn Hazard. Do Not Recharge, Short Circuit, Disassemble, Heat Above 212° F（100℃） or Incinerate. Keep Battery Out Of Reach Of Children And In Original Package Until Ready To Use. If Swallowed, Contact your Doctor Immediately.Dispose Of Used Batteries Promptly.

有着火、爆炸和灼伤的危险。不要对电池进行充电、短路、挤压、拆卸、焚烧和加热超过100℃。

Low temperature button-type $LiMnO_2$ battery

低温型扣式锂电池



With the more and more extensive application of battery, the use environment is becoming worse and worse. Which asks higher requirements for the discharge performance of the battery in the low-temperature environment. Therefore, the button battery with good low-temperature discharge performance and stable good electrical characteristics appeared and began to be applied in major electronic markets step by step.

随着应用的越来越广泛，使用环境也越来越恶劣，同时对电池在低温环境下放电性能也提出了更高的要求，因此具有良好低温放电性能以及稳定的良好电气特性的低温型扣式电池开始出现，并逐步在各大电子市场开始应用。

Application:

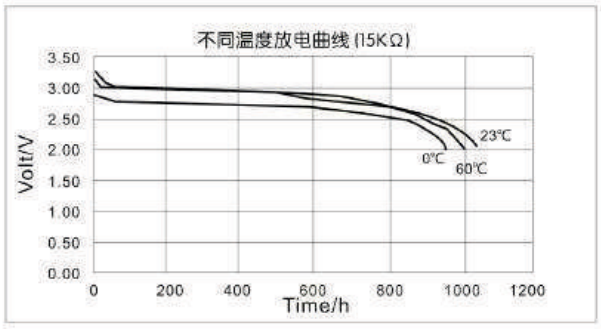
Industrial equipment, electronic labels, electronic scales, calculators, communication labels, PHS, portable vedio cameras, FA equipment, keyless entry systems, laptops, OA equipment, remote controls, medical equipment, etc.

电池用途：

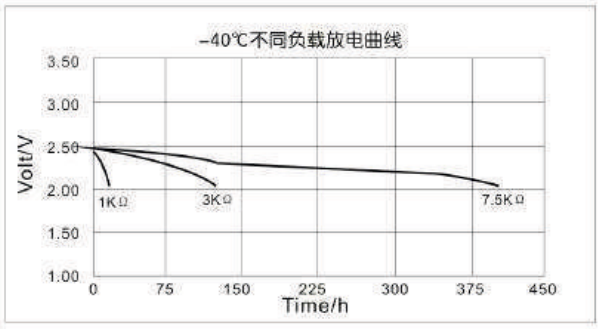
普遍应用在工业设备；电子标签；电子秤；计算器；通信标签；PHS；便携摄像机；FA设备；免钥匙进入系统；笔记本电脑；OA设备；遥控器；医疗设备等。

Model	Nominal Voltage (V)	Nominal Capacity (mAh)	Max.Constant Current (mA)	End Voltage (V)	Test Temperature (℃)	Max. Diameter (mm)
CR2032D	3	240	15	5	3.0	-40℃~+60℃
CR2450D	3	600	20	5	7.0	-40℃~+60℃

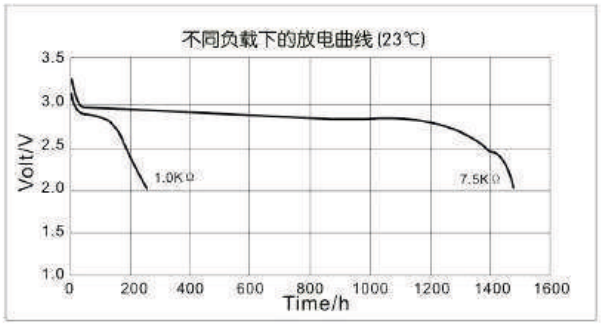
CR2032D Discharge curve



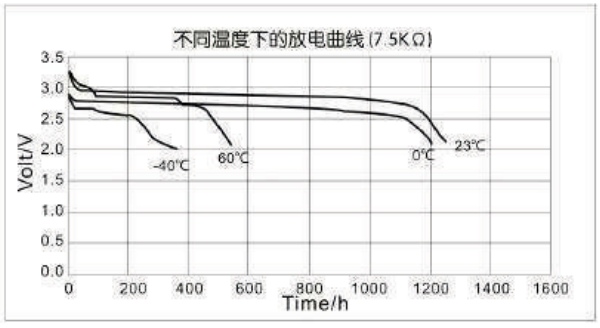
CR2032D Discharge curve



CR2450D Discharge curve



CR2450D Discharge curve



超薄CR2412



Ultra thin button-type Li/MnO_2 battery

超薄扣式锂电池

随着社会上电子产品朝着薄巧型发展，对相应的电源也有越来越薄，容量越来越高，电流越来越大的要求，因此具有较高容量较大电流的CR2412电池开始出现，并逐步在各大电子市场开始应用。

With the development of electronic products towards thin and smart type in society, the requirements for corresponding power supply are thinner and thinner in size and higher and higher in capacity and current. Therefore, CR2412 batteries with higher capacity and larger discharge current appeared and were gradually applied in various electronic markets.

电池用途： 通信标签；PHS；便携式摄像机；FA设备（测量仪器、机载微电脑、传感器）；免钥匙进入系统；胶片相机；笔记本电脑；OA设备（传真机、复印机、打印机）；移动CD/MD播放器；电子词典、数码相机；遥控器；医疗设备、收银机；台式电脑；PDA;电表；手表；计算器；掌上游戏机。

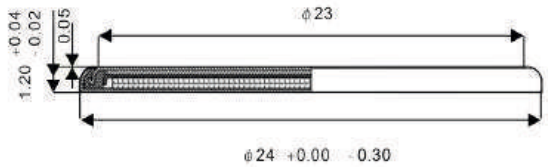
Application： Communication card, PHS, camcorder, FA equipment (measuring instrument, airborne microcomputer, sensor), keyless entry system, film camera, notebook computer, OA equipment (fax machine, copier, printer), mobile CD / MD Player, electronic dictionary, digital phase machine, remote control, medical equipment, cash register, desktop computer, PDA, electricity meter, watch, calculator, PSP.

