中国认可
检测
TESTING
CNAS L0748

170014233963

NO.1119030278

检 测 报 告

Test Report

样品名称： 锂原电池/锂金属电池/锂-二氧化锰钮扣电池/ KTS CR2032 3.0V 220mAh

Name of Sample: Lithium manganese dioxide button cell KTS CR2032 3.0V 220mAh

委托单位: 仕野股份有限公司

Consignor: /

上海化工院检测有限公司

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.

上海化工院检测有限公司
检 测 报 告

Shanghai Research Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1119030278

样品名称 Name of Sample	中文 Chinese	锂原电池/锂金属电池/锂-二氧化锰钮扣电池/ KTS CR2032 3.0V 220mAh		
	英文 English	Lithium manganese dioxide button cell KTS CR2032 3.0V 220mAh		
样品编号 Sample No.	1119030278			
委托单位 Consignor	仕野股份有限公司 /			
生产单位 Manufacturer	武汉力兴（火炬）电源有限公司 Wuhan Lixing (Torch) Power Sources Co., Ltd.			
检测方法 Test method	联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3			
判定标准 Criterion	联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3			
样品外观 Appearance	银色钮扣状金属外壳 Silvery Button metal shell			
样品接受日期 Accepted Date	2019-03-18	检测起迄日期 Test Date	2019-03-25 ～ 2019-04-26	
检测项目 Test Items	高度模拟;热测试;振动;冲击;外短路;挤压;强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Forced discharge			
检测结论 Conclusion	经检验，该样品符合联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3标准要求。 The sample has passed the test items of UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 38.3 生效日期(Date)： 2019-04-26			
备注 Comment	锂含量0.06g 。Lithium content:0.06g. 不可充电锂电池芯Primary Lithium Cell./			
委托单位地址 Consignor Address	/		邮政编码 Post Code	/

批准 Approver: 张小秋　　审核 Checker: 陆建峰　　编制 Compiler: 陶俊

职务 Title: 副总工程师(Vice chief engineer)

上海化工院检测有限公司
检 测 报 告

Shanghai Research Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1119030278

序号 No.	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	高度模拟 Altitude simulation	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.1	见附表 1 See Appendix 1	合格 Passed	/
2	热测试 Thermal test	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.2	见附表 2 See Appendix 2	合格 Passed	/
3	振动 Vibration	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.3	见附表 3 See Appendix 3	合格 Passed	/
4	冲击 Shock	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.4	见附表 4 See Appendix 4	合格 Passed	/
5	外短路 External short circuit	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.5	见附表 5 See Appendix 5	合格 Passed	/
6	挤压 Crush	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.6	见附表 6 See Appendix 6	合格 Passed	/
7	强制放电 Forced discharge	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Section 38.3 Test T.8	见附表 7 See Appendix 7	合格 Passed	/
8	以下空白	This space intentionally left blank			

检测环境条件 Test Environment Condition	环境温度:22℃-24℃;环境湿度:/% Ambient temperature:22℃-24℃;Ambient humidity:/%				
分包检验情况 Subcontracted Test Condition	检测项目 Test Item	/			
	分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code	/
		地址 Address	/	电话 Tel	/

