

Vinnic[®]

銀戰士電池



Lithium Manganese
Dioxide Battery Series
鋰錳電池



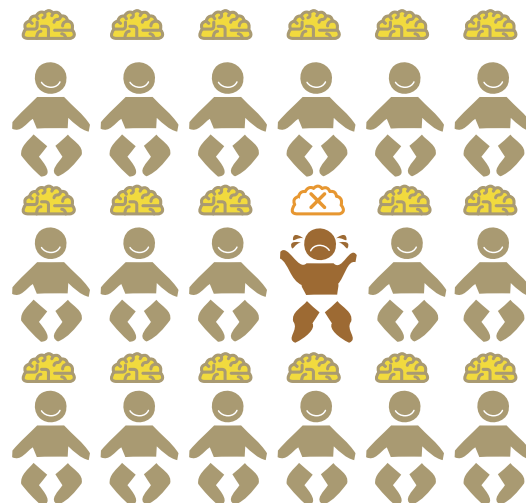
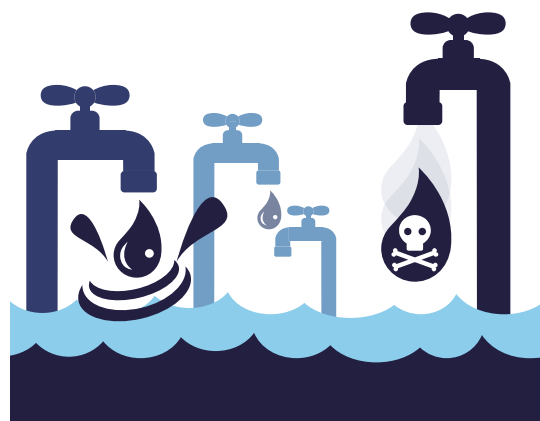
Lithium Manganese Dioxide Battery 鋰錳電池

- 25 million children in the world were suffered from drinking of LEAD, MERCURY and CADMIUM contaminated water!
- Every 6 of thousand patients in the world were caused by the exposure of LEAD!
- There are around 600 thousands children in the world were mentally disable due to the exposure to LEAD!

Heavy metals such as lead, mercury and cadmium may have long-term impact on the health of human beings and other organisms. For example, lead poisoning can cause damage to the liver, kidneys, brain and even intellectual ability. Mercury poisoning can cause damage to the liver, skin and nervous system, whereas cadmium poisoning can lead to renal failure and osteomalacia.

- 每年世界約有2500萬名兒童，因為水污染而引發疾病，當中包括鉛中毒、汞中毒及鎘中毒！
- 由鉛接觸造成全球的疾病負擔就有0.6%！
- 估計每年由鉛接觸所導致的智力殘疾兒童約為60萬！

鉛、汞及鎘這幾種重金屬，對人類及其他生物的健康影響深遠，像鉛中毒會造成肝、腎、腦的損害，甚至智力永久受損！汞中毒可導致肝、皮膚同神經受損，而鎘中毒就會引起腎功能喪失、骨質軟化等問題！



Corporate video



公司短片



Product video



產品短片



WeChat



Weibo



Facebook



天猫

0% 汞 MERCURY
鉛 LEAD
鎘 CADMIUM

Mercury-free and environment friendly
無汞與環保

Since 2004, Vinnic developed superior Lithium Button Cell by using first-rank materials. While the safety standard of heavy metal for lead is 40 ppm, mercury is 5 ppm and cadmium is 20 ppm, the relevant contents in Vinnic's Lithium Button Cell are much lower than the standard. This is a further milestone in the development of high performance, reliable and environment friendly batteries.

Chung Pak has been keen on development of environment friendly batteries for over 40 years. And the fruitful achievement is devoted to our lovely earth, and our next generation.