产品说明 Product description

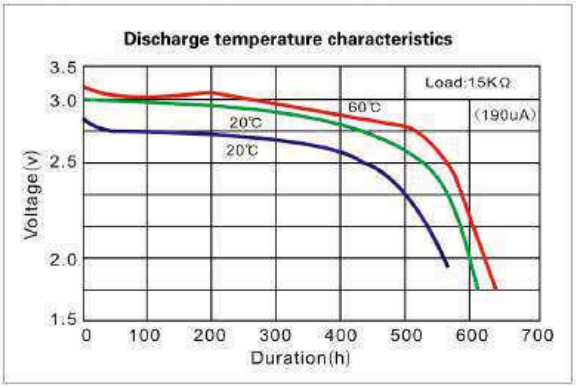
- 型号 Type：CR2412
- 标称（额定）电压 Nominal voltage：3.0V
- 标称容量 Nominal capacity：

  120mAh（持续放电至2.0V(at 15KΩ～2.0V)）
- 使用温度 Operating temperature range：-20~60℃

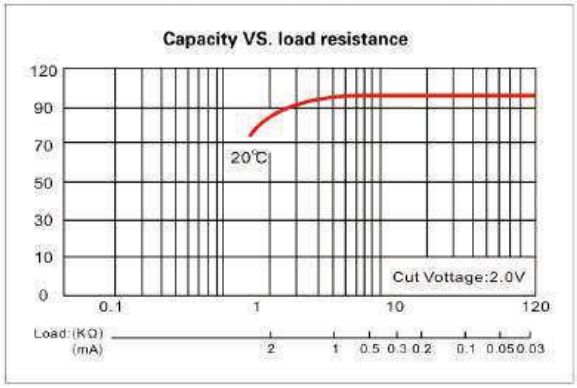
Product outline drawing 产品外形图



不同温度放电曲线



不同电流放电曲线



All the battery types mentioned above have blister card package

以上电池可做成挂卡形式包装

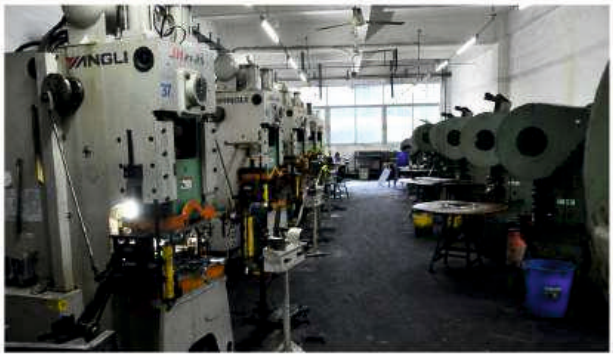










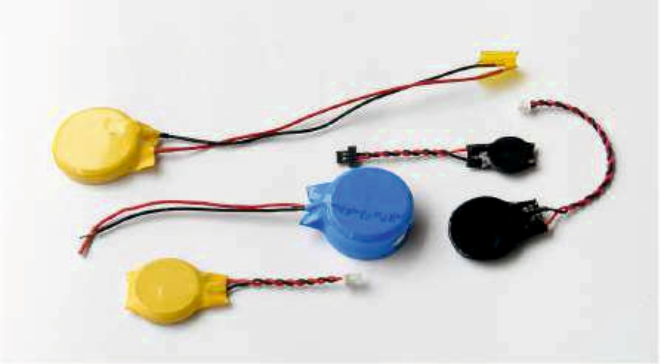

WANGLI





带引线的锂二氧化锰扣式电池

Li–MnO_2 button type battery with wire & connector



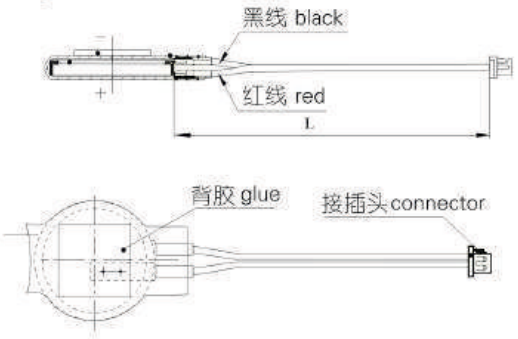
带线电池编码规则 ：
Coding rule

CR2032W9.5JM1GY

电池系列 Battery series	电池型号 battery model	裸电外部有卤 bare battery with halogen	引线长度 wire length	内外套管 tube	胶壳型号 connector model	背胶部分 glue	套管颜色 tube color

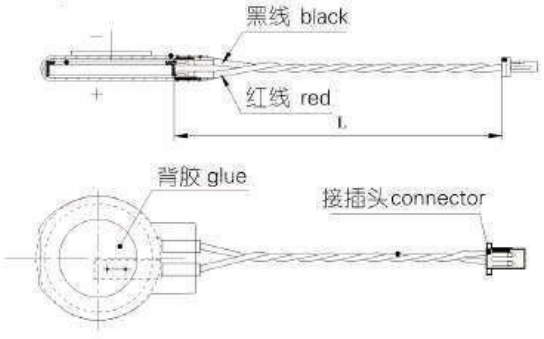
裸电外部有卤 bare battery with halogen		内外套管 tube			背胶部分 glue		胶壳型号 connector model			套管颜色 tube color	
W	裸电外部有卤 bare battery with halogen	U	C	J	G	国产PE泡棉胶 homemade glue 12X12X0.5			针距 pitch	Y	黄色 yellow
H	裸电外部无卤 without halogen	PVC	PET	PP/PE	M	3M4930 12X12X0.64	M1	MOLEX 51021-0200	1.25	B	黑色 black
					B	3M4920 12X12X0.4	M2	MOLEX 51021-0300	1.25		
					Q	SONY G4000 12X12X0.15	M5	MOLEX 51146-0200	1.25		
					R	SONY G4000 12X12X0.15	A3	ACES 88606-0200	1.25		
					T	DIC 8408B 12X12X0.8	A5	ACES 88267-0200	1.25		
					V	DIC 8404B 12X12X0.4	J1	JST SHR-02B-S-B	1		
							J2	JST-02SUR-32S	0.8		

图（figure）1



型号（model）：CR2016 W 51 U J1 G Y

图（figure）2



型号（model）：CR1616 H 51 C J1 R B

说明：1.图中尺寸“L”（露出的线长）可根据客户要求来制作。 2.图中接插头和背胶型号尺寸可由客户制定

1.“L”：wire length can be made according to customer requirement.

2.connector and dimension can be made according to customer requirement.

