中国认可
国际互认
检测
TESTING
CNAS L25044

堆码试验报告
Stacking Test Report

报告编号 **Report No.: RHDTL260311026**

产品名称： **Name of Samples:**	锂离子电芯 Li-ion Cell
型号： **Model:**	101646
委托方名称： **Applicant's name:**	广东幺正科技有限公司 GuangDong Unitarity Technology Co., Ltd.
签发日期： **Date of issue:**	2026.04.10

东莞市鸿鼎储能检测技术有限公司
Dongguan HDTL Technology Co., Ltd.

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样品信息 Information of samples	锂离子电芯 101646 3.7V 650mAh 2.405Wh Li-ion Cell 101646 3.7V 650mAh 2.405Wh
测试实验室 Testing laboratory	东莞市鸿鼎储能检测技术有限公司 Dongguan HDTL Technology Co., Ltd.
实验室地址 Laboratory address	广东省东莞市东城街道金中路 5 号 1 栋 101 室 Room 101, Building 1, No. 5 of Jinzhong Road, Dongcheng Street, Dongguan City, Guangdong Province, China
委托单位 Applicant	广东幺正科技有限公司 GuangDong Unitarity Technology Co., Ltd.
委托单位地址 Applicant Address	广东省东莞市厚街镇晋锋路 3 号 2 号楼 Building 2, No. 3 Jinfeng Road, Houjie Town, Dongguan City, 523593 Guangdong, P.R. China
制造商 Manufacturer	广东幺正科技有限公司 GuangDong Unitarity Technology Co., Ltd.
制造商地址 Manufacturer's address	广东省东莞市厚街镇晋锋路 3 号 2 号楼 Building 2, No. 3 Jinfeng Road, Houjie Town, Dongguan City, 523593 Guangdong, P.R. China
包装生产单位 Manufacturer of packaging	东莞市千和新材料科技有限公司 DONGGUAN QIANHE NEW MATERIAL TECHNOLOGY CO., LTD.
测试标准 Standard	联合国《关于危险货物运输的建议书》 规章范本（23th） 6.1.5.6 条款 United Nations “Recommendations on the Transport of Dangerous Goods” Model Regulations ST/SG/AC.10/1/Rev.23 6.1.5.6 chapter
接样日期 Date of sample receipt	2026.03.23
测试日期 Tested date	2026.03.25~2026.03.27

检验结论 Test conclusion:

包装符合联合国《关于危险货物运输的建议书》规章范本（23th） 6.1.5.6 条款堆码测试要求。
The package was capable of withstanding stacking test of United Nations “Recommendations on the Transport of Dangerous Goods” Model Regulations (ST/SG/AC.10/1/Rev.23) clause 6.1.5.6.

主检：
Tested by

审核：
Checked by

批准：
Approved by

东莞市鸿鼎储能检测技术有限公司 检测专用章

包装件信息 The info of package	
每个包装件毛重 Each package gross weight	10.9kg
每个包装件中电池净重 In each package battery net	9.895kg
包装件尺寸 Packing dimensions	L:38cm × W:29.5 cm× H:23.6cm
包装件详细说明 Detailed description of the package	包装名称: 瓦楞纸箱 Packing Name: corrugated carton 衬垫及其他部件: 塑料托盘 Gasket and other parts: carton 包装件内置电池数量：640 个 Number of Containing in package:640pcs
样品数量 Sample Number	3 个包装件 3 packages
加载的负荷 Theoretical Load	130.8kg
堆码高度 Stacking height	3.068m
层数 Layers	13
检验结论 Test conclusion	包装件未泄露、所装的物质未从内包装中漏出、未恶化、 未变形。 The packagings are not leak, not leakage of the filling substance from the inner packaging, not deterioration not distortion
样品预处理环境 Ambient Conditions of Sample Preparation	环境温度：23.5°C 相对湿度：65%RH
备注/Remarks: 1. 本报告中以点代替小数点。 Throughout this report a point is used as the decimal separator. 2. 判定栏中“-”表示“不需要判定”，“P”表示“通过”，“F”表示“不通过”，“N/A”表示“不适用”。 As for the Verdict, “-” means “no need for judgement”, “P” means “pass”, “F” means “fail” and “N/A” means “not applicable”.	

