



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

Lithium-ion Battery UN38.3 Test Report

Recommendations on the TRANSPORT OF DANGEROUS GOODS

(Manual of Tests and Criteria, Sixth revised edition, Amend 1)

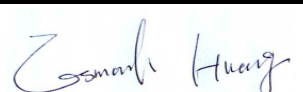
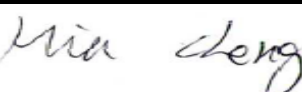
Customer: Lenovo

Model: L17M3PG3

Rating/ Mass: 11.4V , TYP 4610mAh /52.5Wh

MIN 4480mAh /51Wh/ 234 (g)

Issue date: 2019/08/08

Approved By	Checked By	Prepared By
Assistant Manager	Authorized Signatory	Test Engineer
		

SIMPLO TECHNOLOGY CO., LTD.

ADD : No. 471 Pa Teh Rd, Sec 2 Hu Kou, Hsinchu Hsien, 303 Taiwan

TEL: +886-3-5695920

FAX: +886-3-5695931

SIMPLO TECHNOLOGY (CHANGSHU) INC.

ADD : No.888 Dongnan Avenue, Changshu New & Hi-Tech Industrial Development Zone, Changshu, Jiangsu, China

TEL: +86-512-52302255

FAX: +86-512-52302277

SIMPLO TECHNOLOGY (CHONGQING) INC.

ADD : No.2 Zongbao Avenue, Shapingba District, ChongQing, China

TEL: +86-23-61718899

FAX: +86-23-61210488

HUAPU TECHNOLOGY (CHANGSHU) INC.

ADD : No.888 Dongnan Avenue, Changshu New & Hi-Tech Industrial Development Zone, Changshu, Jiangsu, China

TEL: +86-512-52302255

FAX: +86-512-52302277

Email : Test_Lab@simplo.com.tw

Website : <http://www.simplo.com.tw/>



Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效，本報告分離使用無效

Page 1 of 8

This test report is valid only to the items, Invalid for separation using.



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

1. Purpose of the Test :

To test each cell/battery is of the type proved to meet the requirements in United Nations Recommendations on the TRANSPORT OF DANGEROUS GOODS, Manual of Tests and Criteria, Sixth revised edition, Amend 1, Section 38.3.

2. Test Result :

Test results of the UN Recommendations on the Transport of Dangerous Goods

No.	Test Item	Test results
T.1	Altitude simulation	PASS
T.2	Thermal test	PASS
T.3	Vibration test	PASS
T.4	Shock test	PASS
T.5	External short circuit	PASS
T.6	Impact, Crush test	PASS
T.7	Overcharge	PASS
T.8	Forced discharge	PASS

3. Test Lab: Email : Test_Lab@simplo.com.tw Website : <http://www.simplo.com.tw/>

●	SIMPLO (Taiwan) Laboratory ADD : No. 471 Pa Teh Rd, Sec 2 Hu Kou, Hsinchu Hsien, 303 Taiwan TEL: +886-3-5695920 FAX: +886-3-5695931
	SIMPLO (CHANGSHU) Laboratory ADD : No.888 Dongnan Avenue, Changshu New & Hi-Tech Industrial Development Zone, Changshu, Jiangsu, China TEL: +86-512-52302255 FAX: +86-512-52302277
	SIMPLO (CHONGQING) Laboratory. ADD : No.2 Zongbao Avenue, Shapingba District, ChongQing, China TEL: +86-23-61718899 FAX: +86-23-61210488

Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效,本報告分離使用無效

This test report is valid only to the items, Invalid for separation using.



