

Shanghai Bizupwings I&E Foreign Trade Co.Ltd.

CR Coin Battery Proposal





- Top 3 CR coin Batteries Manufacturer in the world
- 28 years of focus on CR coin battery
- 0.79%: 2021 Chaochuang average customer complaints quality level

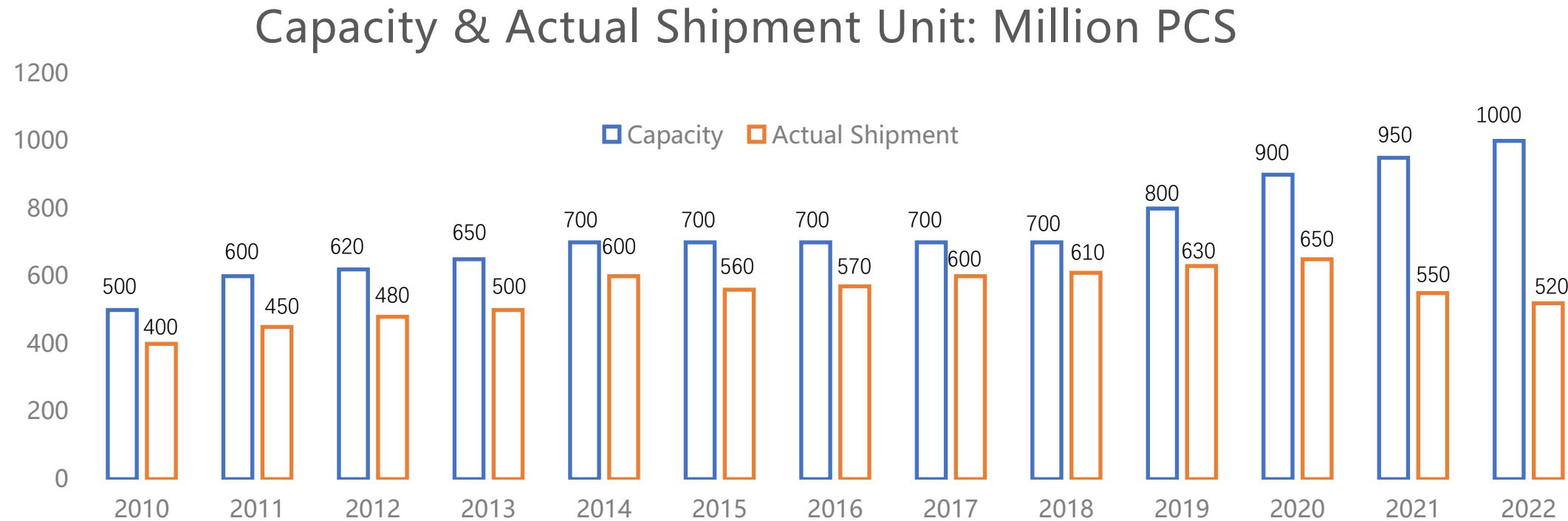


- CR coin Batteries Actual Production Capacity: totally 1 billion pcs/year
- 350 employees



- Covers all CR coin cell battery models
- Supports industrial and retail packaging

1 billion/year capacity, TOP 2 CR Coin battery maker WW.



Product Lineup

- Self-developed dry automatic assembly line
- The most automated CR button battery assembly line in China

- Maximum Production Speed 85pcs/min
- CCD Visual Inspections [structure + appearance]
- Positive MnO₂ Dry Process
- Double Sealing Process

Model	Capacity /M	Product Lines
CR2032	50,000,000	19
CR2025	12,000,000	4
CR2016	9,000,000	4
CR3032, CR2477, CR2450, CR2430, CR2354, CR2330, CR2325, CR2320,	75,000,000	4
CR1632, CR1620, CR1616, CR1625,	35,000,000	3
CR1216, CR1220, CR1225	4,000,000	4
CR927, CR1025, CR1130	1,000,000	2
30 Models	87,000,000	40

