



堆码试验报告

Stacking Test Report

包装容器名称: 五层瓦楞纸箱

Name of Packing container : five layers of corrugated cartons

电池型号
Battery Model : MGU

申请人 : 东莞维科电池有限公司

Applicant : Dongguan Veken Battery Co., Ltd.



东莞市中认联科检测技术有限公司
Dongguan ZRLK Testing Technology Co., Ltd.



样品名称 Sample name	中文 Chinese	五层瓦楞纸箱
	英文 English	five layers of corrugated cartons
电池型号 Battery Model	MGU(额定值: 3.87V 4900mAh 18.97Wh)	
样品编号 Sample No.	#01, #02, #03	
申请人名称 Name of Applicant	东莞维科电池有限公司 Dongguan Veken Battery Co., Ltd.	
地址 Address	东莞市横沥镇田坑村新城工业区兴华路 19 号 No.19 Xinghua Road, Xincheng Industrial Area, Tiankeng, Hengli Town, Dongguan City, Guangdong, Province, China	
包装件制造商 Manufacturer of package	东莞维科电池有限公司 Dongguan Veken Battery Co., Ltd.	
地址 Address	东莞市横沥镇田坑村新城工业区兴华路 19 号 No.19 Xinghua Road, Xincheng Industrial Area, Tiankeng, Hengli Town, Dongguan City, Guangdong, Province, China	
包装箱制造厂家 Manufacturer of the packaging	东莞市万诚贸易有限公司 Dongguan Wancheng Trading Co., Ltd.	
地址 Address	东莞市横沥镇山厦村祥和路 4 号 No.4, Xianghe Road, Shanxia Village, Hengli Town, Dongguan City	
测试方法和判定标准 Test method and criterion	联合国《关于危险货物运输的建议书 规章范本》(23 修订版)包装的试验要求 6.1.5 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Model Regulations (23 rd Rev. edition) test requirements for packaging 6.1.5	
包装容器名称及规格 Spec. and Name of Packing container	名称: 五层瓦楞纸箱, 尺寸: 392*362*156mm	
包装说明 Packing Instruction	PI 965 IB	
包装情况说明 Packing method	长方形瓦楞纸箱(392*362*156mm), 内装 136 锂电池, 电池净重约 8.72kg, 包装件毛重 11.34kg。 Rectangle corrugated carton (392*362*156mm), containing 136 lithium ion batteries, the net weight of batteries is 8.72kg, the gross weight of package is 11.34kg.	
预处理环境条件 Pretreatment environment condition	环境温度: 21°C - 25°C; 环境湿度: 48%RH - 52%RH Ambient temperature: 21°C - 25°C, Ambient humidity: 48%RH - 52%RH	

样品接收日期 Accepted date	2026-01-13	检测日期 Test date	2026-01-13 ~ 2026-01-17		
检测项目 Test items	3m stacking test 3m 堆码试验				
检测结论 Conclusion	堆码载荷 206.74kgf 24 小时后被测包装箱所装的电池未从内包装中漏出，五层瓦楞纸箱未显出可能对运输安全有不利影响的损坏，或者可能降低其强度或造成包装件堆码不稳定的变形。 Stacking load 206.74kgf for 24h, no sample leakage. None of the five layers of corrugated cartons showed any deterioration that could adversely affect the safety of transport, nor any deformation that could easily reduce its strength or cause the packing to be unstable. 签发日期(Issue date): 2026-01-17				
主检(测试工程师) Tested by: (Test engineer)	李奕霖 King Li	审核(项目工程师) Checker: (Project engineer)	张健斌 Ben Zhang	批准(技术总监) Approver: (Technical director)	马芳琴 Ailis Ma