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

4. Product manufacturer : Email : Test_Lab@simplo.com.tw Website : <http://www.simplo.com.tw/>

●	SIMPLO TECHNOLOGY CO., LTD. ADD : No. 471 Pa Teh Rd, Sec 2 Hu Kou, Hsinchu Hsien, 303 Taiwan TEL: +886-3-5695920 FAX: +886-3-5695931
	SIMPLO TECHNOLOGY (CHANGSHU) INC. ADD : No.888 Dongnan Avenue, Changshu New & Hi-Tech Industrial Development Zone, Changshu, Jiangsu, China TEL: +86-512-52302255 FAX: +86-512-52302277
●	SIMPLO TECHNOLOGY (CHONGQING) INC. ADD : No.2 Zongbao Avenue, Shapingba District, ChongQing, China TEL: +86-23-61718899 FAX: +86-23-61210488
	HUAPU TECHNOLOGY (CHANGSHU) INC. ADD : No.888 Dongnan Avenue, Changshu New & Hi-Tech Industrial Development Zone, Changshu, Jiangsu, China TEL: +86-512-52302255 FAX: +86-512-52302277

5. Test Quantity :

- 5.1 Four batteries, at first cycle, in fully charged states. (For T.1~T.5)
- 5.2 Four batteries, after 25 cycles ending in fully charged states. (For T.1~T.5)
- 5.3 Five component cells, at first cycle at 50% of the design rated capacity. (For T.6)
- 5.4 Five component cells, after 25 cycles at 50% of the design rated capacity. (For T.6)
- 5.5 Four batteries, at first cycle, in fully charged states. (For T.7)
- 5.6 Four batteries, after 25 cycles ending in fully charged states. (For T.7)
- 5.7 Ten component cells, at first cycle in fully discharge states. (For T.8)
- 5.8 Ten component cells, after 25 cycles ending in fully discharged states. (For T.8)

Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效，本報告分離使用無效

Page 3 of 8

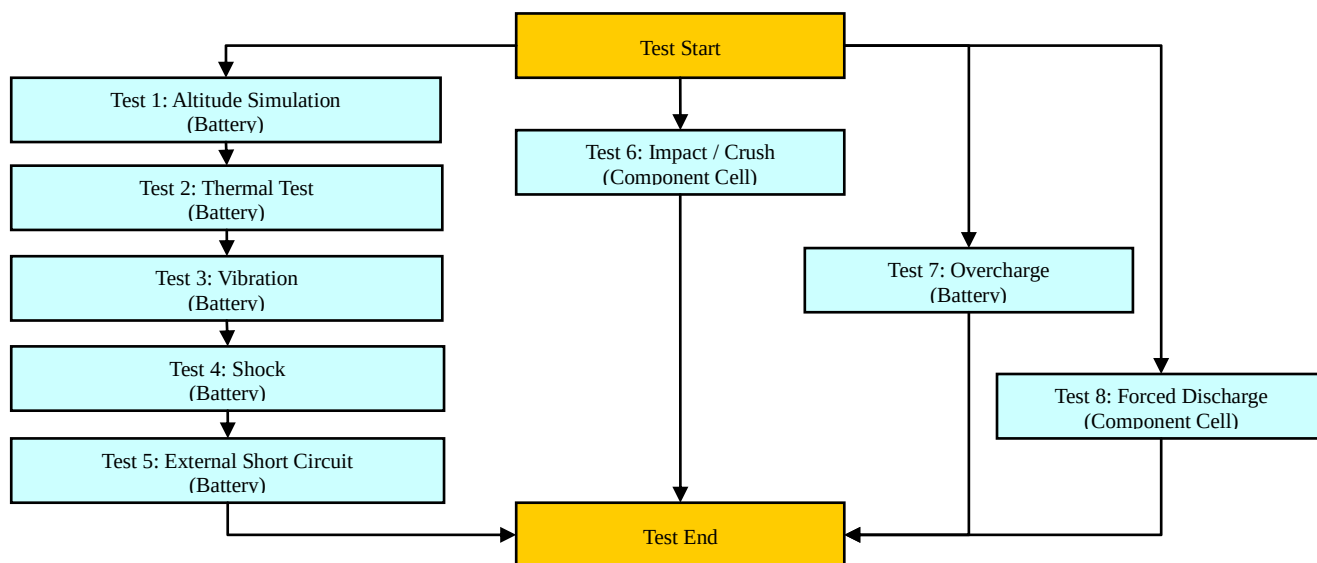
This test report is valid only to the items, Invalid for separation using.



