

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



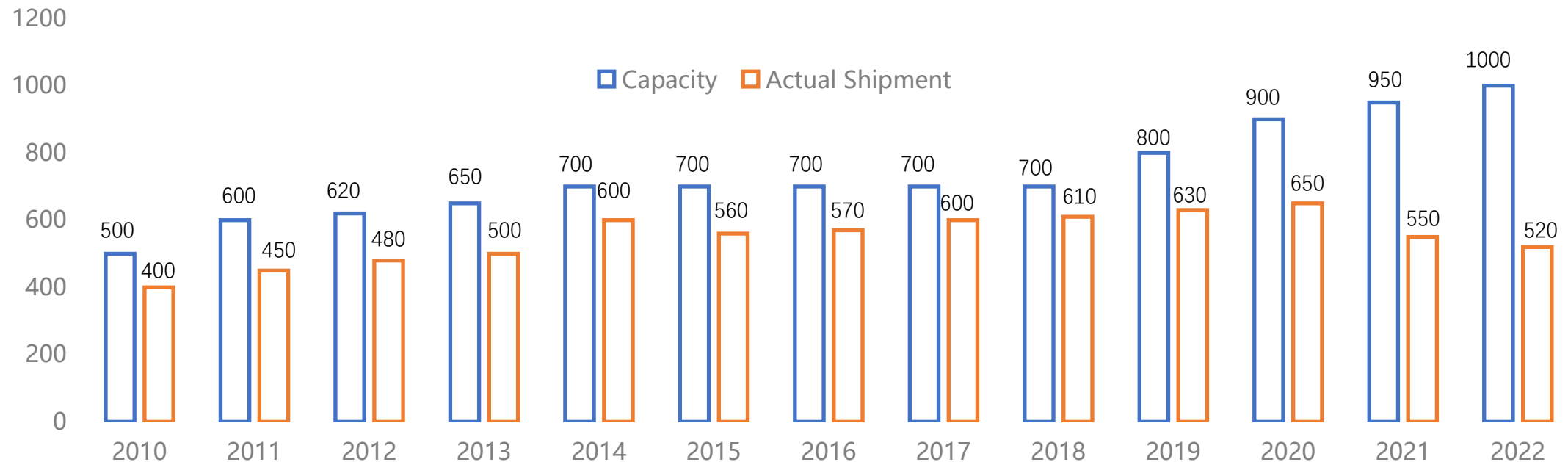
- CR coin Batteries Actual Production Capacity: totally 1 billion pcs/year
- 350 employees



