

# 广州海关技术中心

GUANGZHOU CUSTOMS DISTRICT TECHNOLOGY CENTER



中国认可  
国际互认  
检测  
TESTING  
CNAS L2322

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网址: [www.iqtc.cn](http://www.iqtc.cn) 邮编: 510623  
Add: Tower B, No.66 Huacheng Avenue, Zhujiang Xincheng, Tianhe District, Guangzhou, China  
Website: [www.iqtc.cn](http://www.iqtc.cn) Postcode: 510623

No: 01052100002361-1(E)  
Date: 2021-07-05  
Page: 1 of 8

## UN38.3 报告

### UN38.3 Test Report

样品名称: 储能电池簇

Sample Name: Energy Storage Cluster

委托单位: 华为技术有限公司

Applicant: Huawei Technologies Co., Ltd



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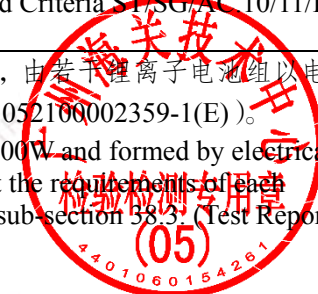
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## 检测证书 TEST REPORT

样品名称 Sample Name	储能电池簇 Energy Storage Cluster		
型号 Model	LUNA2000		
内含电池组型号 Batteries Model	ESM51320AS1		
委托单位 Applicant	华为技术有限公司 Huawei Technologies Co., Ltd		
委托单位地址 Applicant Address	广东省深圳市龙岗区坂田华为基地 Huawei Base, Bantian Longgang District Shenzhen, P.R. China		
生产单位 Manufacture	东莞阳天电子科技有限公司惠阳分公司 Dongguan Yangtian Electronic Technology Co., Ltd. Huiyang Branch.		
生产单位地址 Manufacture Address	惠州市惠阳区永湖镇麻溪村下埔村小组大栋岗地段 Dadonggang District, Xiapu Village Group, Maxi Village, Yonghu Town, Huiyang District, Huizhou 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 试验和标准手册》ST/SG/AC.10/11/Rev.7, 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS", Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3		
接样时间 Accepted date	2021-05-05	测试日期 Test date	2021-05-05~2021-07-05
测试项目 Test items	过度充电、短路、电池组之间过度放电。 Overcharge, Short circuit, Over discharge between the batteries. 对于已通过所有适用试验的若干锂离子电池组以电路连接而成的电池包, 额定瓦特-小时数超过 6200Wh, 该集成电池组经验证具有过度充电、短路、电池组之间过度放电保护功能, 则无需进行其他试验。When lithium ion batteries that have passed all applicable tests are electrically connected to form a battery pack, with a Watt-hour rating of more than 6200Wh, the assembled battery does not need to be tested if it has been verified as preventing: Overcharge, Short circuits and Over discharge between the batteries.		
结论 Conclusion	经测试, 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.7, 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 Test and Criteria ST/SG/AC 10/11/Rev.7, 38.3.		
备注 Remark	1.该电池簇(集成电池组)的额定瓦特-小时数超过 6200Wh, 由若干锂离子电池组以电路连接而成, 锂离子电池组已通过 UN38.3 测试(报告编号: 01052100002359-1(E))。 The lithium Battery System was rated a Watt-hour more than 6200Wh and formed by electrically connected modules, the modules 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. (Test Report No.: 01052100002359-1 (E)). 2.随附 UN38.3 试验概要(编号: 01052100002361-2(E))。 Attached with UN38.3 test summary (No.: 01052100002361-2(E)).		



批准  
Approver: 陆路强

审核  
Checker: 叶中轩

主检  
Appraiser: 周伟光

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集成电池组信息:

The assembled battery information:

电池类型 Battery type	锂离子电池 Lithium ion batteries	标称电压 Nominal Voltage	1075.2V
额定容量 Rated Capacity	320Ah	总能量 Total Energy	344.1kWh
充电限制电压 Limited Charge Voltage	1227V	标准充电电流 Standard Charge Current	160A
最大充电电流 Maximum Charge Current	320A	标准放电电流 Standard Discharge Current	160A
最大放电电流 Maximum Discharge Current	320A	放电截止电压 Discharge Cut-off Voltage	907V
重量 Mass	2940kg	尺寸 Overall Dimensions (W×D×H)	1525mm×638mm×2360mm
模组数量 Module Quantity	21PCS	样品外观与性状 Appearance & Odor	白色金属外壳 white metal shell
模组容量 Module Capacity	320Ah	模组型号 Module Model	ESM51320AS1
电池组组合方式 Battery Pack Combination	1P21S		

1. 本报告结果仅对测试样品负责。The results in this report are relevant only to the sample(s) tested.