带焊片的锂二氧化锰扣式电池

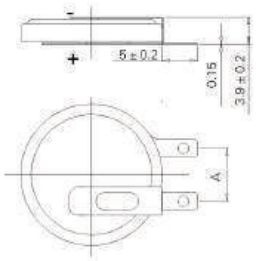
Li–MnO_2 button type battery with Pin



型号说明 Example **CR2032—E3/E4**

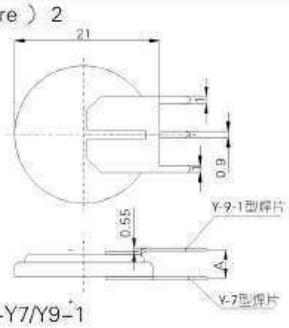
Battery type 电池类别	Battery Model 电池型号	Tab code 正极焊片代号	tab code 负极焊片代号

图（figure）1



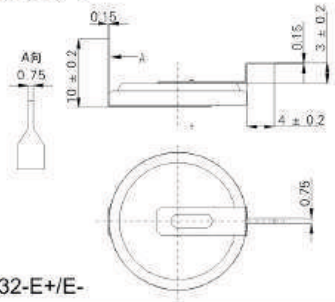
CR2032–S3/S3

图（figure）2



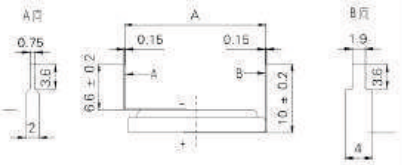
CR2032–Y7/Y9–1

图（figure）3



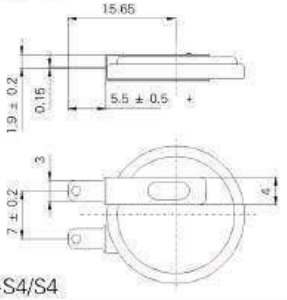
CR2032-E+/E-

图（figure）4



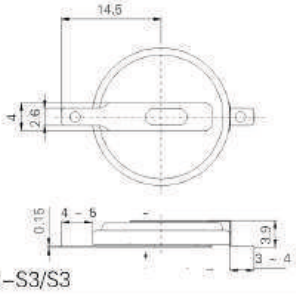
CR2032–E3/E4

图（figure）5



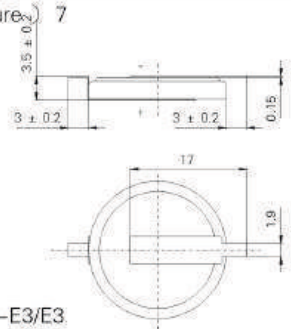
CR2032–S4/S4

图（figure）6



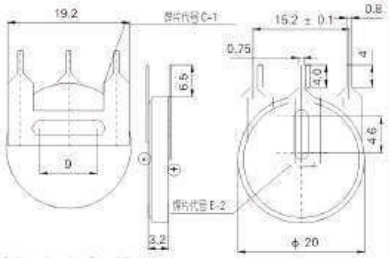
CR2032–S3/S3

图（figure）7



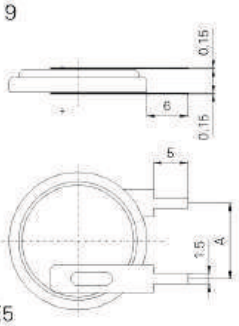
CR2032–E3/E3

图（figure）8



CR2032-C1/E2

图（figure）9



CR2032–E5/E5

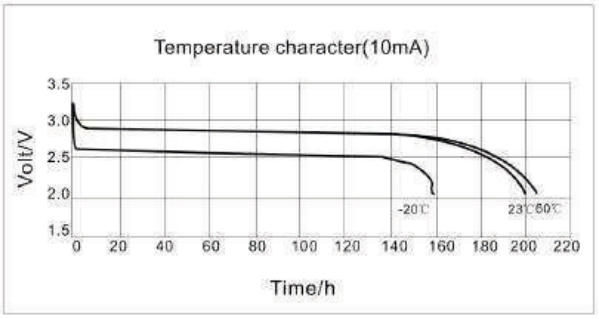
1.选用焊片时，为保证焊片尖部工作尺寸，可根据需要灵活选择合适的焊片。

2.图中尺寸"A"（焊脚中心距）、"B"（焊片露出尺寸）、"C"（焊片折弯尺寸）可根据客户要求来确定。

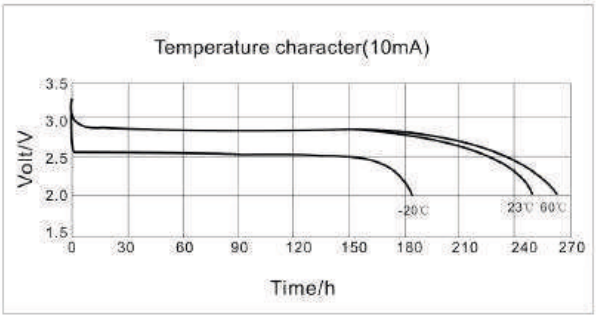
1.tabs can be selected as per different requirements , so as to ensure work size of tab tip.

2.A（center distance of weld leg） B（stretch out dimension of tab） C（bending dimension of tab） can be done according to customer requirement.