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

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

Capacity & Actual Shipment Unit: Million PCS



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

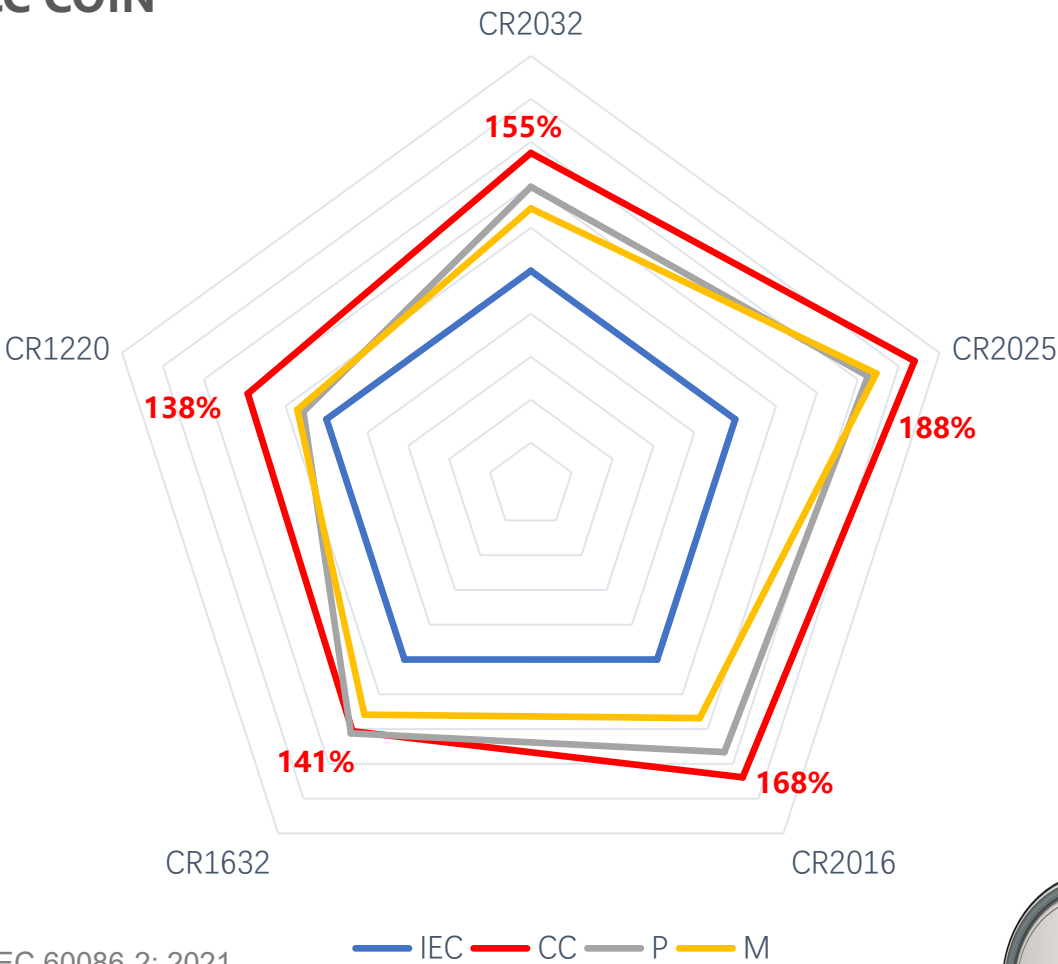
IEC standard Discharge



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
CR2032	15kΩ	920	1424.3 (SH)	1279.4	1186.7
CR2025	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

* Data source: Chaochuang Quality Technology Department 2022
* The test samples are the highest specification batteries available in the market