2004年，銀戰士使用性能超卓的材料并研製出不同的配方，使鋰錳鈕扣性電池無鉛無汞無鎘，鉛含量遠低於40ppm,汞含量遠低於5ppm，鎘含量遠低於20ppm。這是銀戰士研發高性能，安全可靠，環保電池的新里程碑。

為了地球，為了下一代，松栢在過去40多年致力生產無鉛無汞無鎘的環保高性能電池！



Lithium Manganese Dioxide Battery

鋰錳電池

Lithium Manganese Dioxide Battery

鋰錳電池

Main Features 產品特性

Quality:

Compact and lightweight
Stable power supply quality
Extremely small self- discharge
A wide compact operational temperature range of
-20°C to 60°C

Chemical Structure

Positive Electrode – Manganese Dioxide

Negative Electrode – Lithium

Electrolyte –Organic Electrolyte

Application :

- Calculator
- Electronic Weigh
- Cameras
- Game Toys
- Breadboard
- Instant Dictionary

品質:

體積小，輕巧
放電平衡
優異抑制自我放電
廣域之使用溫度範圍: -20 °c ~ 60 °c

化學成份:

正極 - 二氧化錳
負極 - 金屬鋰
電解液 - 有機電解液

用途:

- 電子計算機
- 電子磅
- 相機
- 遊戲機
- 電腦底板
- 電子辭典



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Specifications 產品規格

Model no. 型號	Nominal voltage (V) 標稱電壓 (V)	Nominal capacity (mAh) 典型容量 (mAh)	Dimension尺寸		Average weight (g) 平均重量 (g)
			Diameter (mm) 直徑 (mm)	Height (mm) 高度 (mm)	
CR 927	3.0	30	9.5	2.7	0.6
CR 1025	3.0	30	10.0	2.5	0.6
CR 1216	3.0	27	12.5	1.6	0.6
CR 1220	3.0	36	12.5	2.0	0.8
CR 1612	3.0	30	16.0	1.25	0.7
CR 1616	3.0	45	16.0	1.6	1.0
CR 1620	3.0	70	16.0	2.0	1.2
CR 1632	3.0	130	16.0	3.2	2.0
CR 2016	3.0	90	20.0	1.6	1.7
CR 2025	3.0	165	20.0	2.5	2.5
CR 2032	3.0	240	20.0	3.2	3.1
CR 2032LT	3.0	230	20.0	3.2	3.1
CR 2032HR	3.0	210	20.0	3.2	3.1
CR 2412	3.0	90	24.5	1.25	1.8
CR 2430	3.0	300	24.5	3.0	4.2
CR 2450	3.0	590	24.5	5.0	6.4
CR 2450LT	3.0	570	24.5	5.0	6.4
CR 2477	3.0	810	24.5	7.7	9.5
CR 3032	3.0	525	30.0	3.2	6.7
CR123A	3.0	1500	16.7	34.1	15.8
CR2	3.0	900	15.2	27	10.2