上海化工院检测有限公司
检 测 报 告－附表 1

SRICI Testing Co.， Ltd. Test Report—Appendix 1 NO. 1119030278

序号 No.	1	检测项目名称 Name of Test Items		高度模拟 Altitude simulation				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	2.8410	3.44	2.8411	3.46	0.00	100.00	O
002	未放电 Undischarged	2.8210	3.46	2.8213	3.44	0.00	99.42	O
003	未放电 Undischarged	2.8220	3.46	2.8224	3.46	0.00	100.00	O
004	未放电 Undischarged	2.8152	3.47	2.8158	3.46	0.00	99.71	O
005	未放电 Undischarged	2.8379	3.46	2.8384	3.46	0.00	100.00	O
006	未放电 Undischarged	2.8181	3.47	2.8184	3.47	0.00	100.00	O
007	未放电 Undischarged	2.8226	3.48	2.8230	3.47	0.00	99.71	O
008	未放电 Undischarged	2.8558	3.48	2.8559	3.48	0.00	100.00	O
009	未放电 Undischarged	2.8276	3.48	2.8277	3.48	0.00	100.00	O
010	未放电 Undischarged	2.8485	3.48	2.8488	3.48	0.00	100.00	O
011	完全放电 Fully discharged	2.8292	/	2.8295	/	0.00	/	O
012	完全放电 Fully discharged	2.8704	/	2.8705	/	0.00	/	O
013	完全放电 Fully discharged	2.8232	/	2.8232	/	0.00	/	O
014	完全放电 Fully discharged	2.8274	/	2.8279	/	0.00	/	O
015	完全放电 Fully discharged	2.8380	/	2.8385	/	0.00	/	O
016	完全放电 Fully discharged	2.8351	/	2.8358	/	0.00	/	O
017	完全放电 Fully discharged	2.8526	/	2.8536	/	0.00	/	O
018	完全放电 Fully discharged	2.8365	/	2.8369	/	0.00	/	O
019	完全放电 Fully discharged	2.8357	/	2.8364	/	0.00	/	O
020	完全放电 Fully discharged	2.8347	/	2.8348	/	0.00	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting,
No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表 2

SRICI Testing Co., Ltd. Test Report—Appendix 2 NO. 1119030278

序号 No.	2	检测项目名称 Name of Test Items		热测试 Thermal test				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	2.8411	3.46	2.8396	3.44	0.05	99.42	O
002	未放电 Undischarged	2.8213	3.44	2.8193	3.43	0.07	99.71	O
003	未放电 Undischarged	2.8224	3.46	2.8198	3.43	0.09	99.13	O
004	未放电 Undischarged	2.8158	3.46	2.8139	3.44	0.07	99.42	O
005	未放电 Undischarged	2.8384	3.46	2.8368	3.44	0.06	99.42	O
006	未放电 Undischarged	2.8184	3.47	2.8161	3.44	0.08	99.14	O
007	未放电 Undischarged	2.8230	3.47	2.8211	3.44	0.07	99.14	O
008	未放电 Undischarged	2.8559	3.48	2.8535	3.45	0.08	99.14	O
009	未放电 Undischarged	2.8277	3.48	2.8249	3.45	0.10	99.14	O
010	未放电 Undischarged	2.8488	3.48	2.8467	3.45	0.07	99.14	O
011	完全放电 Fully discharged	2.8295	/	2.8297	/	0.00	/	O
012	完全放电 Fully discharged	2.8705	/	2.8705	/	0.00	/	O
013	完全放电 Fully discharged	2.8232	/	2.8230	/	0.01	/	O
014	完全放电 Fully discharged	2.8279	/	2.8277	/	0.01	/	O
015	完全放电 Fully discharged	2.8385	/	2.8379	/	0.02	/	O
016	完全放电 Fully discharged	2.8358	/	2.8356	/	0.01	/	O
017	完全放电 Fully discharged	2.8536	/	2.8538	/	0.00	/	O
018	完全放电 Fully discharged	2.8369	/	2.8369	/	0.00	/	O
019	完全放电 Fully discharged	2.8364	/	2.8362	/	0.01	/	O
020	完全放电 Fully discharged	2.8348	/	2.8343	/	0.02	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表 3