Batteries performance

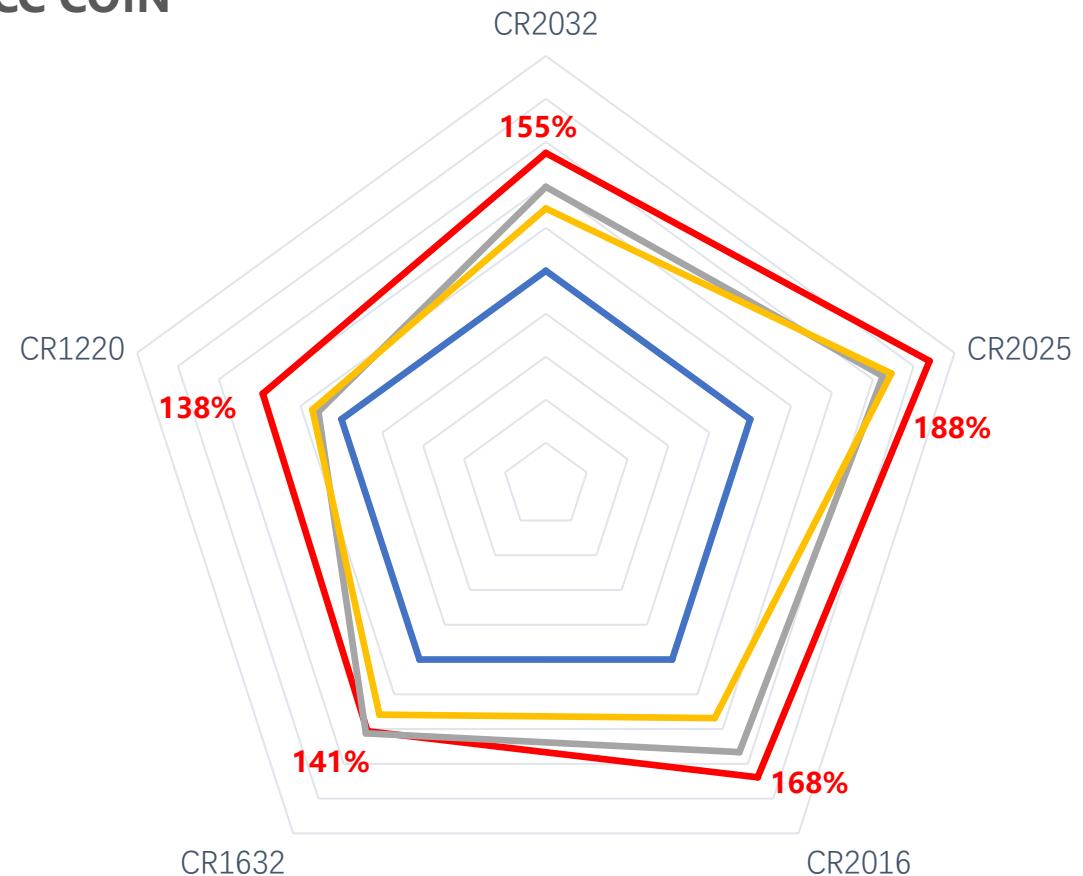
IEC standard Discharge



P COIN & M COIN VS CC COIN

Test environment: Temp 20°C RH 50%

Item	Test Method IEC 24h/d discharge, end-point voltage 2.0V (Unit: hour)			CC	P	M
	15kΩ	920	1424.3 (SH)	1279.4	1186.7	
CR2032	15kΩ	540	1013.7 (SH)	890.7	912.8	
CR2016	30kΩ	675	1132.2 (SH)	1034.4	902.4	
CR1632	15kΩ	540	762.7	769.3	711.3	
CR1220	62kΩ	700	969.4	779	799.6	