Lithium Manganese Dioxide Battery 鋰錳電池

Cross Reference Guide 電池對照表

Model no. 型號	DIM(mm) 尺寸	IEC 型號	ANSI 型號	Energizer 型號	Panasonic 型號	Duracell 型號	Maxell 型號	Renata 型號	Rayovac 型號	Varta 型號
CR 927	9.5x2.7	CR 927	-	-	-	-	-	-	-	-
CR 1025	10.0x2.5	CR 1025	5033LC	ECR 1025	CR1025	-	-	CR1025	-	-
CR 1216	12.5x1.6	CR 1216	-	ECR 1216	CR1216	-	-	CR1216	-	-
CR 1220	12.5x2.0	CR 1220	5012LC	ECR 1220	CR 1220	DL1220	CR 1220	CR 1220	-	CR 1220
CR 1612	16.0x1.25	CR 1612	-	ECR 1612	CR1612	-	-	-	-	-
CR 1616	16.0x1.6	CR 1616	-	ECR 1616	CR1616	-	CR1616	CR1616	-	-
CR 1620	16.0x2.0	CR 1620	5009LC	ECR 1620	CR 1620	DL1620	CR 1620	CR 1620	CR 1620	CR 1620
CR 1632	16.0x3.2	CR 1632	-	ECR 1632	CR 1632	-	CR 1632	CR 1632	-	-
CR 2016	20.0x1.6	CR 2016	5000LC	ECR 2016	CR 2016	DL2016	CR 2016	CR 2016	CR 2016	CR 2016
CR 2025	20.0x2.5	CR 2025	5003LC	ECR 2025	CR 2025	DL2025	CR 2025	CR 2025	CR 2025	CR 2025
CR 2032	20.0x3.2	CR 2032	5004LC	ECR 2032	CR 2032	DL2032	CR 2032	CR 2032	CR 2032	CR 2032
CR 2412	24.5x1.25	CR 2412	-	ECR 2412	CR 2412	-	-	-	-	-
CR 2430	24.5x3.0	CR 2430	5011LC	ECR 2430	CR 2430	DL2430	CR 2430	CR 2430	CR 2430	CR 2430
CR 2450	24.5x5.0	CR 2450	5029LC	ECR 2450	CR 2450	DL2450	CR 2450	CR 2450 N	-	CR 2450
CR 2477	24.5x7.7	CR 2477	-	-	CR2477	-	-	CR2477 N	-	-
CR 3032	30.0x3.2	CR 3032	-	-	CR3032	-	-	-	-	-
CR123A	16.7X34.1	CR17345	5018LC	EL123A	CR123A	DL2/3A	CR123A	-	CR123A	CR123A
CR2	15.1X26.7	CR15H270	5046LC	CR2	CR2	CR2	CR2	-	-	CR2

Lithium Coin Pack

鋰錳組裝電池

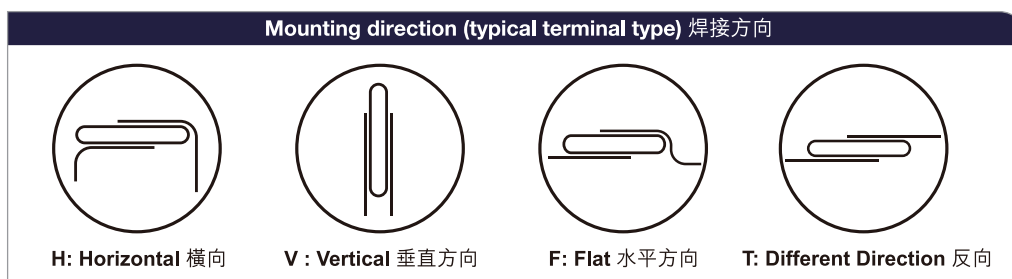
Designation system for Lithium Coin Pack

鋰錳組裝電池型號設定系統

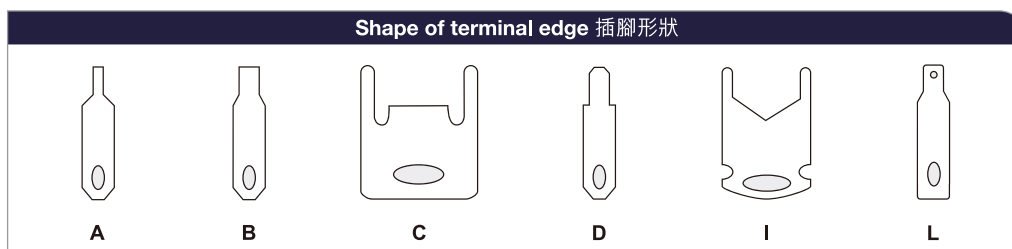
Example 例子 1CR2032/HA2a2I

1	Number of cells in the battery pack 組裝中所含電池數量
CR2032	Battery type 電池類型
H	Mounting direction 焊接方向代碼
A	Shape of terminal edge - cathode 插腳形狀代碼-正極
2	Serial number - cathode 型號編碼-正極
a	Shape of terminal edge - anode 插腳形狀代碼-負極
2	Serial number - anode 型號編碼-負極
I	With insulation 有絕緣套