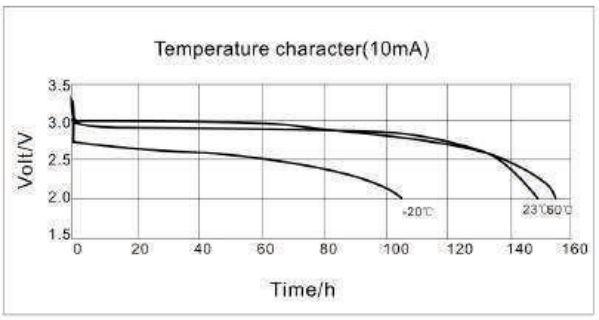
CR17450 Discharge curve



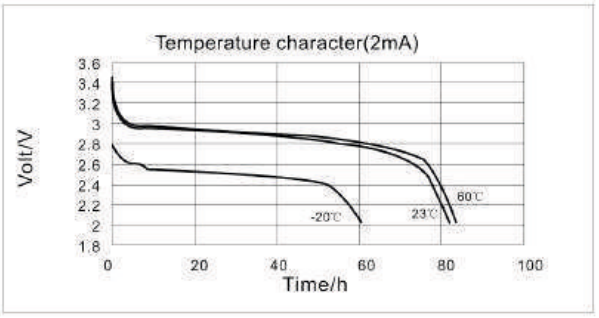
CR17505 Discharge curve



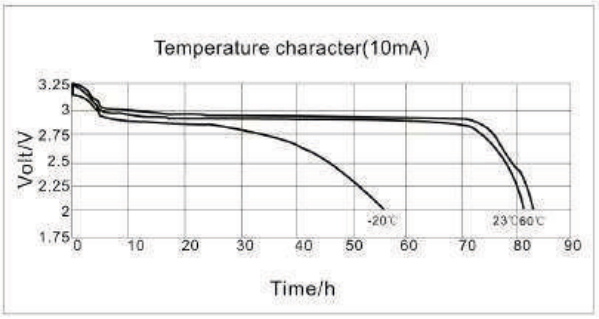
CR17345(CR123A) Discharge curve



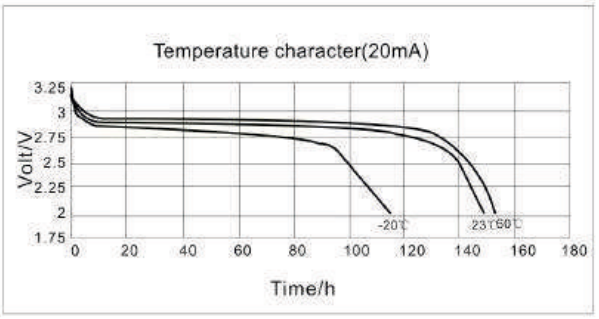
CR11108(CR1/3N) Discharge curve



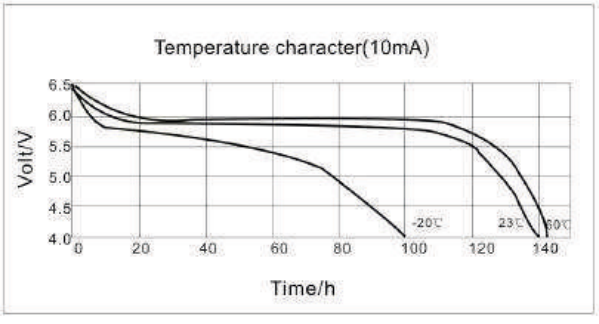
CR15H270(CR2) Discharge curve



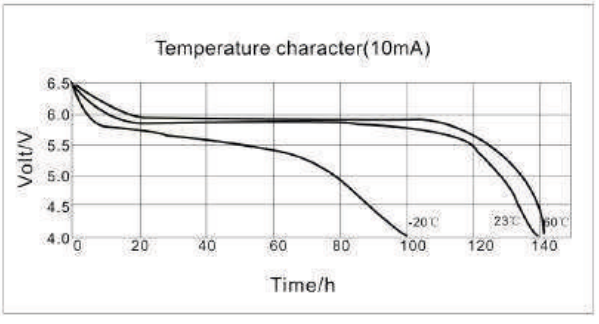
CR-V3 Discharge curve



CR-P2 Discharge curve



2CR5 Discharge curve



Specification table 产品规格一览表

Model	Nominal Voltage (V)	Nominal Capacity (mAh)	Standard Discharge Current(mA)	End Voltage (V)	Max.Diameter (mm)	Max.Height (mm)	Reference Weight (g)	Test Temperature (°C)	Max.constant current (mA)	Max.pulse current (mA)	Operating temperature range
CR14250	3	650	10	2	14.5	25.0	10	23±3	500	1500	-40℃~+85℃
CR14505	3	1500	10	2	14.5	50.5	17	23±3	1500	3000	-40℃~+85℃
CR17450	3	2000	10	2	17.0	45.0	23	23±3	1500	3000	-40℃~+85℃
CR17505	3	2500	10	2	17.0	50.5	25	23±3	1500	3500	-40℃~+85℃
CR17345(CR123A)	3	1500	10	2	17.0	34.5	17	23±3	1500	3500	-40℃~+85℃
CR11108(CR1/3N)	3	160	2	2	11.6	10.8	3.3	23±3	60	80	-40℃~+85℃
CR15H270(CR2)	3	850	10	2	15.6	27.0	11	23±3	1000	2500	-40℃~+85℃
CR-P2	6	1500	10	4	35x19.5x36		38	23±3	1500	3500	-40℃~+85℃
2CR5	6	1500	10	4	34x45x17		38	23±3	1500	3500	-40℃~+85℃
CR-V3	3	3000	20	2	29x14.5x53		38	23±3	3000	6000	-40℃~+85℃

CAUTION:
Fire And Burn Hazard. Do Not Recharge, Short Circuit, Over-discharge, Crush, Disassemble, Heat Above 212° F（100℃）Or Incinerate. Keep Battery Out Of Reach Of Children And In Original Package Until Ready To Use. Dispose Of Used Batteries Promptly.

有着火、爆炸和灼伤的危险。不要对电池进行充电、短路、过放、挤压、拆卸、焚烧和加热超过100℃，不要将电池放在小孩能接触到的地方。使用前请保持电池原包装。及时处理用尽的电池。

以上电池可做成挂卡形式包装

All the battery types mentioned above have blister card package



Cylindrical Li/$SOCl_2$ Battery

锂亚硫酰氯柱式电池



Li/$SOCl_2$ batteries employ Li as anode, $SOCL_2$ as cathode and electrolyte, which is sealed by welding stainless steel can and cap.

Li/$SOCl_2$ batteries can be produced in bobbin type or spiral type. The bobbin type batteries are fit for small current discharge. This type of battery is very safe for use.Spiral type batteries can export larger current.When using this type of battery, please act strictly according to stipulations and be careful during the storage, shipping and use.

锂－亚硫酰氯电池采用锂作负极，亚硫酰氯作为正极和电解液，使用不锈钢壳盖焊接而成。

按电极结构一般分为碳包式和卷绕式两种。碳包式适合于小电流放电，使用时较为安全。卷绕式能输出较大的电流，使用时要注意安全。锂－亚硫酰氯碳包式、卷绕式电池都要严格按规范使用，在存放、运输、使用过程中要格外小心，以保证安全。

● Application

1.Industrial application : Water meter, Gas meter,Ammeter, Smoke Alarm and intelligent equipment
2.Military application : Communication equipment etc

● Characteristics

1.High-voltage (3.6V)
2.The specific energy(500wh/kg) and energy density (1000wh/dm^3) are very high
3.The discharge voltage is very stable
4.Wide working temperature range(-55~85℃)
5.Self-discharge is very low, the shelf-life can be more than 5 years.