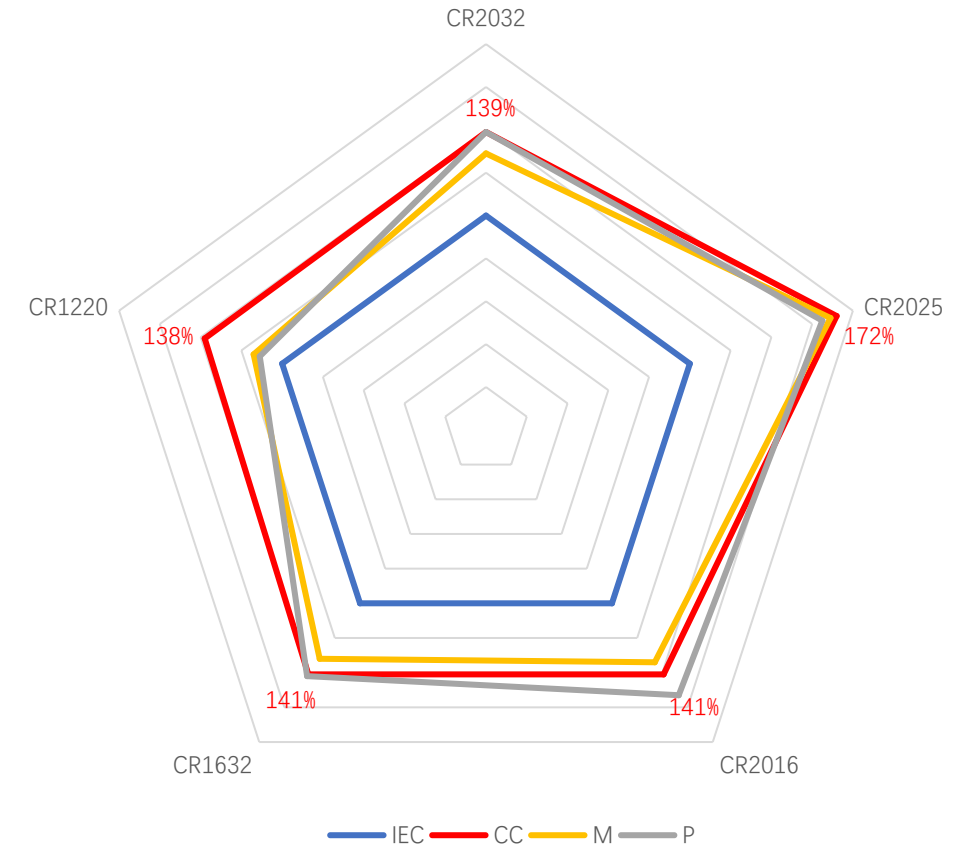
Batteries performance

IEC standard Discharge

P Cell & M Cell VS CC Cell

Test environment: Temp 20°C RH 50%

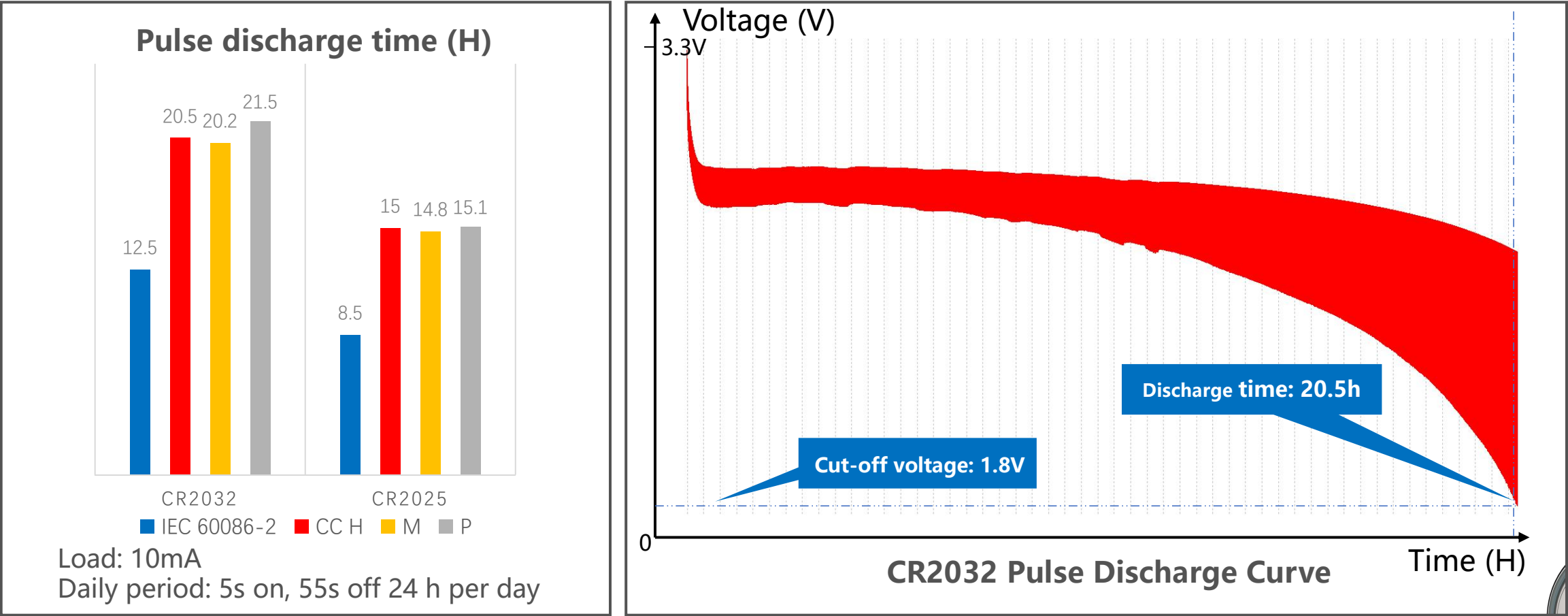
Item	Test Method IEC		CC	P	M
	24h/d discharge, end-point voltage 2.0V (Unit: hour)				
CR2032H	15kΩ	920	1279.5	1279.4	1186.7
CR2025H	15kΩ	540	926.5	890.7	912.8
CR2016	30kΩ	675	948.9	1034.4	902.4
CR1632	15kΩ	540	762.7	769.3	711.3
CR1220	62kΩ	700	969.4	779	799.6



