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检测
TESTING
CNASL0354

TEST REPORT

Report No.	**STL/R2405185-2EN**
Sample Name	**Lithium ion Rechargeable Battery Module**
Consignor	**SolaX Power Network Technology (Zhejiang) Co. ,Ltd.**

ZHEJIANG ACADEMY OF SCIENCE AND TECHNOLOGY FOR INSPECTION AND QUARANTINE
浙江省检验检疫科学技术研究院
检验检测专用章

Zhejiang Academy of Science and Technology for Inspection and Quarantine

TEST REPORT

Name	Lithium ion Rechargeable Battery Module
Type/Model	TP-HS50E/ 102.4V 50Ah 5.12kWh
Consignor	SolaX Power Network Technology (Zhejiang) Co. ,Ltd.
Address	No.278, Shizhu Road, Chengnan Sub-district, Tonglu County, Hangzhou, Zhejiang, China
Manufacture	SolaX Power Network Technology (Zhejiang) Co. ,Ltd.
Address	No.278, Shizhu Road, Chengnan Sub-district, Tonglu County, Hangzhou, Zhejiang, China
Factory	SolaX Power Network Technology (Zhejiang) Co. ,Ltd.
Address	No.278, Shizhu Road, Chengnan Sub-district, Tonglu County, Hangzhou, Zhejiang, China
Quantity	4 Batteries, 30 Cells
Sample No.	2405185-1-1~4
Accepted Date	2024-06-04
Test Date	2024-06-13 to 2024-07-17
Criterion	ST/SG/AC.10/11/Rev.7/Amend.1/Section 38.3
Conclusion	The sample has passed the test items of UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.7/Amend.1/Section 38.3
Comment	/

Compiler: Shenyuanbin Reviewer: Zhou Approver:

Description and illustration of Samples

Appearance：Good

Color：White

Shape：Prismatic

Series-parallel structure：32S1P

Parameter：

	Charge voltage	Discharge voltage	Charge current		Discharge current	
			Std.	Max.	Std.	Max.
Cell	3.65V	2.5V	25A	50A	25A	50A
Battery	116.8V	80V	30A	50A	30A	50A

Status of batteries：

	At first cycle, fully charged	After 25 cycle, fully charged
Sample No.	2405185-1-3	2405185-1-1
	2405185-1-4	2405185-1-2

Status of cells:

	At first cycle with 50% SoC	After 25 cycle, at 50% SoC
Sample No.	06-10	01-05
	At first cycle, fully discharged	After 25 cycle, fully discharged
Sample No.	21-30	11-20

Note:

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Photos of Samples and Labels