● Caution

Fire, explosion, and severe burn hazard. Do not recharge, short circuit, crush, over-discharge, disassemble, heat above 212°F (100℃) or incinerate. Dispose of used batteries promptly.

● 用途

民用：水、煤、气、电表；烟雾报警及智能仪表；军事：通讯设备

● 特性

1、单体电压高3.6V
2、放电曲线十分稳定
3、比能量(500wh/kg)和能量密度(1000wh/dm^3)大
4、工作温度范围宽(-55~85℃)
5、自放电小，储存寿命可达5年

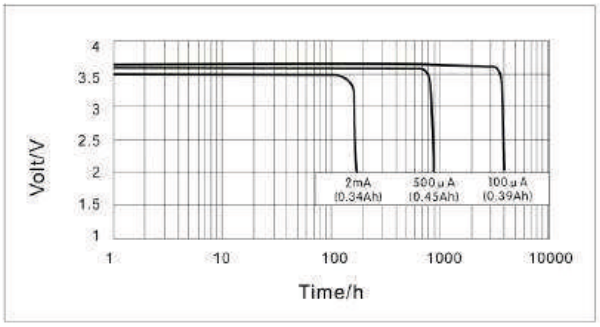
● 注意事项

严禁焚烧电池。不要对电池进行充电、短路、过放电、挤压、拆卸，不要加热电池超过100℃，及时处理用尽的电池。

Li-socl$_2$ battery with high capacity

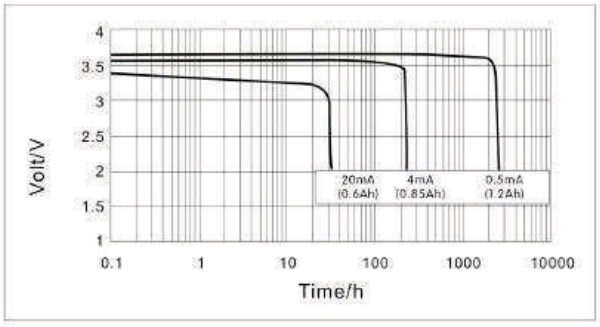
锂亚硫酰氯高能量型

ER13150 Discharge curve

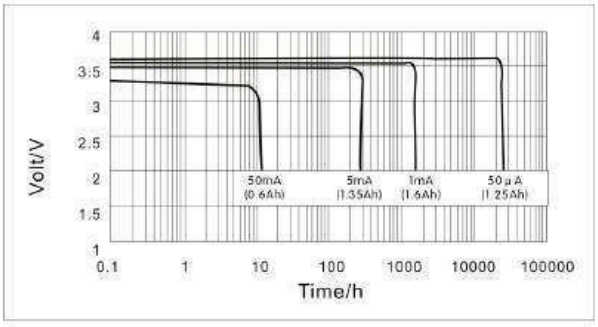




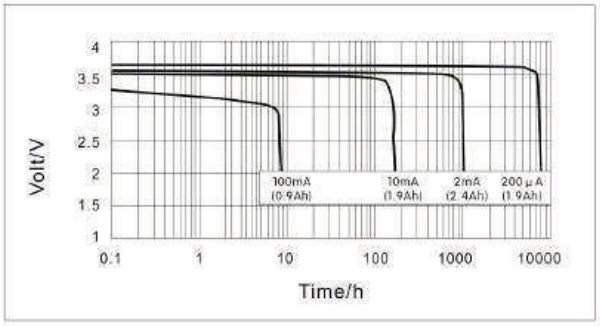
ER14250 Discharge curve



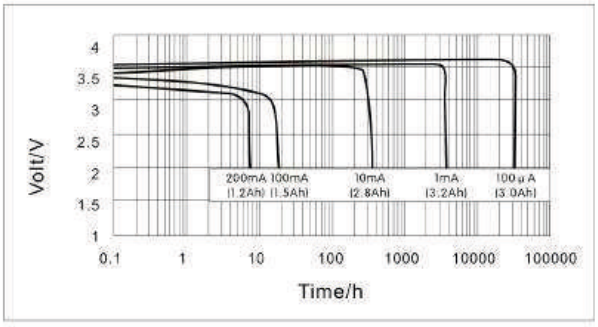
ER14335 Discharge curve



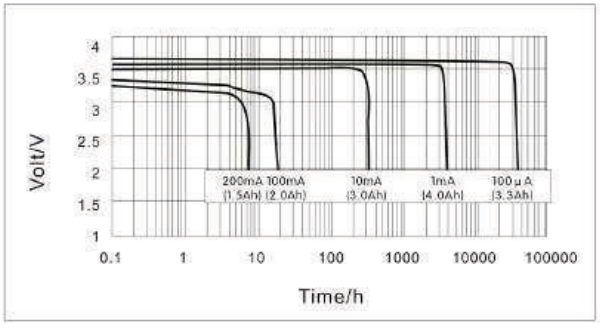
ER14505 Discharge curve



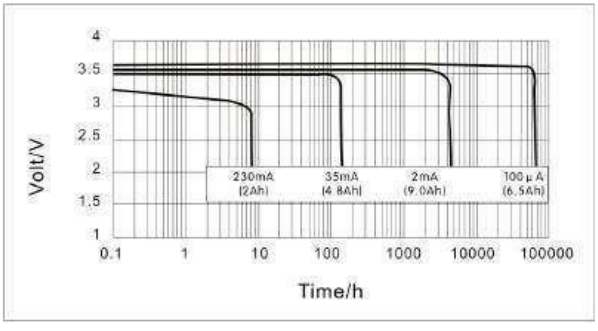
ER17505 Discharge curve



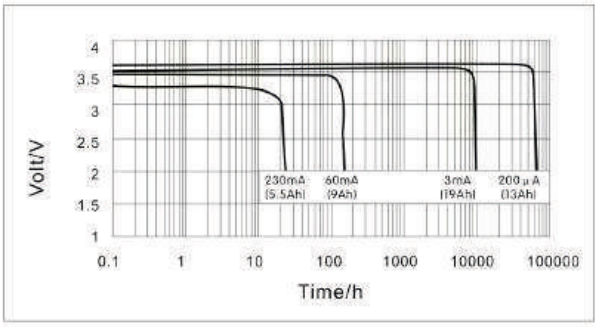
ER18505 Discharge curve



ER26500 Discharge curve



ER34615 Discharge curve

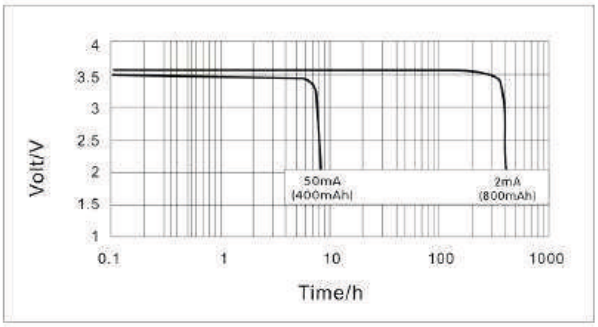




Li-socl$_2$ battery with high power

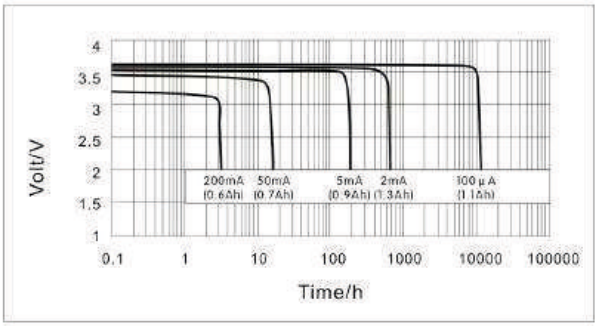
锂亚硫酰氯高功率型

ER14250m Discharge curve

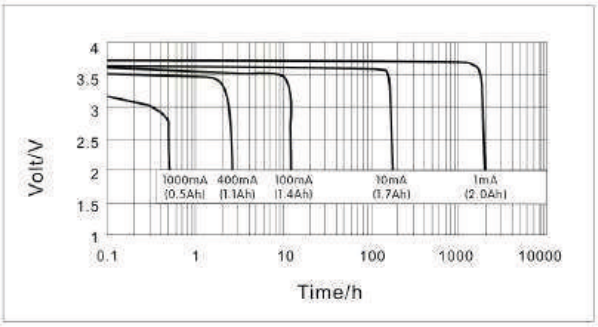




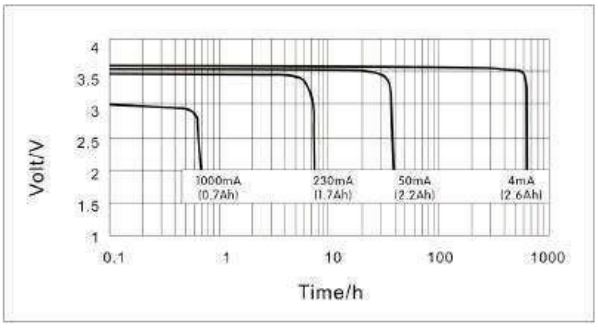
ER14335m Discharge curve



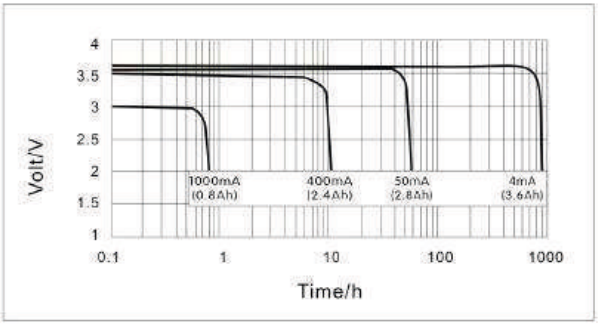
ER14505m Discharge curve



ER17505m Discharge curve



ER18505m Discharge curve



Specification table 产品规格一览表