6. Test Procedure :

6.1 All detailed test procedures must be based on United Nations Recommendations on the TRANSPORT OF DANGEROUS GOODS, Manual of Tests and Criteria, Sixth revised edition, Amend 1, Section 38.3.

6.2 Test flow shall be followed as below.



Conclusion: The samples had passed the test items of UN38.3.

7. Comment :

7.1 Follow the requirement of “TRANSPORT OF DANGEROUS GOODS, Manual of Tests and Criteria, Sixth revised edition, Amend 1, Section 38.3”, this report was updated. (The control number of old report: SLEU-1802002)

7.2 Due to the change of label, the sample picture need to modify, this report was updated. (The control number of old report: SLEU-1802002)



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

8. Test Equipment :

SMP SIMPLO TECHNOLOGY CO., LTD.

Address : No.471, Sec.2, Pa Teh Rd., Hu Kou, Hsin Chu Hsien 303, Taiwan

TEL: +886-3-5695920; FAX: +886-3-5695931

Revised Date: 2018-02-13

Test Instruments Reference List								
Used	Instrument ID	Instrument Name	Type	Range of use	Manufacturer	Calibration Date_Last	Calibration Date_Next	Remarks
	Pretest							
V	ML-761	Learning	715C	0~18V 0~8A	SMP	2017/3/1	2018/3/1	
V	ML-762	Learning	715C	0~18V 0~8A	SMP	2018/1/3	2019/1/3	
V	ML-763	Learning	715C	0~18V 0~8A	SMP	2017/3/1	2018/3/1	
V	ML-764	Learning	715C	0~18V 0~8A	SMP	2018/1/3	2019/1/3	
	ML-925	Learning	750C8	0~60V 0~30A	SMP	2018/1/3	2019/1/3	
	T.1 Altitude Simulation							
V	ML-522	Altitude	SVT-120	Kpa:30~90	HSIN JIANG	2017/7/19	2018/7/19	
V	ML-257	Multimeter	HP 34401A	Note 1	Agilent	2017/3/2	2018/3/2	
	ML-494	Electronic Balance	XS1220M-SCS	1-1200 gf	CHUANHUA	2017/7/19	2018/7/19	
V	TD-166	Electronic Balance	PG603-S	1-610 gf	METTLER TOLEDO	2017/9/13	2018/9/13	
	ML-523	Electronic Balance	MTW-30K	30*0.005Kg		2017/9/13	2018/9/13	
V	ML-550	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	T.2 Thermal Test							
V	ML-789	Thermal Shock	GTST-080-65-AW	T:-40 to 120°C	GF	2018/1/3	2019/1/3	
V	ML-257	Multimeter	HP 34401A	note 1	Agilent	2017/3/2	2018/3/2	
	ML-494	Electronic Balance	XS1220M-SCS	1-1000 gf	CHUANHUA	2017/7/19	2018/7/19	
V	TD-166	Electronic Balance	PG603-S	1-610 gf	METTLER TOLEDO	2017/9/13	2018/9/13	
	ML-523	Electronic Balance	MTW-30K	30*0.005Kg		2017/9/13	2018/9/13	
V	ML-551	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	T.3 Vibration							
V	ML-233	Vibration	KD-9636-EM-300F2K-30N80	F:5~2000Hz G:0.2~20G	King Design	2017/8/29	2018/8/29	
V	ML-257	Multimeter	HP 34401A	note 1	Agilent	2017/3/2	2018/3/2	
	ML-494	Electronic Balance	XS1220M-SCS	1-1000 gf	CHUANHUA	2017/7/19	2018/7/19	
V	TD-166	Electronic Balance	PG603-S	1-610 gf	METTLER TOLEDO	2017/9/13	2018/9/13	
	ML-523	Electronic Balance	MTW-30K	30*0.005Kg		2017/9/13	2018/9/13	
V	ML-552	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	T.4 Shock							
V	ML-056	Shock	DP-1200-25	G:10~600G	King Design	2017/8/29	2018/8/29	
V	ML-257	Multimeter	HP 34401A	note 1	Agilent	2017/3/2	2018/3/2	
	ML-494	Electronic Balance	XS1220M-SCS	1-1000 gf	CHUANHUA	2017/7/19	2018/7/19	
V	TD-166	Electronic Balance	PG603-S	1-610 gf	METTLER TOLEDO	2017/9/13	2018/9/13	
	ML-523	Electronic Balance	MTW-30K	30*0.005Kg		2017/9/13	2018/9/13	
V	ML-551	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	T.5 External Short Circuit							
V	ML-534	mΩ Hister	3540	1mΩ ~ 30kΩ	HIOKI	2017/9/18	2018/9/18	
V	ML-459	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150°C	Yokogawa	2017/9/13	2018/9/13	
V	ML-460	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150°C	Yokogawa	2017/9/13	2018/9/13	
V	ML-521	Oven	9031	30~80 °C	YEOW LONG	2017/9/13	2018/9/13	
V	ML-549	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	T.6 Impact / Crush							
V	ML-339	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150°C	Yokogawa	2017/5/17	2018/5/17	
	ML-076	Impact Tester			JYI SHENG	2018/1/3	2019/1/3	
	ML-553	Crush Tester	BCT-01		Simplo	2017/5/18	2018/5/18	
V	ML-866	Crush Tester	M0654		JYI SHENG	2017/4/13	2018/4/13	
	ML-459	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150°C	Yokogawa	2017/9/13	2018/9/13	

Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效，本報告分離使用無效

This test report is valid only to the items, Invalid for separation using.



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

SMP SIMPLO TECHNOLOGY CO., LTD.

Address : No.471, Sec.2, Pa Teh Rd., Hu Kou, Hsin Chu Hsien 303, Taiwan

TEL: +886-3-5695920; FAX: +886-3-5695931

Revised Date: 2018-02-13

Test Instruments Reference List								
Used	Instrument ID	Instrument Name	Type	Range of use	Manufacturer	Calibration Date_Last	Calibration Date_Next	Remarks
	T.7 Overcharge							
	ML-482	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-483	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-484	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-486	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-487	Programmable DC Source	DS6024	1-60 Vdc, 0.3-24A	MOTECH	2017/5/17	2018/5/17	
	ML-488	Programmable DC Source	DS6024	1-60 Vdc, 0.3-24A	MOTECH	2017/5/17	2018/5/17	
V	ML-549	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	ML-459	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150 °C	Yokogawa	2017/9/13	2018/9/13	
	ML-460	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150 °C	Yokogawa	2017/9/13	2018/9/13	
V	ML-918	Overcharge & Forced discharge tester	T901	3~30 Vdc, Charge: 0.05~20A Discharge: 0.02~10A	SMP	2017/5/17	2018/5/17	
	T.8 Forced Discharge							
	ML-132	Electronic Load	3311C	60V,55A, 300W	Prodigit	2017/3/2	2018/3/2	
	ML-133	Electronic Load	3311C	60V,55A, 300W	Prodigit	2017/3/2	2018/3/2	
	ML-136	Electronic Load	3311C	60V,55A, 300W	Prodigit	2017/3/2	2018/3/2	
	ML-192	Electronic Load	3311C	60V,55A, 300W	Prodigit	2017/3/2	2018/3/2	
	ML-269	Electronic Load	3311C	60V,55A, 300W	Prodigit	2017/3/2	2018/3/2	
	ML-532	DC Electronic Load	33511-01	120V, 240A, 3600W	Prodigit	2017/7/19	2018/7/19	
	ML-482	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-483	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-484	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-486	Programmable DC Source	DS10014	1-100Vdc, 0.3-14.4A	MOTECH	2017/5/17	2018/5/17	
	ML-487	Programmable DC Source	DS6024	1-60 Vdc, 0.3-24A	MOTECH	2017/5/17	2018/5/17	
	ML-488	Programmable DC Source	DS6024	1-60 Vdc, 0.3-24A	MOTECH	2017/5/17	2018/5/17	
V	ML-549	Data Logger	313	15~35 °C; 30~80 %RH	CENTER	2017/9/18	2018/9/18	
	ML-459	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150 °C	Yokogawa	2017/9/13	2018/9/13	
	ML-460	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150 °C	Yokogawa	2017/9/13	2018/9/13	
V	ML-918	Overcharge & Forced discharge tester	T901	3~30 Vdc, Charge: 0.05~20A Discharge: 0.02~10A	SMP	2017/5/17	2018/5/17	
Note 1: DC Voltage: 0.1-1000V; AC Voltage: 0.5-700V at 60Hz, 1kHz; Resistance: 10Ω-10MΩ; DC Current: 0.1mA-3A; AC Current: 0.01-3A at 60Hz, 0.01-1A, at 1kHz.								