SRICI Testing Co.， Ltd. Test Report—Appendix 3 NO. 1119030278

序号 No.	3	检测项目名称 Name of Test Items		振动 Vibration				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	2.8396	3.44	2.8373	3.44	0.08	100.00	O
002	未放电 Undischarged	2.8193	3.43	2.8174	3.44	0.07	100.00	O
003	未放电 Undischarged	2.8198	3.43	2.8178	3.16	0.07	92.13	O
004	未放电 Undischarged	2.8139	3.44	2.8128	3.45	0.04	100.00	O
005	未放电 Undischarged	2.8368	3.44	2.8348	3.45	0.07	100.00	O
006	未放电 Undischarged	2.8161	3.44	2.8147	3.44	0.05	100.00	O
007	未放电 Undischarged	2.8211	3.44	2.8201	3.45	0.04	100.00	O
008	未放电 Undischarged	2.8535	3.45	2.8519	3.44	0.06	99.71	O
009	未放电 Undischarged	2.8249	3.45	2.8245	3.45	0.01	100.00	O
010	未放电 Undischarged	2.8467	3.45	2.8451	3.46	0.06	100.00	O
011	完全放电 Fully discharged	2.8297	/	2.8281	/	0.06	/	O
012	完全放电 Fully discharged	2.8705	/	2.8692	/	0.05	/	O
013	完全放电 Fully discharged	2.8230	/	2.8232	/	0.00	/	O
014	完全放电 Fully discharged	2.8277	/	2.8274	/	0.01	/	O
015	完全放电 Fully discharged	2.8379	/	2.8377	/	0.01	/	O
016	完全放电 Fully discharged	2.8356	/	2.8345	/	0.04	/	O
017	完全放电 Fully discharged	2.8538	/	2.8533	/	0.02	/	O
018	完全放电 Fully discharged	2.8369	/	2.8359	/	0.04	/	O
019	完全放电 Fully discharged	2.8362	/	2.8362	/	0.00	/	O
020	完全放电 Fully discharged	2.8343	/	2.8343	/	0.00	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表 4

SRICI Testing Co., Ltd. Test Report—Appendix 4 NO. 1119030278

序号 No.	4	检测项目名称 Name of Test Items		冲击 Shock				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	2.8373	3.44	2.8383	3.44	0.00	100.00	O
002	未放电 Undischarged	2.8174	3.44	2.8178	3.44	0.00	100.00	O
003	未放电 Undischarged	2.8178	3.16	2.8175	3.18	0.01	100.00	O
004	未放电 Undischarged	2.8128	3.45	2.8132	3.45	0.00	100.00	O
005	未放电 Undischarged	2.8348	3.45	2.8354	3.45	0.00	100.00	O
006	未放电 Undischarged	2.8147	3.44	2.8152	3.45	0.00	100.00	O
007	未放电 Undischarged	2.8201	3.45	2.8202	3.44	0.00	99.71	O
008	未放电 Undischarged	2.8519	3.44	2.8527	3.45	0.00	100.00	O
009	未放电 Undischarged	2.8245	3.45	2.8245	3.45	0.00	100.00	O
010	未放电 Undischarged	2.8451	3.46	2.8459	3.46	0.00	100.00	O
011	完全放电 Fully discharged	2.8281	/	2.8293	/	0.00	/	O
012	完全放电 Fully discharged	2.8692	/	2.8708	/	0.00	/	O
013	完全放电 Fully discharged	2.8232	/	2.8228	/	0.01	/	O
014	完全放电 Fully discharged	2.8274	/	2.8278	/	0.00	/	O
015	完全放电 Fully discharged	2.8377	/	2.8384	/	0.00	/	O
016	完全放电 Fully discharged	2.8345	/	2.8354	/	0.00	/	O
017	完全放电 Fully discharged	2.8533	/	2.8534	/	0.00	/	O
018	完全放电 Fully discharged	2.8359	/	2.8370	/	0.00	/	O
019	完全放电 Fully discharged	2.8362	/	2.8364	/	0.00	/	O
020	完全放电 Fully discharged	2.8343	/	2.8352	/	0.00	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表 5