Model 型号	Nominal Voltage 额定电压(V)	Nominal Capacity 标称容量(mAh)	Standard Discharge Current 电流(mA)	End Voltage 终止电压(V)	Test Temperature 温度范围(℃)	Max.Diameter 直径(mm)	Max.Height 高度(mm)	Reference Weight 质量(g)	Max.constant current 最大连续放电电流 (mA)	Max.pulse current 最大脉冲电流 (mA)	Operating temperature range 使用温度
ER13150	3.6	450	0.5	2.0V	23±3	13.5	15.0	5.5	2	4	-55℃~+85℃
ER14250	3.6	1200	0.5	2.0V	23±3	14.5	25.0	10	30	100	-55℃~+85℃
ER14335	3.6	1600	1	2.0V	23±3	14.5	33.5	12	50	100	-55℃~+85℃
ER14505	3.6	2400	2	2.0V	23±3	14.5	50.5	19	100	200	-55℃~+85℃
ER17505	3.6	3200	1	2.0V	23±3	17	50.5	26	100	200	-55℃~+85℃
ER18505	3.6	4000	1	2.0V	23±3	18.5	50.5	28	100	200	-55℃~+85℃
ER26500	3.6	9000	2	2.0V	23±3	26.2	50.0	52	230	400	-55℃~+85℃
ER34615	3.6	19000	3	2.0V	23±3	34.2	61.5	100	230	500	-55℃~+85℃
ER14250M	3.6	800	2	2.0V	23±3	14.5	25.5	11	100	150	-55℃~+85℃
ER14335M	3.6	1300	2	2.0V	23±3	14.5	34.1	13	200	300	-55℃~+85℃
ER14505M	3.6	2200	1	2.0V	23±3	14.5	50.5	20	400	1500	-55℃~+85℃
ER17505M	3.6	2600	4	2.0V	23±3	17	50.5	27	1000	1500	-55℃~+85℃
ER18505M	3.6	3600	4	2.0V	23±3	18.5	50.5	29	1000	2000	-55℃~+85℃

The model with "M" stands for high-power battery, spirial type. The model without "M" stands for high-energy battery, bobbin type. The difference between lithium-thionyl chloride high-power batteries and high-energy batteries is that high-power batteries have higher output currents and require higher safety performance when used. Therefore, they must be used strictly to ensure safety.

规格表中型号带“M”字母的为高功率型电池，不带“M”的为高能量型电池。锂-亚硫酰氯高功率型电池与高能量型电池的区别在于高功率型电池输出较大电流，使用时安全性能要求更高，因而要严格按规范使用以保证安全。

Storage: It shall be placed in clean, dry and cool conditions (preferably at + 20 ℃ or lower, don't over + 30 ℃).