---Discharge Test methods from IEC 60086-2: 2021

— IEC — CC — P — M

Batteries performance

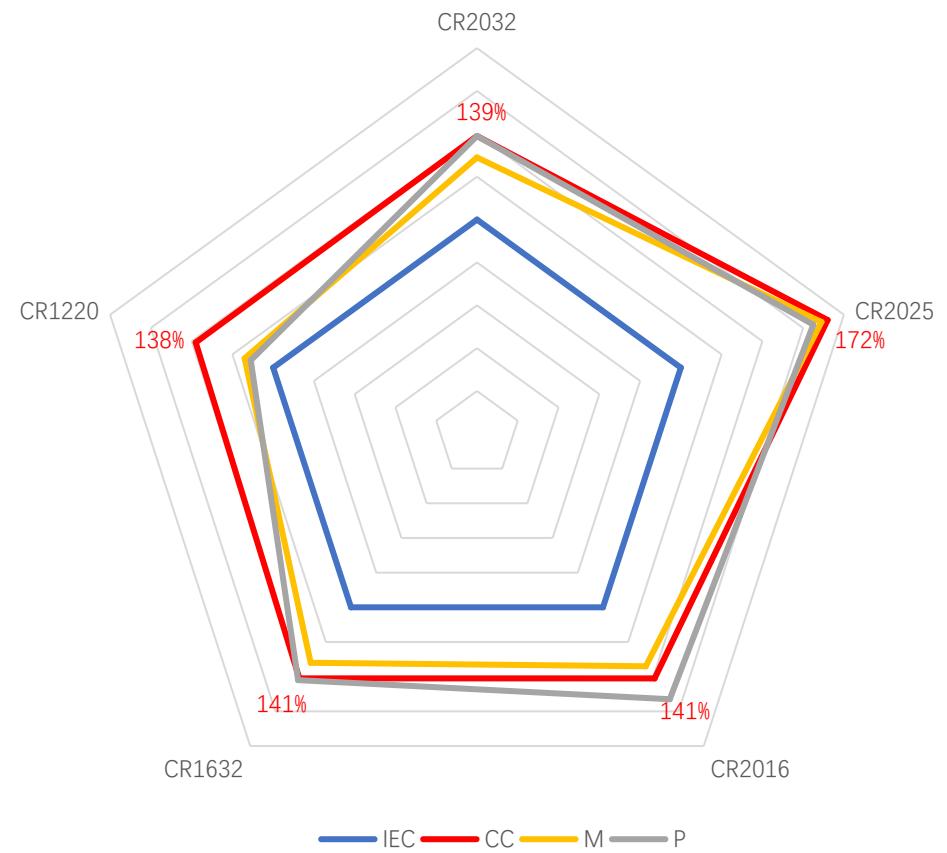
IEC standard Discharge