SRICI Testing Co., Ltd. Test Report—Appendix 5 NO. 1119030278

序号 No.	5	检测项目名称 Name of Test Items	外短路 External short circuit
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /℃	其他现象 Other Event
001	未放电 Undischarged	63.2	O
002	未放电 Undischarged	63.6	O
003	未放电 Undischarged	63.9	O
004	未放电 Undischarged	63.5	O
005	未放电 Undischarged	61.1	O
006	未放电 Undischarged	63.5	O
007	未放电 Undischarged	64.0	O
008	未放电 Undischarged	62.2	O
009	未放电 Undischarged	61.8	O
010	未放电 Undischarged	63.1	O
011	完全放电 Fully discharged	56.1	O
012	完全放电 Fully discharged	56.6	O
013	完全放电 Fully discharged	56.8	O
014	完全放电 Fully discharged	57.3	O
015	完全放电 Fully discharged	57.4	O
016	完全放电 Fully discharged	57.7	O
017	完全放电 Fully discharged	57.5	O
018	完全放电 Fully discharged	58.1	O
019	完全放电 Fully discharged	57.6	O
020	完全放电 Fully discharged	57.5	O

备注：D-解体 R-破裂 F-起火 O-无解体、无起火、无破裂。

Note: D-Disassembly R-Ruptur F-Fire O-No Disassembly,No Fire & No Rupture.

序号 No.	6	检测项目名称 Name of Test Items	挤压 Crush
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /℃	其他现象 Other Event
021	未放电 Undischarged	/	O
022	未放电 Undischarged	/	O
023	未放电 Undischarged	/	O
024	未放电 Undischarged	/	O
025	未放电 Undischarged	/	O
026	完全放电 Fully discharged	/	O
027	完全放电 Fully discharged	/	O
028	完全放电 Fully discharged	/	O
029	完全放电 Fully discharged	/	O
030	完全放电 Fully discharged	/	O
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备注：D-解体 F-起火 O-无解体、无起火。 Note: D-Disassembly F-Fire O-No Disassembly & No Fire.			

序号 No.	7	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
031	完全放电 Fully discharged	O	
032	完全放电 Fully discharged	O	
033	完全放电 Fully discharged	O	
034	完全放电 Fully discharged	O	
035	完全放电 Fully discharged	O	
036	完全放电 Fully discharged	O	
037	完全放电 Fully discharged	O	
038	完全放电 Fully discharged	O	
039	完全放电 Fully discharged	O	
040	完全放电 Fully discharged	O	
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备注：D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.


+
K T S
LITHIUM BATTERY
JAPAN STD
CR2032


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
检验检测专用章
(17)

报告结束

Lixing Batteries

材料安全资料表 Material Safety Data Sheet

1 化学品及企业标识(Chemical Product and Company Identification)	
产品名称 Product Name	锂-二氧化锰扣式电池 Lithium manganese dioxide coin battery
制造商名称 Manufacturers Name	武汉力兴（火炬）电源有限公司 WUHAN LIXING (TORCH) POWER SOURCES CO.,LTD.
地址 Address	武汉市东湖高新技术开发区关东工业园 430074 The Guandong industrialized country of East Lake high and new technology development zone , Wuhan 430074
紧急联络电话 Emergency Number	86-27-87531527
传真 Fax	86-27-87414024

产品基本技术信息 Technical parameters			
产品型号 Model	**产品重量** Weight for Reference	**标称容量** Nominal Capacity*	**标称电压** Nominal Voltage
CR2032	About 3.0g	220 mAh	3.0V

2 成分/组成信息(Composition/Information on Ingredients)

危险性组分:
Hazardous Components:

名称 Description	含量 Approximate Percent (wt %)	重量 Approximate weight (mg)	化学文摘号 CAS No.
二氧化锰 Manganese dioxide	26.8	804	1313-13-9
碳 Graphite	2.2	66	7782-42-5
Teflon (PTFE)	1.5	45	9002-84-0
PP 塑料 Plastic	4.7	141	9003-07-0
不锈钢 Stainless Steel	53.9	1608	12597-68-1
锂 Lithium	1.8	63	7439-93-2
高氯酸鋰 Lithium Perchlorate	0.9	27	7791-03-9
碳酸丙烯酯 Propylene carbonate	6.5	195	108-32-7
乙二醇二甲醚 1,2 Dimethoxyethane	1.7	51	110-71-4
总计 Total	100	3000	-