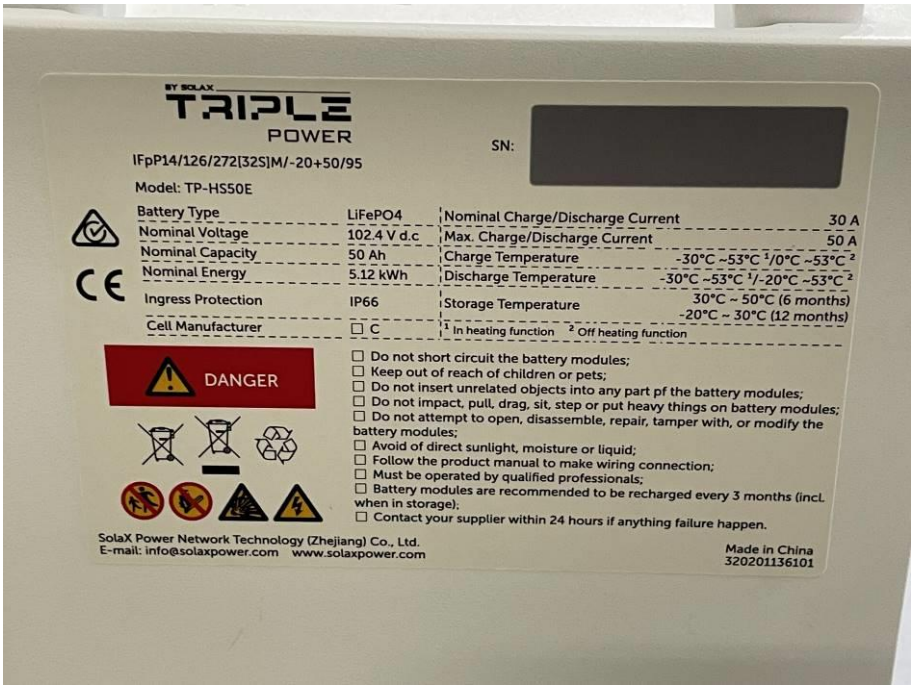


Appearance



Appearance

Photos of Samples and Labels



Label



Appearance of a cell

Test Results

No.	Test item and requirements	Result	Conclusion
38.3.4.1	**Test item： T.1 Altitude simulation** Requirements: no leakage, no venting, no disassembly, no rupture and no fire. The mass loss is less than 0.1% and the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure.	Samples meet this requirement. The data is shown in Appendix 1	Passed
38.3.4.2	**Test item： T.2 Thermal test** Requirements: no leakage, no venting, no disassembly, no rupture and no fire. The mass loss is less than 0.1% and the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure.	Samples meet this requirement. The data is shown in Appendix 2	Passed
38.3.4.3	**Test item： T.3 vibration** Requirements: no leakage, no venting, no disassembly, no rupture and no fire. The mass loss is less than 0.1% and the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure.	Samples meet this requirement. The data is shown in Appendix 3	Passed
38.3.4.4	**Test item： T.4 Shock** Requirements: no leakage, no venting, no disassembly, no rupture and no fire. The mass loss is less than 0.1% and the open circuit voltage of each test cell or battery after testing is not less than 90% of its voltage immediately prior to this procedure.	Samples meet this requirement. The data is shown in Appendix 4	Passed
38.3.4.5	**Test item： T.5 External short circuit** Requirements: Their external temperature does not exceed 170℃, and there is no disassembly, no rupture and no fire within six hours after this test.	Samples meet this requirement. The data is shown in Appendix 5	Passed

No.	Test item and requirements	Result	Conclusion
38.3.4.6	**Test item： T.6 Impact/Crush**	☐Impact ☒Crush	Passed
38.3.4.6.2	Requirements: Their external temperature does not exceed 170℃, and there is no disassembly, no rupture and no fire within six hours after this test.	Samples meet this requirement. The data is shown in Appendix 6	
38.3.4.7	**Test item： T.7 Overcharge**	Samples meet this requirement.	Passed
	Requirements: There is no disassembly, no fire within 7 days after this test.		
38.3.4.8	**Test item： T.8 Forced discharge**	Samples meet this requirement.	Passed
	Requirements: There is no disassembly, no fire within 7 days after this test.		

Appendix 1

No.	1	Test Item		Altitude simulation			
Sample No.	Mass			OCV			Event
	Before (kg)	After (kg)	Loss (%)	Before (V)	After (V)	Loss (%)	
2405185-1-1	47.525	47.525	0	106.661	106.653	0.01	O
2405185-1-2	47.305	47.305	0	106.384	106.379	0	O
2405185-1-3	46.925	46.925	0	106.829	106.819	0.01	O
2405185-1-4	47.300	47.300	0	106.649	106.644	0	O
Note: L-Leakage, V-Venting, D-Disassembly, R-rupture, F-Fire, O- no leakage, no venting, no disassembly, no rupture and no fire							

Appendix 2

序号 No.	2	Test Item		Thermal test			
Sample No.	Mass			OCV			Event
	Before (kg)	After (kg)	Loss (%)	Before (V)	After (V)	Loss (%)	
2405185-1-1	47.525	47.515	0.02	106.653	106.523	0.12	O
2405185-1-2	47.305	47.300	0.01	106.379	106.300	0.07	O
2405185-1-3	46.925	46.920	0.01	106.819	106.665	0.14	O
2405185-1-4	47.300	47.295	0.01	106.644	106.521	0.12	O
Note: L-Leakage, V-Venting, D-Disassembly, R-rupture, F-Fire, O- no leakage, no venting, no disassembly, no rupture and no fire							

Appendix 3

No.	3	Test Item		Vibration			
Sample No.	Mass			OCV			Event
	Before (kg)	After (kg)	Loss (%)	Before (V)	After (V)	Loss (%)	
2405185-1-1	47.515	47.515	0	106.523	106.505	0.02	O
2405185-1-2	47.300	47.300	0	106.300	106.286	0.01	O
2405185-1-3	46.920	46.920	0	106.665	106.645	0.02	O
2405185-1-4	47.295	47.295	0	106.521	106.506	0.01	O
Note: L-Leakage, V-Venting, D-Disassembly, R-rupture, F-Fire, O- no leakage, no venting, no disassembly, no rupture and no fire							

Appendix 4

No.	4	Test Item		Shock			
Sample No.	Mass			OCV			Event
	Before (kg)	After (kg)	Loss (%)	Before (V)	After (V)	Loss (%)	
2405185-1-1	47.515	47.515	0	106.505	106.503	0	O
2405185-1-2	47.300	47.300	0	106.286	106.281	0	O
2405185-1-3	46.920	46.920	0	106.645	106.640	0	O
2405185-1-4	47.295	47.295	0	106.506	106.502	0	O
Note: L-Leakage, V-Venting, D-Disassembly, R-rupture, F-Fire, O- no leakage, no venting, no disassembly, no rupture and no fire							

Appendix 5

No.	5	Test Item	External short circuit
Sample No.	Max. External Temperature(℃)		Event
2405185-1-1	57.4		O
2405185-1-2	57.9		O
2405185-1-3	58.0		O
2405185-1-4	57.6		O
Note: D-Disassembly, R-rupture, F-Fire, O- no disassembly, no rupture and no fire			

Appendix 6

No.	6	Test Item	Impact/Crush
Sample No.	Max. External Temperature(℃)		Event
01	25.1		O
02	25.1		O
03	25.1		O
04	24.9		O
05	25.2		O
06	25.4		O
07	25.1		O
08	25.8		O
09	25.3		O
10	25.0		O
Note: D-Disassembly, R-rupture, F-Fire, O- no disassembly, no rupture and no fire			

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STATEMENT

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4. This report is invalid without the signature of the approver (authorized signatory).
5. Test report is invalid if altered.
6. The duplicate report without the "dedicated seal for inspection and testing" of the institution is invalid.
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Zhejiang Academy of Science and Technology for Inspection and Quarantine

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