---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

Batteries performance

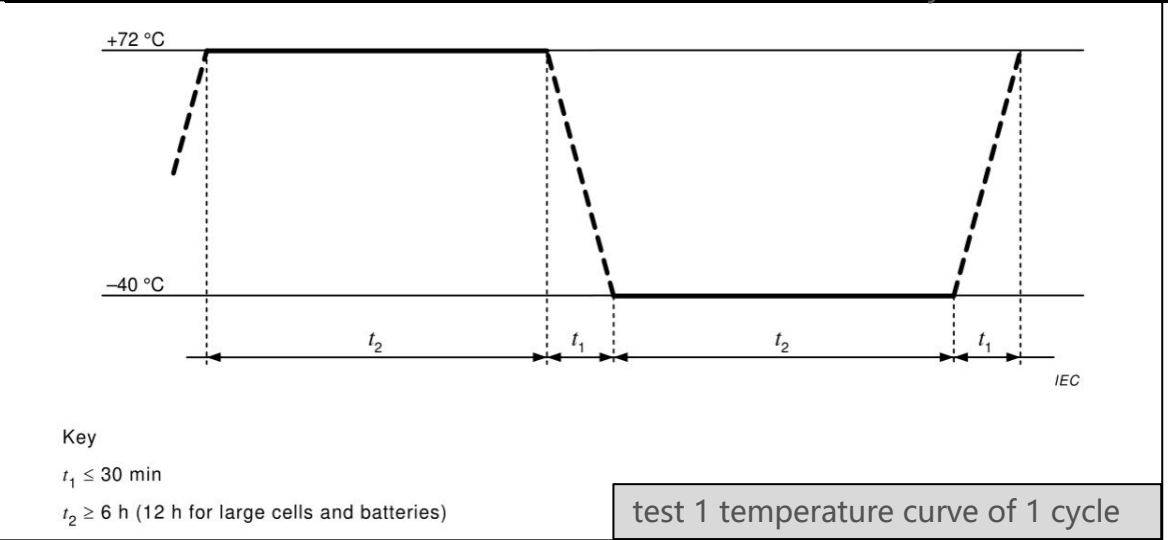
Anti-leakage Performance

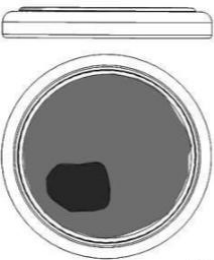



- There is no leakage due to the battery itself, among the 600 million batteries sold in 2020
- Limit test to ensure that the battery does not leak

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



IEC 60086-3:2016 © IEC 2016		– 23 –	
Table 11 (2 of 2)			
Leakage levels		Diagram	Definition
Classification	Grade		
Leaks	L1	 IEC	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	 IEC	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

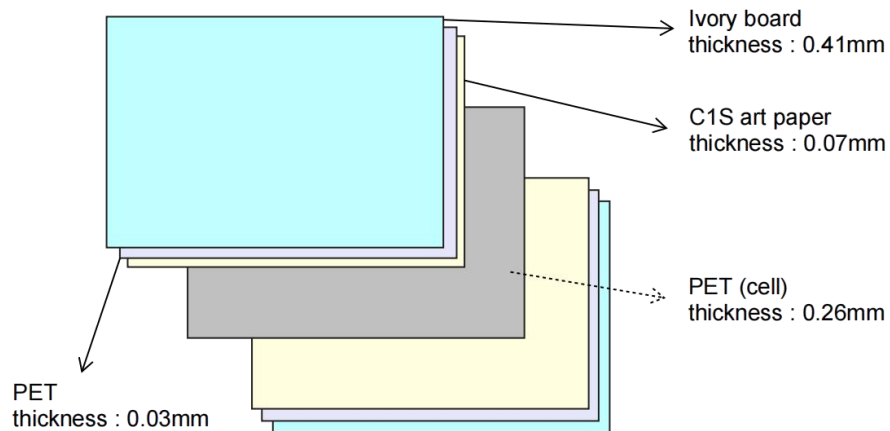
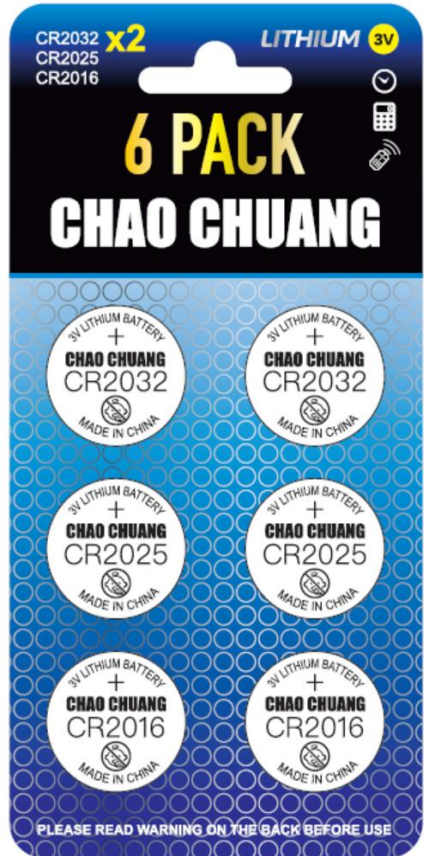
Material Option:

- 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



Shipping Documents



MSDS

UN38.3

Certification

CHAOCHUANG

海 运
By Sea

Document number: MSDS_CR_QC3001

MATERIAL SAFETY DATA SHEET

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is only provided as technical information and is referred normal use of the product in question. Chaochuang makes no warranty, expressed or implied.