P Cell & M Cell VS CC Cell

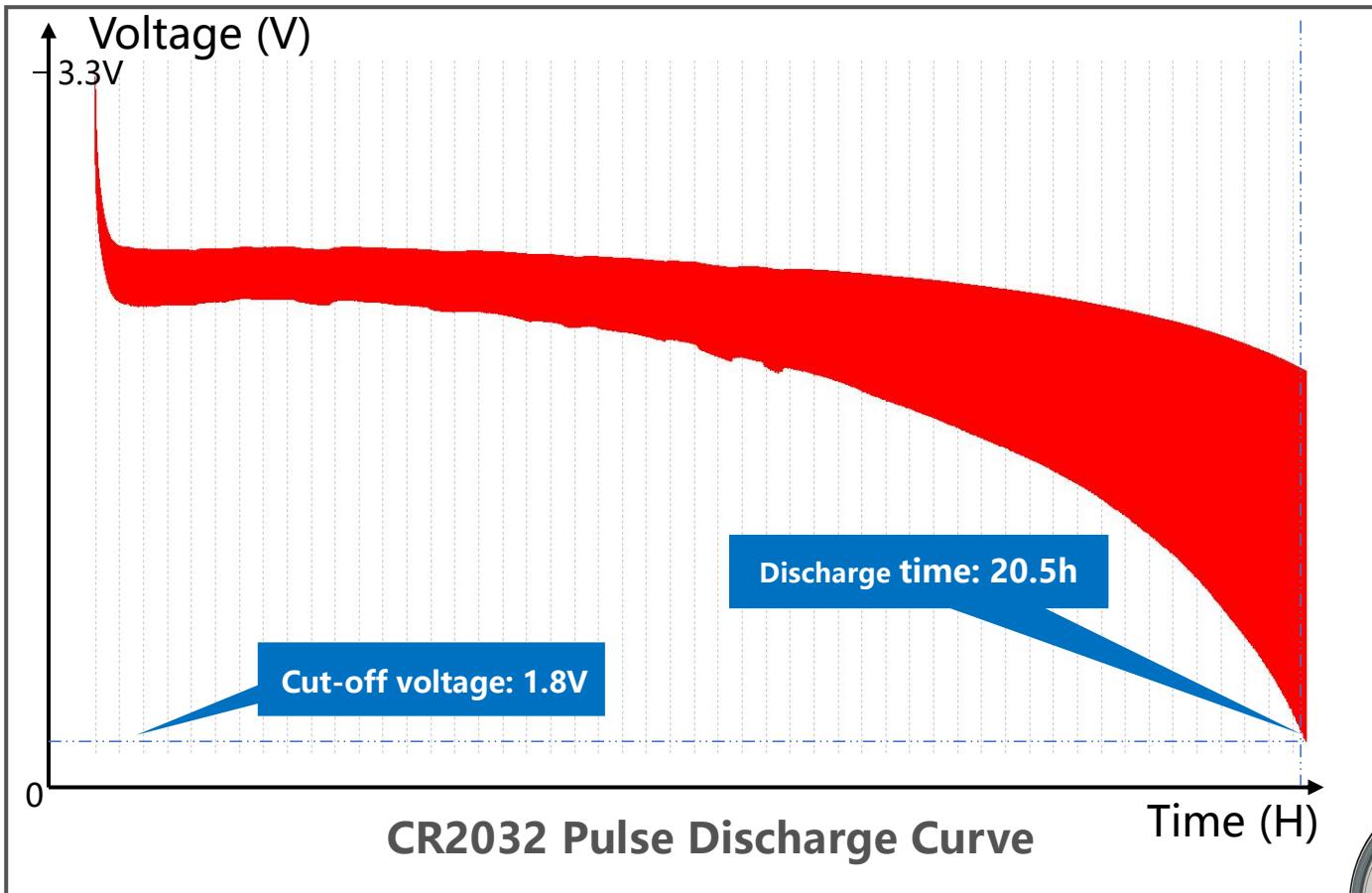
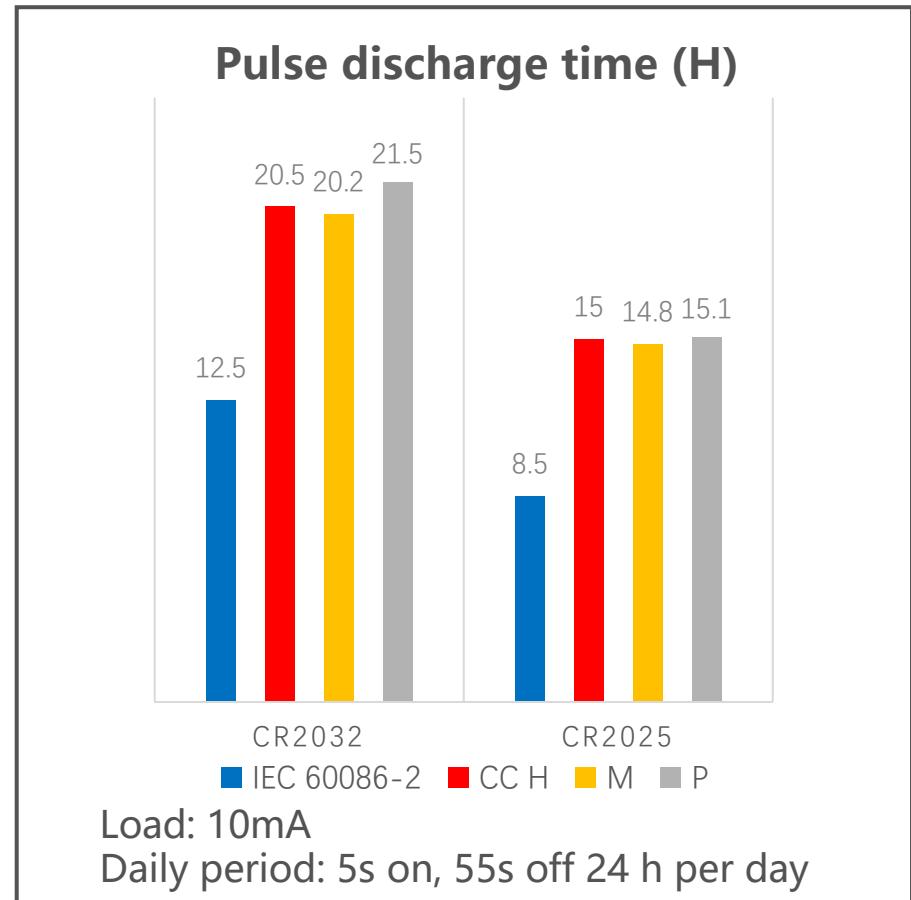
Test environment: Temp 20°C RH 50%