3 危险性概述(Haxards Summarizing)

锂 Lithium	与水接触剧烈反应,易燃烧。只能用苏打粉,沙子等灭火。 It reacts violently when in contact with water,and it is flammable.Use only soda ash or sand to extinguish flame.
二氧化锰 Manganese dioxide	强氧化剂,具腐蚀性,摄入有毒。可用 CO_2 灭火。 A toxic material also an corrosive and an oxidising agent.Use only CO_2 or halon to extinguish flame.
碳酸丙烯酯 Propylene carbonate	可腐蚀眼睛和皮肤。 可用 CO_2 灭火。 Will irritate the eyes and the skin by absorption,harmful if ingested or inhaled. Use only CO_2 or halon to extinguish flame.
乙二醇二甲醚 1,2 Dimethoxyethane	极易燃。吸入和摄入有害。可用 CO_2 灭火。 Highly flammable. Harmful if ingested or inhaled. Use only CO_2 or halon to extinguish flame.

其他组分不活泼,或者危害较小。
Other materials are either inert or have low hazard associated with their exposure.

4 急救措施(First-aid Measures)

眼睛:用水冲洗,立即就医。
Eyes:irrigate thoroughly with water.Obtain medical attention.

皮肤:用水彻底冲洗,脱掉受污染的衣物并清洗。除非少量接触,否则就医。
Skin:drench the skin thoroughly with water.Remove contaminated clothing and wash before re-use.Unless contact has been slight,obtain medical attention.

吸入:离开污染场所,休息并保暖。严重时就医。
Inhalation:remove from exposure,rest and keep warm.In severe cases,obtain medical attention.

食入:用水彻底冲洗口部后大量饮水。就医。
Ingestion:wash out mouth thoroughly with water and give plenty of water to drink.Obtain medical attention.

5 消防措施(Fire-fighting Measures)

大量电池燃烧,可能发生爆炸。适合的灭火介质为 CO_2,干粉灭火器和沙子。不可用水灭火。
消防人员应配戴空气呼吸器，防护头盔，眼镜等。
There would be explosion in the case where significant quantities of lithium-manganese dioxide batteries have been involved in a fire. Applicable extinguishing media: CO_2 fire extinguisher , ABC dry powder extinguisher , sand ,etc.Do not use water as extinguishing agent. Firemen should wear the air breathe machine, helmet, glasses ,etc.

6 泄露应急处理(Accidental Release Measures)

不可呼吸泄漏液蒸汽,或用手接触液体。若皮肤已接触电解质,立即用大量水冲洗。可用泥土和沙子吸收泄漏液。将漏液电池和沙子按特殊废弃物处理。
Do not breath vapours or touch liquid with bare hands.If the skin has come into contact with the electrolyte it should be washed thoroughly with water.Earth or sand should be used to absorb the exudation.Seal leaking battery and earth in a heavy-duty Polythene bag and dispose of as special waste.

7 操作处置与储存(Handling and Storage)

保证电池包装完整,避免短路。
Pack the batteries well,and avoid short circuit.

不要拆卸电池。
Never disassemble batteries.

不要吸入电池蒸汽或用光手接触电池内部物质。
Do not breathe cell vapors or touch internal material with bare hands.

将电池储存在阴凉通风的地方,避免阳光直射。
Store batteries in cool well-ventilated area,keep out of direct sunlight.

8 接触控制/个体防护(Exposure Controls/Personal Protection)

外部含镍壳盖的腐蚀可能生成有毒产物。避免吞咽电池。接触后洗手。
External corrosion of the nickle can could result in theformation of toxic metal salts.Avoid ingestion,Wash hands after contact.

9 理化特性(Physical and Chemical Properties)

本品为固态,无味。其他指标不适用。
This battery is solid state , and inodorous.The other items are not applicable.

10 稳定性和反应性(Stability and Reactivity)

有害物质被密封在壳体内,在正常情况下本产品稳定,无害。
Hazardous materials are housed within a sealed unit,under normal conditions this unit is stable and non-hazardous.