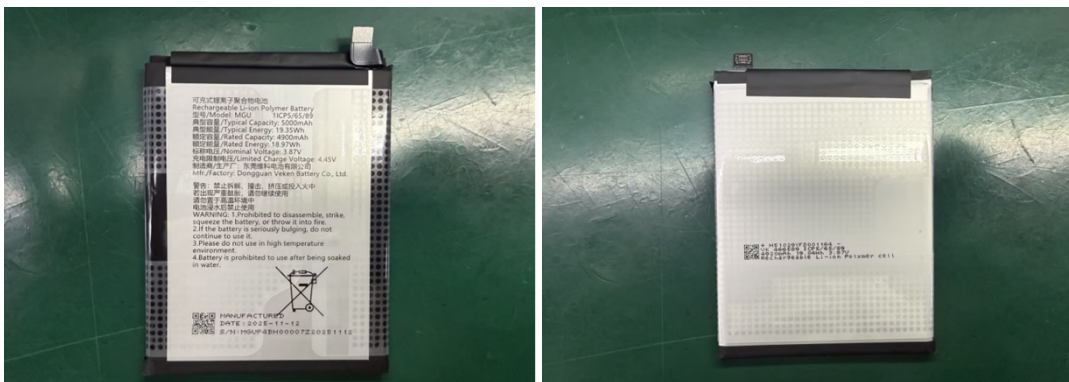
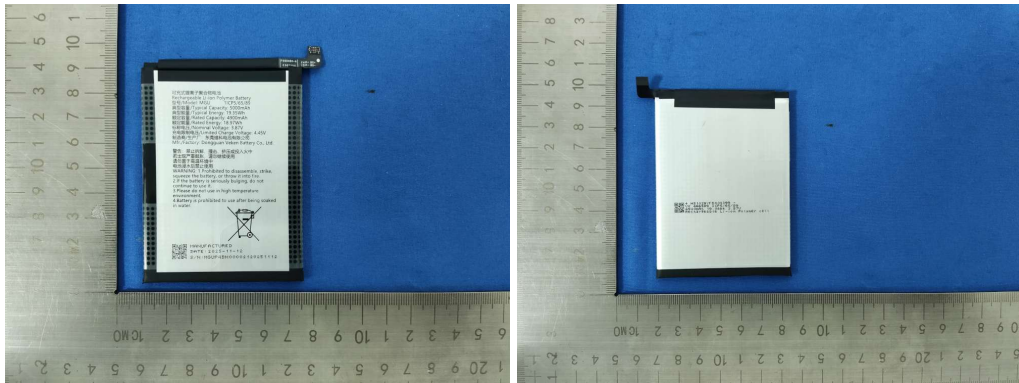
序号 No.	测试项目名称 Name of test	标准要求或标准条款号 Standard requirement or the clause number of standard	测试结果 Test result	本项结论 Test conclusion	备注 Remarks
1	3 米堆码试验 3m Stacking Test	联合国《关于危险货物 运输的建议书 规章范 本》(23 修订版)第 6 部 分包装的试验要求 6.1.5 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Model Regulations (23 rd Rev. edition) test requirements for packaging's 6.1.5	电池未从内包装中漏出， 包装件未发生形变。 The battery does not leak out of the inner package and the package is not deformed.	合格 Passed	/
2	堆码载荷 Stacking load	联合国《关于危险货物 运输的建议书 规章范 本》(23 修订版)第 6 部 分包装的试验要求 6.1.5 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Model Regulations (23 rd Rev. edition) test requirements for packaging's 6.1.5	按照如下公式计算堆码载 荷为：206.74kgf $P = K \times \left(\frac{H-h}{h} \right) \times m$ P—加载的负荷，单位为 千克； K—劣变系数 1； H—堆码高度 3 米； h—单个包装件高度，单 位为米； m—单个包装件毛重，单 位为千克 The stacking load is calculated as follows: 206.74kgf P—Load loaded in kilograms K—Coefficient of inferiority 1 H—Stacking height is 3 meters m—Gross weight of a single package in kg	合格 Passed	/
测试环境条件 Test environment condition		环境温度： 21°C - 25°C； 环境湿度： 48%RH - 52%RH Ambient temperature: 21°C - 25°C, Ambient humidity: 48%RH - 52%RH			

测试设备 Test Equipment:

设备名称 Equipment name	设备编号 Equipment Number	设备型号 Equipment Model	校准日期 Cla. Date	下次校准日期 Next Cal. Date
电池堆码试验机 Battery stacking tester	ZKSB-1128	ASTD-DM-2T	2025-09-02	2026-09-01
卷尺 Tapeline	ZKSS-1013	25FT	2025-12-16	2026-12-15
电子台秤 Electronic platform scale	ZKSB-1057	M8B	2025-12-17	2026-12-16
温湿度记录仪 Temperature and humidity recorder	ZKSB-1064	TH10R	2025-12-17	2026-12-16

包装件内部和外部图片 The package photo

可充电锂离子聚合物电池
Rechargeable Li-ion Polymer Battery
型号/Model: MGU 1ICP5/65/89
典型容量/Typical Capacity: 5000mAh
典型能量/Typical Energy: 19.35Wh
额定容量/Rated Capacity: 4900mAh
额定能量/Rated Energy: 18.97Wh
标称电压/Nominal Voltage: 3.87V
充电限制电压/Limited Charge Voltage: 4.45V
制造商/生产厂: 东莞维科电池有限公司
Mfr./Factory: Dongguan Veken Battery Co., Ltd.



*** The end ***

注意事项 Important Notice

1. 本报告无 ZRLK 盖章无效。
The test report is invalid without the official stamp of ZRLK.
2. 未经本试验室书面同意，不得复制或部分地复制本报告。
Nobody is allowed to photocopy or partly photocopy this report without written permission of ZRLK.
3. 本报告无批准人、审核人及编制人签名无效。
The test report is invalid without the signatures of Approver, Checker and Compiler.
4. 客户必须如实提供样品及资料，并保证申报品名和样品以及运输货物相同，否则本检测单位不承担任何相关责任。
The client should provide samples and relevant data, at the same time, they should guarantee the consistence of the product's name the declared, the samples they provided and the goods to be transported. Otherwise we will not bear any relevant responsibilities.
5. 准备提交运输的包装已按照本章节的有关要求进行了试验，使用其他包装方法或部件可能使其无效。试验报告的副本须提供给有关当局。
The packaging prepared as for transport was tested in accordance with the appropriate requirements of this Chapter and that the use of other packaging methods or components may render it invalid. A copy of the test report shall be available to the competent authority.
6. 本报告涂改无效。
The test report is invalid if altered.
7. 对检验报告若有异议，应于收到报告之日起十五天内向检验单位提出。
Objection to the test report must be submitted to ZRLK within 15 days.
8. 本报告仅对送检样品负责。
The test report is valid for the tested samples only.
9. 任何情况下检测单位的赔偿责任都不会超过检测单位就本次检测所收取的检测费用。
ZRLK's liability under no circumstance will exceed the testing fee received from applicant for test conducted hereof this testing report.
10. 本报告中的中文内容仅供参考。
The Chinese contents in this report are only for reference.