Mounting direction (typical terminal type) 焊接方向



Shape of terminal edge 插腳形狀



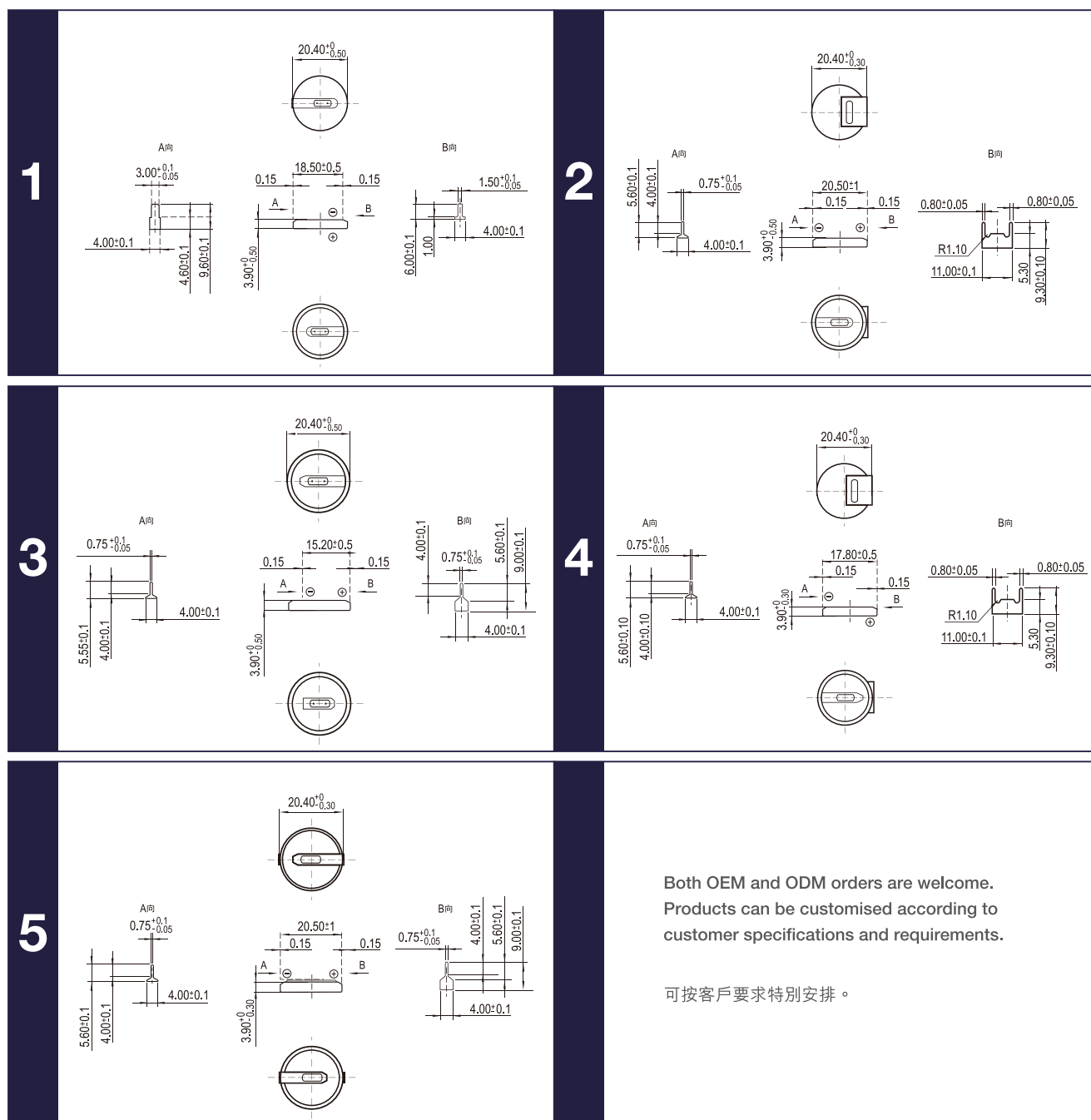
Coin cell tab configurations 組裝規格

型號 Model No	標識類型 Tab Type		圖示號碼 Configuration Diagram No
	有絕緣套With Insulation Wrap	無絕緣套Without Insulation Wrap	
CR2032	-----	/HD1d1	1
CR2032	-----	/HC1a1	2
CR2032	/HA1c1I	-----	3
CR2032	-----	/HC1b2	4
CR2032	/HA1a1I	-----	5