若电池密封被损坏,金属锂会与水反应放出可燃性气体。
Lithium will react with water and produce flammable gas if the seal of battery is damaged.

11 毒理学资料(Toxicological Information)

若电池不损坏,无毒。
No toxicity unless the battery is damaged.

12 生态学资料(Ecological Information)

不适用。
Not Applicable.

13 废弃处置(Disposal)

不要焚烧电池或将电池加热超过 80℃。根据当地法规处理电池。
Do not incinerate or subject cells to temperature in excess of 80℃.Dispose of in accordance with local regulations.

14 运输信息(Transport Information)

国际运送规定:
锂电池国际运输规程
World transports and stipulates :
Lithium battery international transportation rules

Effective October 1, 2008 all LIXING lithium batteries are not subject to the requirements of the U.S. Department of Transportation (DOT), Subchapter C, Hazardous Material Regulations if shipped in compliance with 49 CFR 173.185 and Special Provision 188.Currently all LIXING lithium batteries can be transported under the International Civil Aviation Organization (ICAO) and the Packing Instructions (PI) 968 (Batteries), PI 969 (Batteries, packed with equipment) and PI 970(Batteries, contained in equipment).

They are considered to be non-dangerous by the IATA Dangerous Goods regulations as below:

- The goods with lithium metal cells and should complies with IATA DGR **60th** EDITION
- The substance is not restricted to IMO IMDG code according to special provision

188.

- A lithium metal cell, the lithium content is not more than 1g.
- For these lithium cells/batteries contained in equipment, the equipment is equipped and protected with an effective means to prevent short circuits, dangerous reverse current flow and accidental activation.
- This consignment does not contain any recalled and/or defective batteries that have the potential of producing a dangerous evolution of heat, fire or short circuit.
- Each package of batteries must be capable of withstanding a 1. 2m-drop test in any orientation without damage to dells or batteries contained therein, shifting of the contents so as to allow battery to battery(or cell to cell) contact and/or release of contents.
- Each cell or battery is of the type proven to meet the requirements of each test in the UN Manual of Tests an Criteria, Part III,subsection 38.3 as of the Material Safety Data Sheet Reference Number LX-QR-824-38.

The only requirement for shipping these batteries, in all modes of transportation, are that they must be separated to prevent short-circuits and to prevent movement that could lead to short-circuits. They must also be packed in strong packaging that can withstand the rigors normal to transportation.

运输时,应避免电池短路。
The batteries being transported must be protected from shorting-circuiting and protected from movement that could lead to short-circuiting.

15 法规信息(Regulatory Information)

特殊要求依据当地法规。
Special requirement be according to the local regulations.

16 其他信息(Other Information)

填表时间 Date of Issue	2020.01.01
填表部门 Dept. of Issue	名称:武汉力兴(火炬)电源有限公司技术部 Name: the R&S dept. of wuhan lixing (torch) power sources co.,ltd.
文件号 Document Number	LX-QR-824-38
备注 Remarks	以上数据只基于对产品目前状态的了解。 The above information is given based on the present state of our knowledge of this product.

海 运
By Sea

NO.2120012052

中国认可
检验
INSPECTION
CNAS IB0071

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： 成品配件(锂电池)/成品配件(钮扣式锂电池)/锂电池(钮扣)/钮扣式锂电池/钮扣式锂电池(不可充电)/原电池/锂电池/钮扣锂电池/钮扣电池/锂原电池/锂金属电池/锂-二氧化錳电池/ KTS 型號 CR2032 3.0V 220mAh

Sample name: Lithium manganese dioxide button cell KTS CR2032 3.0V 220mAh

委托单位： 什野股份有限公司
/

生产单位： 武汉力兴(火炬)电源有限公司
/

上海化工院检测有限公司 检验检测专用章

上化院 上海化工院检测有限公司
Shanghai Research Institute of Chemical Industry Testing Co., Ltd