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序号 No.	测试项目名称 Name of test	标准要求或标准条款号 Stand requirement or the clause number of standard	测试结果 Test result	本项结论 Test conclusion	备注 Remark	
1	过度充电 Overcharge	联合国《关于危险货物运输的建议书 试验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3	见附表 1 See Appendix 1	合格 Passed	/	
2	短路 Short circuits	联合国《关于危险货物运输的建议书 试验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3	见附表 1 See Appendix 1	合格 Passed	/	
3	电池组之间过度放 电 Over discharge between the batteries	联合国《关于危险货物运输的建议书 试验和标准手册》UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7, 38.3	见附表 1 See Appendix 1	合格 Passed	/	
测试环境 Test environment condition		环境温度: 20°C-25°C; 环境湿度: 45%-75% Ambient temperature: 20°C-25°C, Ambient humidity: 45%-75%				
分包测试情况 Subcontracted test condition		测试项目 Test items	/			
		分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post code	/
			地址 Address	/	电话 Tel	/

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附表 1  
Appendix 1

样品状态 Sample status	Pack 1#: 一个功能正常的集成电池组; Pack 1#: one functional assembled battery;	
测试项目名称 Name of test	测试要求 Requirement of test	测试结果 Test result
过度充电 Overcharge	按照制造商规定的充电方法, 验证过度充电保护功能。 Verify overcharge protection according to the manufacturer's charging method.	Pass
短路 Short circuits	按照制造商规定的充电方法充满电, 使电池组经受总外电阻小于 $0.1\Omega$ 的短路条件, 验证短路保护功能。 Fully charged according to the charging method specified by the manufacturer. The battery shall be subjected to a short circuit condition with a total external resistance of less than $0.1\text{ ohm}$ . Verify short circuit protection.	Pass
电池组之间过度放电 Over discharge between the batteries	按照制造商规定的放电方法, 验证过度放电保护功能。 Charging to 1.2 times the upper limit voltage according to the charging method specified by the manufacturer. Verify over discharge protection.	Pass

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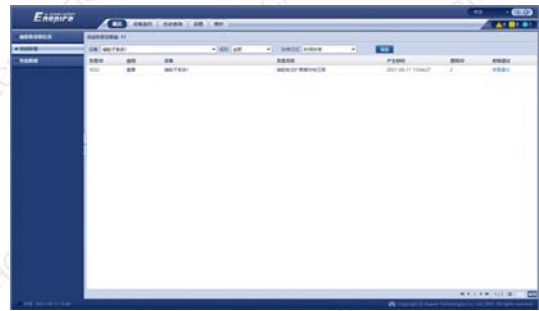
### 样品图片

### Photo of the sample

#### 集成电池组/Battery Pack



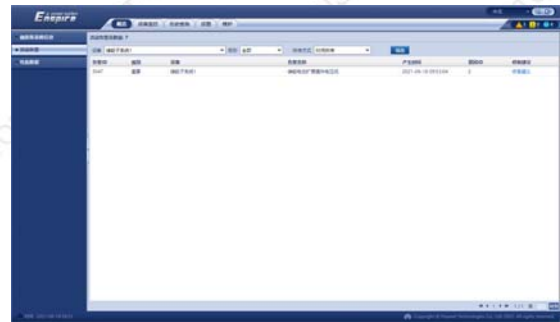
集装箱打开看到内部照片（正面）



软件过充保护界面



集装箱打开看到内部照片（背面）



软件过放保护界面

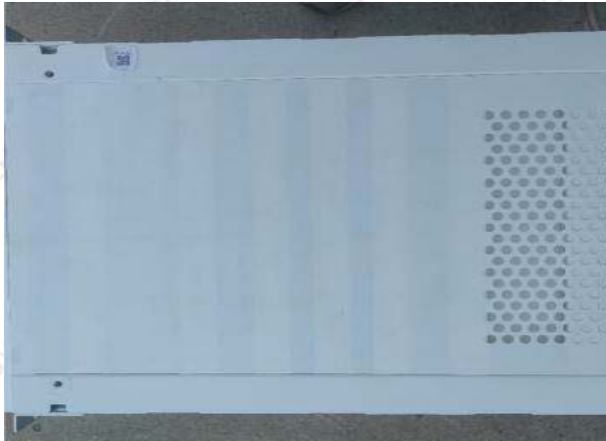
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### 样品图片

### Photo of the sample

电池正面外观  
Battery front appearance



电池侧面外观  
Battery side appearance



电池侧面外观  
Battery side appearance



电池铭牌(含 Wh)  
Battery nameplate (With Wh)

	型号 Model: ESM51320AS1 名称 Name: 储能电池模组 Energy Storage Module
额定电压 Rated Voltage: 51.2 V 充放电电流 Charging/Discharging Current: 320 A Max 标称能量 Nominal Energy Capacity: 16.36 kWh 可充式锂离子电池 Rechargeable Lithium Ion Battery 工作温度范围 Operating Temperature Range: -20 ~ +55 °C 注意 Caution: 禁止拆卸 Do not Disassemble the Battery 禁止靠近火源 Keep the Battery away from Fire	
华为技术有限公司 HUAWEI TECHNOLOGIES CO., LTD. 中国制造 MADE IN CHINA HQ of Huawei, Bantian, Longgang District, Shenzhen, 518129, P.R.C	

电芯  
Cell



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1. 本报告无检验单位公章无效。

The test report is invalid without the official stamp of IQTC.

2. 本报告无批准人、审核人及主检人签名无效。

The test report is invalid without the signatures of Approver, Checker and Appraiser.

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Objection to the test report must be submitted to IQTC within 15 days

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Inspection Address: Room C102, No.1 Nanxiangzhi Road, Science City, Guangzhou, Guangdong, China (Light Industry Testing Laboratory in Science City)

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