Lithium Manganese Dioxide Battery 鋰錳電池

Diagram 圖示

Dimensions/mm (inch) 尺度(英寸)



Packing Information 包裝資料

Model no. 型號	Standard Packing (pcs) 標準包裝 (電池數量)		Consumer Pack (1pcs/ card) 1粒咭裝		Consumer Pack (2pcs/ card) 2粒咭裝		Consumer Pack (5pcs/ card) 5粒咭裝	
	Bulk Pack 散裝	Carton 外箱	Color Box 彩盒	Carton 外箱	Color Box 彩盒	Carton 外箱	Color Box 彩盒	Carton 外箱
CR 927	50	6800	10	300	16	480	50	1000
CR 1025	30	3000	10	300	16	480	50	1000
CR 1216	30	3000	10	300	16	480	50	1000
CR 1220	30	3000	10	300	16	480	50	1000
CR 1612	20	2400	10	300	16	480	50	1000
CR 1616	20	2400	10	300	16	480	50	1000
CR 1620	20	2400	10	300	16	480	50	1000
CR 1632	20	2000	10	300	16	480	50	1000
CR 2016	20	2000	10	300	16	480	50	1000
CR 2025	20	2000	10	300	16	480	50	1000
CR 2032	20	2000	10	300	16	480	50	1000
CR 2032 LT	20	2000	10	300	16	480	50	1000
CR 2032 HR	20	2000	10	300	16	480	50	1000
CR 2412	20	1600	10	300	12	360	50	1000
CR 2430	20	2000	10	300	12	360	50	1000
CR 2450	20	1600	10	300	12	360	50	1000
CR 2477	20	640	10	300	12	360	50	1000
CR 3032	12	1200	10	300	12	360	50	1000
CR 123A	50	1000	6	180	12	360	/	/
CR2	50	1000	6	180	12	360	/	/

* Any specific design and packaging requirements will be accommodated as required.