Item	Test Method IEC 24h/d discharge, end-point voltage 2.0V (Unit: hour)			CC	P	M
	15kΩ	920	1279.5	1279.4	1186.7	
CR2032H	15kΩ	540	926.5	890.7	912.8	
CR2016	30kΩ	675	948.9	1034.4	902.4	
CR1632	15kΩ	540	762.7	769.3	711.3	
CR1220	62kΩ	700	969.4	779	799.6	



---Discharge Test methods from IEC 60086-2: 2021

The pulse level of CC's CR2032 is about 200mAh



---Discharge Test methods from IEC 60086-2: 2021

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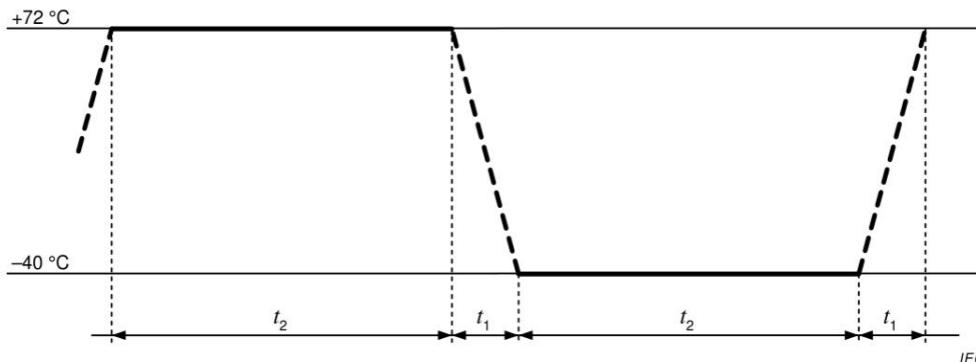
Batteries performance

Anti-leakage Performance

- There is no leakage due to the battery itself, among the 600 million batteries sold in 2020
- Limit test to ensure that the battery does not leak

Thermal Test

IEC 60086-4	test 1	Cycle: 72°C~ -40°C	No leakage within 5days
	test 2	Thermostatic storage: 60°C, 90%RH	No leakage within 7days
ChaoChuang	test 3	Thermostatic storage: 45°C	No leakage within 14 days
	test 4	Cycle: 60°C~ -10°C	No leakage within 14 days



Key

$t_1 \leq 30$ min

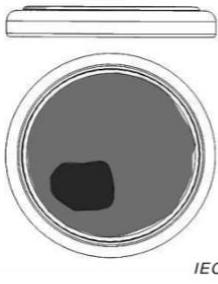
$t_2 \geq 6$ h (12 h for large cells and batteries)

test 1 temperature curve of 1 cycle

IEC 60086-3:2016 © IEC 2016

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Table 11 (2 of 2)

Leakage levels		Diagram	Definition
Classification	Grade		
Leaks	L1		The accumulation of crystallised liquid coming from the electrolyte swells up on part of the cloud spread, which covers the entire surface of the flat negative contact
	L2		The accumulation of crystallised liquid coming from the electrolyte swells up on the entire cloud spread, which covers the entire surface of the flat negative contact

Description of leakage in international standards

Packaging

- customized design
- Anti-swallowing/ Child Secure Packaging



Single Blister Type

Comply with:

- IEC 60086-4
- CFR 1700
- ANSI C18.1

Material Option:

- PVC
- PET

Packaging

- customized design
- Anti-swallowing/ Child Secure Packaging



Double Blister Type

Comply with:

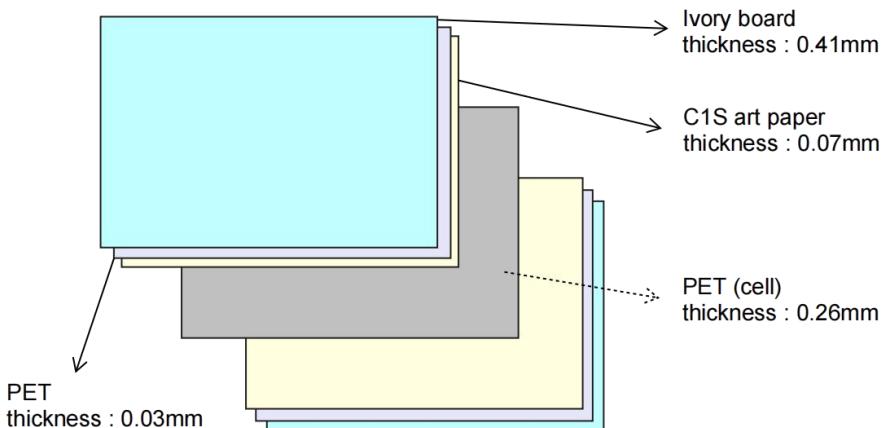
- IEC 60086-4
- CFR 1700
- ANSI C18.1

Material Option:

- PVC

Packaging

- customized design
- Anti-swallowing/ Child Secure Packaging



Lamination Structure Type

Comply with:

- IEC 60086-4
- CFR 1700
- ANSI C18.1

Material Option:

- PET

Certification



by



Valued Quality. Delivered.



Shipping Documents



MSDS

Material Safety Data Sheet
Document Number: MSDS_CGCG5001
Date: 2020 Dec 01

The following are examples of safety data sheets and are not subject of this OSHA Hazard Communication Standard requirement. This is only provided as reference information and is neither formal nor is it intended to be binding in any way. OSHA hazard communication makes no warranty or guarantee.

Section I - Product and Company Identification

Product Name: CHONGMING JINTAN CHAOCHUANG BATTERY CO., LTD.	Telephone Number: +86-610-85483333	Date of Preparation: 201402171A
Address: Xiangtan Industrial Zone, Xupan Town, Jinling City, Jiangsu Province, China	Fax Number: +86-610-85483333	Country: China
Section II - Composition/Information on Ingredients		
Chemical Name: Li-MnO ₂ Button Cell	Concентration (%): 100%	CAS No.: 1328-68-1
Polymer Name: Polymethylmethacrylate	Concентration (%): 100%	EC No.: 213-13-0
Monomer Name: Methyl Methacrylate	Concентration (%): 100%	UN No.: 1243-03-8
Initiator Name: Initiator	Concентration (%): 100%	UN No.: 1243-03-5
Terminator Name: Terminator	Concентration (%): 100%	UN No.: 1243-03-2
Other Name: Other	Concентration (%): 100%	UN No.: 1243-03-1
Color: Colorless	Concентration (%): 100%	UN No.: 1243-03-0
Odor: Odorless	Concентration (%): 100%	UN No.: 1243-03-9
Flammability: Flammable	Concентration (%): 100%	UN No.: 1243-03-7
Reactivity: Reactive	Concентration (%): 100%	UN No.: 1243-03-6
Corrosivity: Corrosive	Concентration (%): 100%	UN No.: 1243-03-5
Specific Gravity: Specific Gravity	Concентration (%): 100%	UN No.: 1243-03-4
Boiling Point: Boiling Point	Concентration (%): 100%	UN No.: 1243-03-3
Flash Point: Flash Point	Concентration (%): 100%	UN No.: 1243-03-2
Odor Threshold: Odor Threshold	Concентration (%): 100%	UN No.: 1243-03-1
Water Solubility: Water Solubility	Concентration (%): 100%	UN No.: 1243-03-0
Octanol/Water Partition Coefficient: Octanol/Water Partition Coefficient	Concентration (%): 100%	UN No.: 1243-03-9
Autoignition Temperature: Autoignition Temperature	Concентration (%): 100%	UN No.: 1243-03-8
Decomposition Temperature: Decomposition Temperature	Concентration (%): 100%	UN No.: 1243-03-7
Stability: Stability	Concентration (%): 100%	UN No.: 1243-03-6
Special Precautions for Safe Handling: Special Precautions for Safe Handling	Concентration (%): 100%	UN No.: 1243-03-5
Special Precautions for Safe Storage: Special Precautions for Safe Storage	Concентration (%): 100%	UN No.: 1243-03-4
Special Precautions for Safe Transportation: Special Precautions for Safe Transportation	Concентration (%): 100%	UN No.: 1243-03-3
Special Precautions for Disposal: Special Precautions for Disposal	Concентration (%): 100%	UN No.: 1243-03-2
Section III - Hazards Identification		
Section IV - First Aid Measures		
Section V - Fire Fighting Measures		
Section VI - Accidental Release Measures		
Section VII - Handling and Storage		
Section VIII - Exposure Controls / Personal Protection		
Section IX - Physical and Chemical Properties		
Section X - Stability and Reactivity		
Section XI - Toxicological Information		
Section XII - Environmental Information		
Section XIII - Disposal Considerations		
Section XIV - Transport Information		
Section XV - Regulatory Information		
Section XVI - Other Information		