SMP SIMPLO TECHNOLOGY CO., LTD.

Address : No.471, Sec.2, Pa Teh Rd., Hu Kou, Hsin Chu Hsien 303, Taiwan

TEL: +886-3-5695920; FAX: +886-3-5695931

Revised Date: 2019-08-08

Test Instruments Reference List								
Used	Instrument ID	Instrument Name	Type	Range of use	Manufacturer	Calibration Date_Last	Calibration Date_Next	Remarks
	Pretest							
V	ML-761	Learning	715C	0~18V 0~8A	SMP	2019/2/26	2020/2/26	
V	ML-762	Learning	715C	0~18V 0~8A	SMP	2019/1/3	2020/1/3	
V	ML-763	Learning	715C	0~18V 0~8A	SMP	2019/2/26	2020/2/26	
V	ML-764	Learning	715C	0~18V 0~8A	SMP	2019/1/3	2020/1/3	
	ML-925	Learning	750C8	0~60V 0~30A	SMP	2019/1/3	2020/1/3	
	T.6 Impact / Crush							
V	ML-339	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150 °C	Yokogawa	2019/5/10	2020/5/10	
	ML-076	Impact Tester			JYI SHENG	2019/1/3	2020/1/3	
	ML-553	Crush Tester	BCT-01		Simplo	2019/5/10	2020/5/10	
V	ML-866	Crush Tester	M0654		JYI SHENG	2019/4/8	2020/4/8	
	ML-459	Data Acquisition	MX100-E-1D	1-100 Vdc, -50 to 150 °C	Yokogawa	2018/9/12	2019/9/12	

Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效，本報告分離使用無效

Page 6 of 8

This test report is valid only to the items, Invalid for separation using.



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

9. T.1~T.8 Detail Reports:

UN 38.3 Test Datasheet UN38.3/ST/SG/AC.10/11/Rev.6/Amend.1

Control Number: SLEU-1908003	Customer: Lenovo	Model Name: L17M3PG3	SMP Project Name: Y530_15B
Pack P/N: 928QA231H (A)(B)	Configuration: 3S1P	Test Duration: 2018/01/12~2018/02/12 2019/07/31~2019/08/07	Reviewer: Esmond

Test Sample Identification: ☐ Large Battery ☒ Small Battery ☐ Single-cell Battery

Battery Pack						Component Cell		
Used	Sample No.	Sample State	Used	Sample No.	Sample State	Used	Sample No.	Sample State
V	01~04	1 Cycle, Fully charged	V	05~08	25 Cycles, Fully charged	V	01C~05C	1 Cycle, 50% SOC
V	09~12	1 Cycle, Fully charged	V	13~16	25 Cycles, Fully charged	V	06C~10C	25 Cycles, 50% SOC
						V	11C~20C	1 Cycle, Fully discharged (0% SOC)
						V	21C~30C	25 Cycles, Fully discharged (0% SOC)

T.1 Altitude Simulation

Start time: 2018/01/29 09:10		Ambient temp.: 21.8 °C						Operator: Betty	
Finish time: 2018/01/29 15:30		Sample 01	Sample 02	Sample 03	Sample 04	Sample 05	Sample 06	Sample 07	Sample 08
OCV (V)	Before	12.933	12.928	12.926	12.930	12.927	12.925	12.931	12.925
	After	12.923	12.919	12.917	12.920	12.917	12.915	12.922	12.916
	Residual OCV %	99.92%	99.93%	99.93%	99.92%	99.92%	99.92%	99.93%	99.93%
Mass (g)	Before	234.251	234.069	234.125	234.622	234.374	234.158	234.692	234.280
	After	234.251	234.069	234.122	234.621	234.374	234.153	234.692	234.280
	Mass loss %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Results		P	P	P	P	P	P	P	P