贮存：应在清洁、干燥、凉爽（最好在+20度或更低温度环境下，最高不超过+30度）条件下放置。

Li-ion Capacitor
锂离子电容器











随着市场对蓄电池器件的容量和输出功率要求越来越高，锂离子电池和电容器成为当前研究的热点。锂离子电池具有能量密度高，自放电率低的优点，但倍率性能不理想，功率密度较低，而电容器虽然具有功率密度高，循环寿命长等特点，但能量密度相对较低。为了满足高能量密度高输出特性的需求，将锂离子电池和双电层电容器的蓄电原理结合，出现了被称之为混合式电容器的产品。

我司在了解市场需求，结合我司生产线和工艺水平，设计了锂离子电容器产品，该产品即具有锂离子电池的特性，也具有电容器的特性。同时，将产品可以与其他电源（如一次锂电池）匹配使用，其最终产品在诸如ETC装置，智能停车场，智能水电气表等产品中应用前景广阔。

Li-ion Capacitor, produced and designed by Liusn, can deliver instantly big pulse and work in a wide temperature range from -40℃up to 85℃. Fanso SLC pulse power system consists of long-life Li-SOCl2 battery and Li-ion Capacitor, which are connected in parallel. It is an ideal power source for intelligent meters and other applications requiring high pulse current.

主要特点：

- 长效锂亚硫酰氯电池与锂离子电容器结合
- 兼具锂亚硫酰氯电池与锂离子电容器的优良特性
- 具有长效性，大电流脉冲能力
- 容量高，使用寿命长　● 高低温性能好
- 大电流脉冲特性好　● 不存在电压滞后现象
- 安全性能高，可靠性好
- 储存性能好，自放电率低

Features:

- Long life and high pulse in one
- Sustainable big pulse
- Excellent performance at high/low temperature
- Good pulse capability
- No voltage delay
- High safety and reliability
- long storage life and low self-discharge

产品基本特性 Performance

项 目 Item	SPC1451特性 Characteristics	SPC1527特性 Characteristics	SPC1734特性 Characteristics
额定容量 Rated Capacity	≥200mAh（720As）	≥70mAh（252As）	≥135mAh（486As）
标称电压 Nominal Voltage	≥3.60V	≥3.60V	≥3.60V
内阻（交流阻抗） Initial Internal Impedance	≤120mΩ	≤180mΩ	≤100mΩ
放电截止电压 End-off Voltage	2.7V	2.7V	2.7V
标准充电电压 Charge Voltage	3.67V	3.67V	3.67V
最大充电电压 Max. Charge Voltage	3.95V	3.95V	3.95V

产品基本特性 Performance

项 目 Item	SPC1451特性 Characteristics	SPC1527特性 Characteristics	SPC1734特性 Characteristics
标准充电电流 Discharge Voltage	50mA	20mA	50mA
最大充电电流 Max. Charge Current	100mA	50mA	100mA
标准充电流程 charge process	按照先恒流后恒压的方式，在环境温度为(23±2)℃条件下，充电源以50mA电流恒流充电直到电压达到3.67V，然后在3.67V下恒压充电到电流小于或等于5mA。	按照先恒流后恒压的方式，在环境温度为(23±2)℃条件下，充电源以20mA电流恒流充电直到电压达到3.67V，然后在3.67V下恒压充电到电流小于或等于5mA。	按照先恒流后恒压的方式，在环境温度为(23±2)℃条件下，充电源以50mA电流恒流充电直到电压达到3.67V，然后在3.67V下恒压充电到电流小于或等于5mA。
最大持续放电电流 Max. continuous discharge current	2000mA	500mA	1000mA
最大脉冲放电电流 Max. impulse discharge current	3.0A	2.0A	3.0A
漏电流 Current loss		<1μA	
重量 Weight	≤20.0g	≤12.0g	≤18.0g
工作温度范围 Working temperature	-40℃~85℃	-40℃~85℃	-40℃~85℃
储存温度范围 Storage temperature	-30℃~60℃	-30℃~60℃	-30℃~60℃
外形尺寸（含热缩套管） Dimension(With wrapper)	直径：14.0±0.1mm 高度：50.3±0.1mm	直径：15.2±0.1mm 高度：27.0±0.1mm	直径：17.0±0.1mm 高度：33.6±0.1mm

电性能 Electrical performance

项 目 Item	SPC1451特性 Characteristics		SPC1527特性 Characteristics		SPC1734特性 Characteristics	
标准充电 Standard Charging						
标准放电 Standard discharging						
额定容量 Rated capacity	≥200mAh（720As）		≥70mAh		≥135mAh	
循环寿命 Cycles	①不低于1000次 ②循环期间不漏液		①不低于1000次 ②循环期间不漏液		①不低于1000次 ②循环期间不漏液	
内阻 Impedance	≤120mΩ		≤180mΩ		≤100mΩ	
大电流脉冲特性 Feature under high impulse current	脉冲次数≥20次		脉冲次数≥20次		脉冲次数≥20次	
极端温度下脉冲特性 Feature under extreme temperature	低温脉冲放电	脉冲次数≥55次	低温脉冲放电	脉冲次数≥55次	低温脉冲放电	脉冲次数≥55次
	高温脉冲放电	脉冲次数≥30次	高温脉冲放电	脉冲次数≥30次	高温脉冲放电	脉冲次数≥30次
荷电保持能力 Capacity holding	剩余容量≥85%额定容量		剩余容量≥85%额定容量		剩余容量≥85%额定容量	
贮存后荷电恢复能力 Capacity recovery after storage	恢复容量≥90%额定容量		恢复容量≥90%额定容量		恢复容量≥90%额定容量	
储存寿命 Storage life	恢复容量≥80%额定容量		恢复容量≥80%额定容量		恢复容量≥80%额定容量	
运输电压 Shipment voltage	3.55V~3.67V		3.55V~3.67V		3.55V~3.67V	

Li/SOCL$_2$ Battery+Li-ion Capacitor

锂-亚硫酰氯电池+锂离子电容器







Model	Refer to the size	Nominal Voltage (V)	Nominal Capacity (mAh)	Max.pulse Diameter current (mm)	Max.Diameter Height (mm)
ER14250+SPC1527	1/2AA+1527	3.6	1200	2000	32×33×18
ER18505+SPC1527	A+1527	3.6	4000	2000	55×38×22
ER26500+SPC1527（顶部Top）	C+1527	3.6	8500	2000	ϕ35×70
ER26500+SPC1527（侧面Side）	C+1527	3.6	8500	2000	55×46×30
ER34615+SPC1527（顶部Top）	D+1527	3.6	19000	2000	ϕ36×80
ER34615+SPC1527（侧面Side）	D+1527	3.6	19000	2000	65×52×36
ER18505+SPC1451	A+AA	3.6	4000	5000	55×38×22
ER26500+SPC1451	C+AA	3.6	8500	5000	55×46×30
ER34615+SPC1451	D+AA	3.6	19000	5000	65×52×36