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货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

NO. 2120012052

样品名称 Sample name	中文 Chinese	成品配件(锂电池)/成品配件(钮扣式锂电池)/锂电池(钮扣)/钮扣式锂电池/钮扣式锂电池(不可充电)/原电池/锂电池/钮扣锂电池/钮扣电池/锂原电池/锂金属电池/锂-二氧化锰电池/KTS 型號 CR2032 3.0V 220mAh
	英文 English	Lithium manganese dioxide button cell KTS CR2032 3.0V 220mAh
委托单位 Consignor		仕野股份有限公司 /
生产单位 Manufacturer		武汉力兴(火炬)电源有限公司 /
检验方法、程序 Inspection method and procedure		国际海事组织《国际海运危险货物规则》(2018版) IMO International Maritime Dangerous Goods Code (2018 Edition)
样品外观 Sample appearance		银色钮扣状金属外壳 Silvery Button metal shell
包装件信息 Package information		重量≤30kg。 Weight≤30kg.

序号 NO.	电池种类 Battery type	型号 Model	容量Capacity /锂含量Li content	放置方式 Placement
1	不可充电锂金属电池芯 Primary Li-metal cell	CR2032	220mAh / ≤0.3g	电池单独运输 Battery only

鉴定结论 IDENTIFICATION CONCLUSION

1. 危险性识别(Hazards identification)
锂金属电池。
Lithium metal battery.

2. 海运按照国际海事组织《国际海运危险货物规则》办理的类项(Suggestion according to IMO IMDG Code)
根据特殊规定188，该物品不受IMO IMDG Code其他条款限制。
The article is not subject to other provisions of IMO IMDG Code according to special provision 188.

3. 包装要求(Packaging requirements)
无。
None.

检验日期: Inspection Date: 2019-12-17　签发日期: Issue Date: 2019-12-17　生效日期: Effective Date: 2020-01-01

备注 Comment	/

批准 Approver: 张小欧　审核 Checker: 董学雄　主检 Appraiser: 孙隆

上海化工院检验有限公司 (17)

货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods

NO. 2120012052

序号 No.	检验结果及其他事项 Inspection results and other things
1	本报告所述锂电池按照《国际海运危险货物规则》(2018版) 2.9.4.5规定的质量管理体系进行制造。 Lithium cells and batteries listed in this report were manufactured under the quality management programme as described in IMDG CODE 2018 EDITION 2.9.4.5 .
2	本报告所述锂电池已通过《联合国试验和标准手册》第III部分38.3小节相应测试要求。 包装件能够承受1.2m跌落试验。 Lithium cells and batteries listed in this report are of the types proven to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3. The package has passed the 1.2m drop test. UN38.3试验概要编号The UN38.3 Test Summary No. (s) 811900800802896 详细信息请扫描右侧二维码。Please scan the QR code on the right for more information.
3	锂电池完全封装在内包装内，位于坚固的外包装中。 Lithium cells and batteries are packed in inner packagings that completely enclose the cell or battery and placed in a strong outer packaging.
4	电池具有适当的防短路措施。 Cells and batteries are properly protected to prevent short circuits.
5	每个包装件必须标示恰当的锂电池标记。 装有锂电池的包装件，符合国际民航组织关于危险货物安全空运的《技术细则》第4部分第11章的包装说明965或968第IB部分规定的，黏贴5.2.1.10(锂电池标记)和5.2.2.2所示的9A型标签，应视为符合本特殊规定188的规定。 Each package shall be marked with the appropriate lithium battery mark. Packages containing lithium batteries packed in conformity with the provisions of part 4, chapter 11, packing instructions 965 or 968, section IB of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by air that bear the mark as shown in 5.2.1.10(lithium battery mark) and the label shown 5.2.2.2, Model No.9A shall be deemed to meet the provisions of this special provision 188.
6	/
7	/

-验证码:773661-

货物运输条件鉴定书

Certification for Safe Transport of Chemical Goods



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