(*) Lithium content for each cell

MSDSCN: Not Applicable

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UN38.3

MA 201402171A IAC-MRA CNAS

中国认可 国际互认 检测 TESTING CNAS L0095

Page 1 of 13 Pages
No.: RZUN2015-3127

检验报告 TEST REPORT

UN38.3

NAME OF SAMPLE: Li-MnO₂ Button Cell

CLIENT: JINTAN CHAOCHUANG BATTERY CO., LTD. 金坛市超创电池有限公司

CLASSIFICATION OF TEST: Commission Test 委托测试

Vkan Certification & Testing Co., Ltd.

威凯检测技术有限公司

检验专用章

Certification

海 运 By Sea NO.2120257815

CNAS 货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

锂电池类货物

样品名称 : 锰-二氧化锰电池 CR2032 3V

Sample name: Lithium button battery CR2032 3V

委托单位 : 常州金坛超创电池有限公司 CHANGZHOU JINTAN CHAOCHUANG BATTERY CO., LTD

生产单位 : 常州金坛超创电池有限公司 CHANGZHOU JINTAN CHAOCHUANG BATTERY CO., LTD

上海化工院检测有限公司

检验检测专用章

Shanghai Research Institute of Chemical Industry Testing Co., Ltd

海运 By Sea

Application

□ In-vehicle Equipment

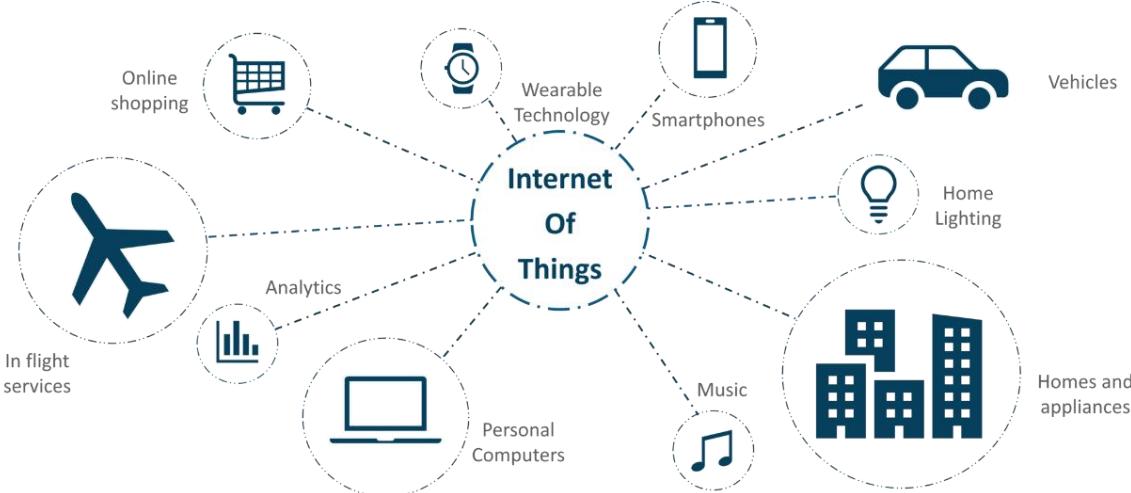


- Keyless Entry
- TPMS

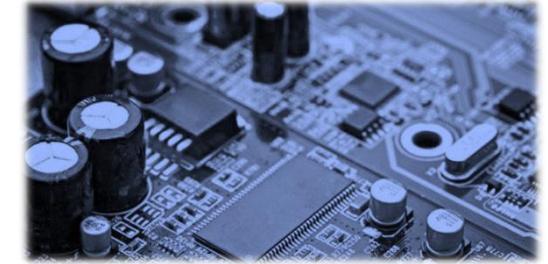
□ Medical devices



- Sphygmomanometer
- Thermometer
- CGM



□ Electronics



- Memory Backup
- Remote Control
- RTC

□ IOT



- Smart Home
- Security
- ESL

Key Customers Worldwide