** 本公司可提供任何可行之特別包裝。

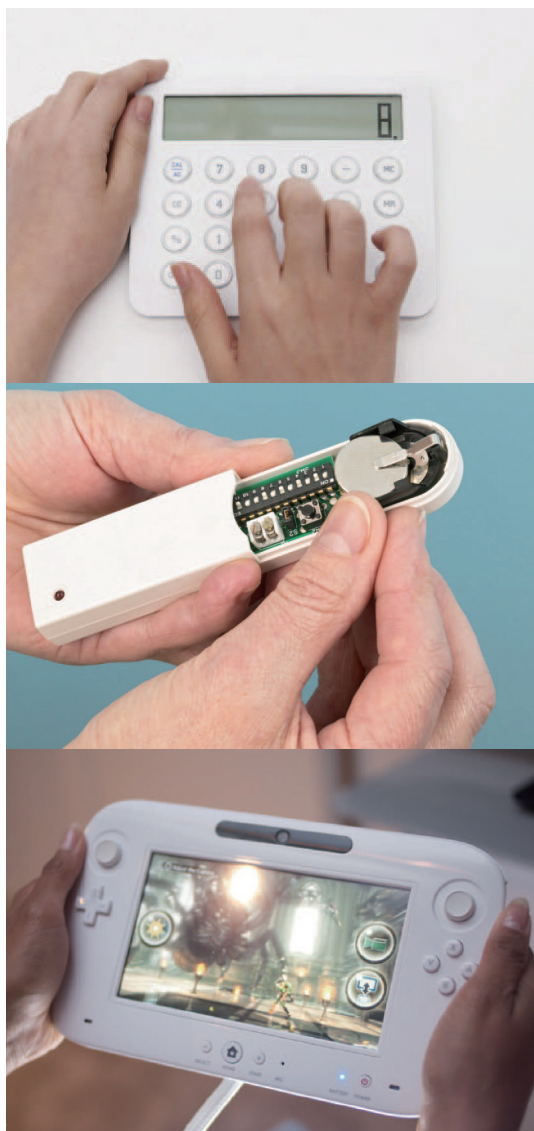
Lithium Manganese Battery Series 鋰錳電池系列



Remarks : Card Size / 注 : 咭紙尺寸 :

C1/C2 : 89 x 45 mm C5 : 141 x 51 mm

Lithium Manganese Dioxide Battery 鋰錳電池



Notes 用戶須知

When using Vinnic batteries, all users must follow the company Battery Specification Guide Book and MSDS guide according to the specific type and model of the battery.

用戶必須按照本公司每款電池之電池規格說明書及 MSDS 使用電池。

For more battery safety instructions, please refer to the following documents, which can be accessed through Vinnic's sales office, or from our website at www.vinnic.com.

如欲瞭解更多電池安全指引，請向本公司營業員或網址 www.vinnic.com 索取以下資料

- 1) Battery Specification Guide Book 電池規格說明書
- 2) Material Safety Data Sheet (MSDS) 物料安全技術說明書
- 3) IEC Non-Rechargeable Batteries Safety Precautions IEC 一次電池安全指引
- 4) Battery Care 電池使用安全指引

Warning	Danger
1. Don't throw the batteries into fire or heat the batteries	This may cause the batteries to disrupt or ignite
2. Don't directly solder the batteries	This may damage their insulating tapes and protective installation, even may cause leakage, explosion and fire
3. Don't insert and use batteries with the $\oplus$ & $\ominus$ electrode inverse	This can damage the batteries for being force charged, even may cause leakage, heat generation, disrupt, explosion or ignition
4. Don't short-circuit the positive and negative terminals of a battery	This may cause heat generation, leakage, explosion, fire and personal injury
5. Don't expose the batteries to water	This can cause heat generation or rust
6. Don't charge and force discharge batteries	This may cause leakage, heat generation, even explosion and ignition
7. Don't disassemble or damage the external tubes of the batteries or modify the batteries(stack-up batteries) etc.	This easily results in short-circuit, leakage, even ignition
8. Store unused batteries in their original packaging away from metal objects.	This can cause battery short-circuiting which may result in venting, leakage, and explosion and personal injury.
9. Don't crush, puncture, or otherwise mutilate to deform batteries	This may cause venting, leakage, explosion and personal injury
10. Immediately stop using the batteries if leakage, discolor or etc. with them are detected	This may cause accidents to occur
11. Don't drop or strongly strike the batteries	This may result in leakage, heat generation, disrupt, even ignition
12. To avoid using at high temperature and high humidity ambient	This may cause batteries early damage
13. a. Be sure to use the batteries within a temperature range from 0°C to 40°C b. Be sure to storage the batteries within a temperature range at 20±5°C	a. Use the batteries beyond the temperature range may cause leakage, heat generation, impaired performance, and shortening of service life of the batteries b. Storage the batteries beyond the temperature range may cause heat generation, impaired performance, and shortening of service life of the batteries
14. Don't use old batteries with new ones	Some batteries may be over-discharged. This can result in venting, leakage, explosion and personal injury
15. Don't use our batteries with any other type or brand of batteries	Mixed-matching of batteries may result in heat generation, leakage, explosion, fire
16. Remove batteries from equipment if it is not to be used for an extended period of time	When batteries beyond expiry period, electrolyte leakage may occur causing damage to the equipment
17. Exhausted batteries should be immediately removed from equipment	When discharged batteries are kept in the equipment for a long time, electrolyte leakage may occur causing damage to the appliance and/or personal injury
18. Keep the batteries out of the reach of children	To avoid being swallowed. If swallowed, Please see doctor immediately
19. Don't allow children to replace batteries without adult supervision	This may cause wrong operation, even may occur accident
20. Please use batteries within expiry period	To avoid using invalid batteries which beyond expiry period
21. Don't take batteries by hand directly. Please wear finger cots	This may cause rust
22. Don't take batteries with iron tweezer. Please use plastic tweezer.	This can cause battery short-circuiting which may result in heat generation, leakage, and explosion