Section 1-Product and Company Identification

Product Name

Coin type Lithium Manganese-Dioxide Batteries(CR)

Size

AA

Date of preparation

Jan. 1, 2020

Company:

CHANGZHOU JINTAN CHAOCHUANG BATTERY CO., LTD.

Address:

Xiang Industrial Zone, Xuesi Town, Jintan City, Jiangsu Province, China

Telephone Numbers:

+86-218-8548388

Fax Numbers:

+86-218-8548338

Section 2-Composition, information on ingredients

Content(wt#)	Ingredient
45 to 60	Stainless Steel
15 to 40	Manganese Dioxide
5 to 8	Polyethylene Carbonate
1 to 2	1,5-Dimethoxybenzene
0 to 1.5	Lithium Perchlorate
1 to 2	Lithium or Lithium Alloy
1 to 4	Gelatin
2 to 10	Polypropylene
1 to 5	Glass Fiber
<0.0040	Pb
<0.0005	Hg
<0.0050	Cd

(*) Lithium content for each cell

Page 1 of 2

MA

2014002171A

ilac-MRA

CNAN

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

产品名称:

锂-二氧化锰扣式电池

CLIENT:

JINTAN CHAOCHUANG BATTERY CO., LTD.

委托单位:

金坛市超创电池有限公司

CLASSIFICATION OF TEST:

Commission Test

检验类别:

委托测试

威凯检测技术有限公司

Vkan Certification Testing Co., Ltd.

检验专用章

海 运
By Sea

NO.2120257815

CNAN

中国认可
检测
INSPECTION
CNAS 80071

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: 锂-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

Shanghai Research Institute of Chemical Industry Testing Co., Ltd

检验检测专用章

海 运
By Sea

海 运
By Sea

Application

□ In-vehicle Equipment

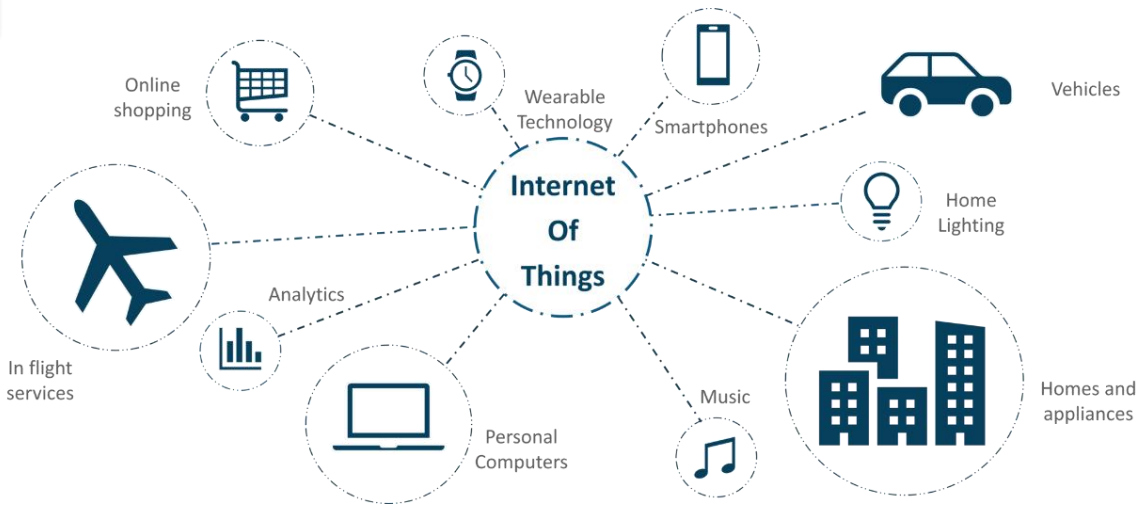


- Keyless Entry
- TPMS

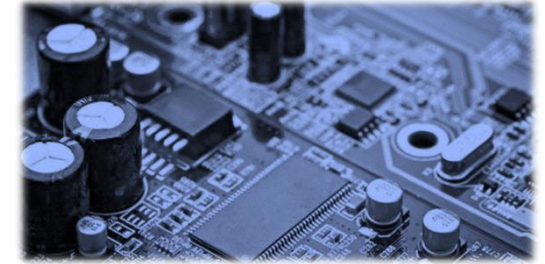
□ Medical devices



- Sphygmomanometer
- Thermometer
- CGM



□ Electronics



- Memory Backup
- Remote Control
- RTC

□ IOT



- Smart Home
- Security
- ESL

Key Customers Worldwide