锂锰扣式可充电池

ML2020 ML1220 ML614



● **Application**

Notebook backup power ; Mobile backup power

● **Characteristics**

High-voltage（3V）; Low self-discharge rate
Rechargeable; Wide working temperature range
Excellent safety characteristics;
Excellent leakage resistance

例
example

● **用途**

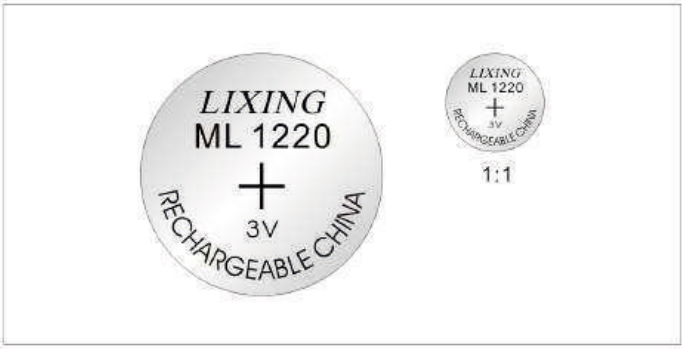
笔记本电脑后备电源；手机后备电源

● **特点**

单只电池电压高（3V）；自放电率低；电池可充放电；
使用温度范围广；安全性能优良；耐漏性能好

性能数据(于23℃):

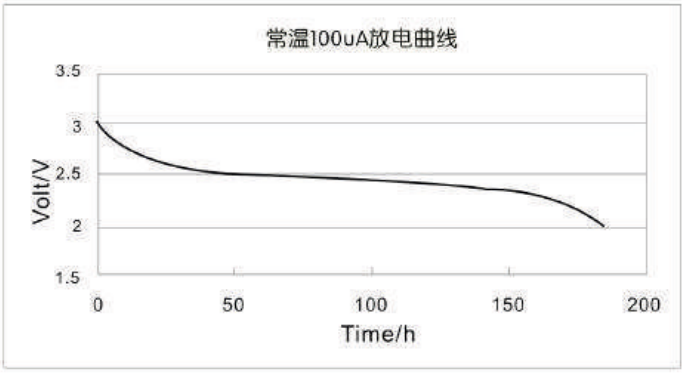
电池型号……ML1220
最大外形尺……直径12.5mm 高度2.0mm
电池重量……0.8g
标称电压……3V
标称容量……17mAh
最大充放电电流……1000μA
使用温度……-20℃~+60℃
充/放循环寿命……放电深度10% 循环900次
充电电压……≤3.2V



Characteristics parameters (23℃):

Model……ML1220
Max dimension……dimension: Φ 12.5mm high:2.0mm
Nominal weight……0.8 g
Nominal voltage……3 V
Nominal capacity……17mAh
Max.chager & discharge current……1000 μA
Operating temperature range……-20℃~+60℃
Charge/discharge cycle life……900times with 10% depth Discharge
Recharge voltage……≥3.2V

Discharge curve

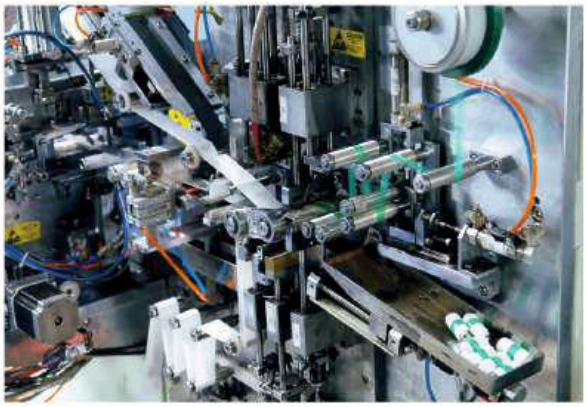


Manufacturing site 设备精良规模生产











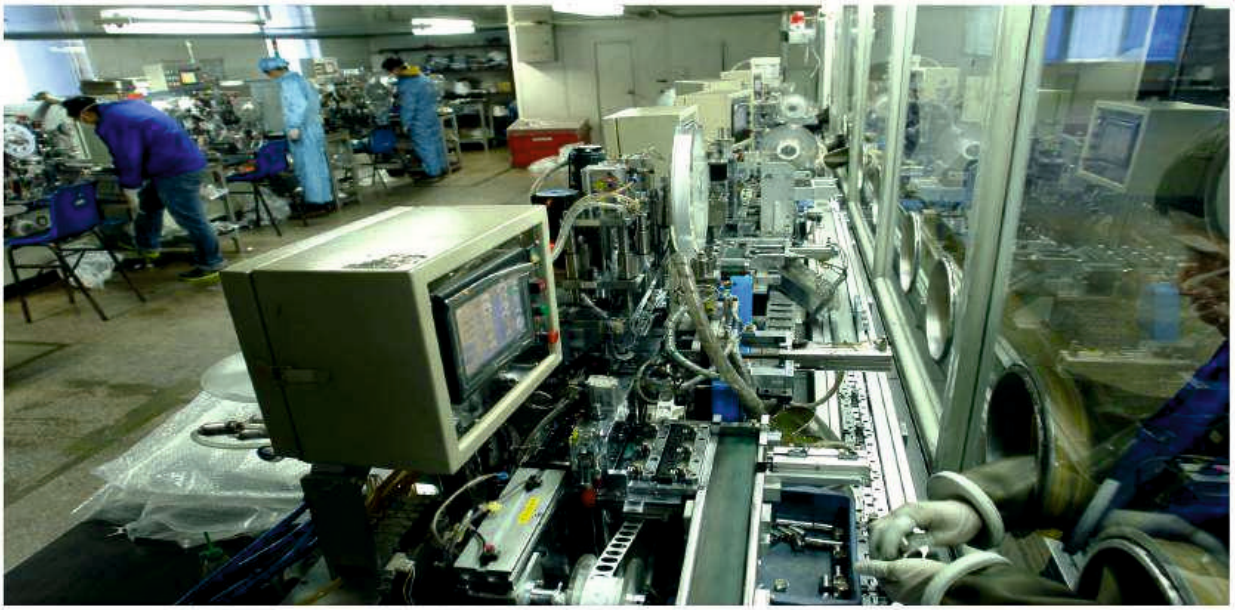




Manufacturing site 设备精良规模生产







certificate



















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