We reserve all rights for the change of product specification and any information without any prior notice.

Safety Instructions 安全指導

警告	危害
1. 請勿將電池投入火中或加熱	以免電池發生破裂起火等
2. 請勿直接焊接電池	以免損壞絕緣圈及保護裝置，引致漏液、爆炸、著火
3. 將電池放入電子產品及使用過程中，請勿將 $\oplus$ 、 $\ominus$ 極反接	以免電池被迫充電而破壞電池，甚至會引起電池漏液、發熱、破裂、爆炸或起火
4. 請勿將電池正、負極短路	以免造成電池發熱、漏液或爆炸、著火及人身傷害
5. 請勿將電池浸入水中	以免電池發熱或生鏽
6. 請勿對電池進行充電及強制放電	以免引起電池漏液、發熱、甚至爆炸及起火
7. 請勿拆開或弄破電池的外包裝，改裝電池(電池組)等	以免容易發生短路，產生漏液甚至起火
8. 請將不用的電池放在原包裝內，遠離易引起短路的金屬物體	以免造成電池短路，產生泄放、泄漏、爆炸和人身傷害
9. 請勿對電池擠壓，打孔或其他形式的破壞	以免造成電池泄放、泄漏、爆炸及人身傷害
10. 若電池有漏液、變色等異常現象，請停止使用	以免發生意外
11. 請勿拋擲或強烈衝擊電池	以免引發電池漏液、發熱、破裂、甚至起火
12. 盡量避免電池在高溫，高濕下使用	以免電池過早損壞
13. a. 請在0~40°C的溫度範圍內使用 b. 請在20±5°C的溫度範圍內貯存	a. 不在此範圍內，可能會使電池漏液或發熱，影響電池性能，縮短電池壽命 b. 不在此範圍內，可能會影響電池性能，縮短電池壽命
14. 請勿將新、舊電池混用	以免造成電池過度放電而產生泄放、泄漏和爆炸，及造成人身傷害
15. 請勿與不同類型或牌號的電池混用	以免造成電池發熱、漏液、爆炸、著火
16. 若電子產品長期不用，應將電池從電子產品中取出	以免電池超過貯存期可能發生漏液損壞電子產品
17. 電池耗盡應立即從電子產品中取出	若已放電的電池長時間留在電子產品中，可能發生漏液，造成電子產品損壞及人身傷害
18. 請勿將電池置於嬰幼兒手可觸及的地方	以免誤吞食；萬一吞食，請立即就醫
19. 請勿讓兒童獨立更換電池	以免操作錯誤或發生意外
20. 請在電池規定的貯存期內使用	以免使用過期失效產品
21. 請勿用手直接接觸電池，請戴手指套取電	以免造成電池生鏽
22. 請勿使用鐵鉗取電，請使用膠鉗取電	以免造成電池短路、發熱、漏液或爆炸

本公司保留更改產品規格書和任何資料的權力，且無須預先通知。



**POWERED
BY PROFESSIONALS**
專業力量 專心為你

Lithium Manganese Dioxide Battery 鋰錳電池

CHUNG PAK GROUP 松柏集團

HEAD OFFICE 總公司

■ **CHUNG PAK BATTERY WORKS LTD.**
松柏電池廠有限公司

■ **VINNIC BATTERY WORKS LTD.**
銀戰士電池廠有限公司

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