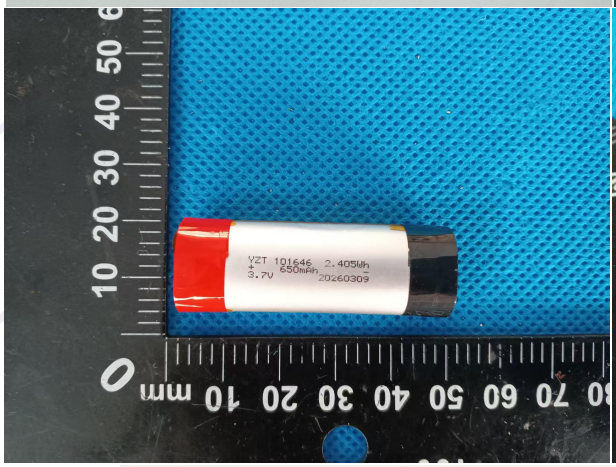
章节 Clause	检测方法 Detection Method	检测要求 Test Requirements	判定 Verdict
	堆码测试/Stacking Drop test		**P**
	测试步骤/ Test procedure		P
6.1.5	将试验包装件置于堆码地坪上,载荷平板置于包装件顶面中心位置,其周边大于包装件顶面边缘 100 mm。在试验样品的顶部表面施加一力量,此力相当于运输时可能堆叠在它上面的同样数量包装件的总重量。如果试验样品内装的液体相对密度与待运液体的不同,则该力应按后者计算。包括试验样品在内的最小堆码高度应是 3 米。试验时间为 24 小时,但拟装液体的塑料桶、罐和复合包装 6HH1 和 6HH2, 应在不低于 40℃的温度下经受 28 天的堆码试验。 Place the test package on the stacking floor and the load plate at the center of the top surface of the package, 100 mm greater than the top edge of the package.The test sample shall be subjected to a force applied to the top surface of the test sample equivalent to the total weight of identical packages which might be stacked on it during transport; where the contents of the test sample are liquids with relative density different from that of the liquid to be transported, the force shall be calculated in relation to the latter. The minimum height of the stack including the test sample shall be 3 meters. The duration of the test shall be 24 hours except that plastics drums, jerricans, and composite packagings 6HH1 and 6HH2 intended for liquids shall be subjected to the stacking test for a period of 28 days at a temperature of not less than 40°C.	试验样品不得泄漏。对复合或组合包装而言,不得有所装的物质从内贮器和内包装中漏出。试验样品不得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。在进行评估之前,塑料包装应冷却至环境温度。 No test sample may leak. In composite packagings or combination packagings, there shall be no leakage of the filling substance from the inner receptacle or inner packaging. No test sample may show any deterioration which could adversely affect transport safety or any distortion liable to reduce its strength or cause instability in stacks of packages. Plastics packagings shall be cooled to ambient temperature before the assessment.	P

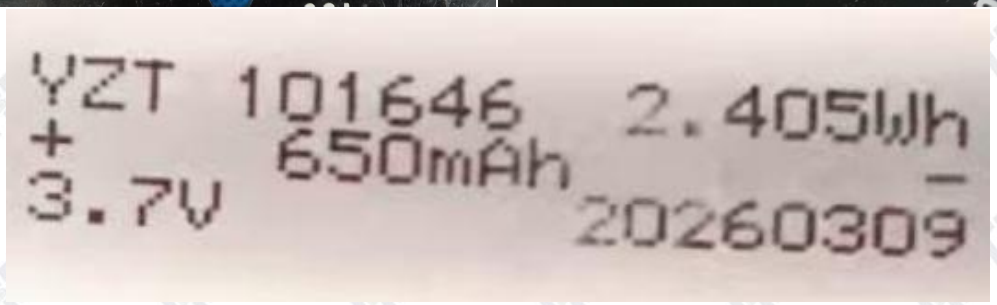
堆码载荷用公式计算:

$$P = K \times \left(\frac{H-h}{h}\right) \times M$$

公式中：
P——加载的负荷，单位为千克（kg）；
K——劣变系数，K 值为 1；
H——堆码高度（不少于 3m）,单位为米（m）；
h——单个包装件高度，单位为米（m）；
M——单个包装件毛重量（毛重），单位为千克（kg）

Photos of Samples and Labels/样品照片及标识





声明
Declaration

1. 本报告无批准人、审核人及检测人签名无效。

   The test report is invalid without the signatures of Ratifier, Reviewer and Testing engineer.

2. 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。

   Objections to the test report must be submitted to HDTL within 15 days.

3. 未经本试验室书面同意，不得部分地复制本报告。

   Nobody is allowed to photocopy or partly photocopy this test report without written permission of HDTL.

4. 本报告仅对送检样品负责。

   The test report is valid for the tested samples only.

5. 本报告涂改无效。

   The test report is invalid if altered.

--- 报告结束---
--- End of Report ---