T.2 Thermal Test

Start time: 2018/01/29 15:50		Ambient temp.: 23.1 °C						Operator: Betty	
Finish time: 2018/02/05 09:00		Sample 01	Sample 02	Sample 03	Sample 04	Sample 05	Sample 06	Sample 07	Sample 08
OCV (V)	Before	12.923	12.919	12.917	12.920	12.917	12.915	12.922	12.916
	After	12.720	12.704	12.709	12.704	12.710	12.695	12.717	12.704
	Residual OCV %	98.43%	98.34%	98.39%	98.33%	98.40%	98.30%	98.41%	98.36%
Mass (g)	Before	234.251	234.069	234.122	234.621	234.374	234.153	234.692	234.280
	After	234.234	234.047	234.103	234.598	234.354	234.129	234.666	234.256
	Mass loss %	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Results		P	P	P	P	P	P	P	P

T.3 Vibration

Start time: 2018/02/05 09:20		Ambient temp.: 21.5 °C						Operator: Betty	
Finish time: 2018/02/06 09:00		Sample 01	Sample 02	Sample 03	Sample 04	Sample 05	Sample 06	Sample 07	Sample 08
OCV (V)	Before	12.720	12.704	12.709	12.704	12.710	12.695	12.717	12.704
	After	12.686	12.669	12.674	12.668	12.675	12.660	12.681	12.668
	Residual OCV %	99.73%	99.72%	99.72%	99.72%	99.72%	99.72%	99.72%	99.72%
Mass (g)	Before	234.234	234.047	234.103	234.598	234.354	234.129	234.666	234.256
	After	234.234	234.044	234.099	234.598	234.349	234.129	234.665	234.256
	Mass loss %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Results		P	P	P	P	P	P	P	P

T.4 Shock

Start time: 2018/02/06 09:20		Ambient temp.: 22.2 °C						Operator: Betty	
Finish time: 2018/02/06 13:20		Sample 01	Sample 02	Sample 03	Sample 04	Sample 05	Sample 06	Sample 07	Sample 08
OCV (V)	Before	12.686	12.669	12.674	12.668	12.675	12.660	12.681	12.668
	After	12.685	12.668	12.674	12.667	12.674	12.659	12.681	12.667
	Residual OCV %	99.99%	99.99%	100.00%	99.99%	99.99%	99.99%	100.00%	99.99%
Mass (g)	Before	234.234	234.044	234.099	234.598	234.349	234.129	234.665	234.256
	After	234.234	234.042	234.099	234.598	234.349	234.126	234.665	234.255
	Mass loss %	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Results		P	P	P	P	P	P	P	P

Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效，本報告分離使用無效

This test report is valid only to the items, Invalid for separation using.



新普科技股份有限公司
新世電子(常熟)有限公司
新普科技(重慶)有限公司
華普電子(常熟)有限公司

Control Number: SLEU-1908003

T.5 External Short Circuit

Start time: 2018/02/06 13:40	Ambient temp.: 21.6 °C				Operator: Betty			
Finish time: 2018/02/07 09:00	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05	Sample 06	Sample 07	Sample 08
OCV (V)	Before	12.685	12.668	12.674	12.667	12.674	12.659	12.681
	After	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Resistance (<100mΩ)		61.3	58.4	59.0	56.2	60.5	55.8	59.2
Max Temp. (< 170°C)		57.5	57.4	57.2	57.4	57.2	57.5	57.4
Results		P	P	P	P	P	P	P

T.6 Impact / Crush (Component Cell)

UN38.3/ST/SG/AC.10/11/Rev.6/Amend.1

☐ Impact - Cylindrical cells not less than 18.0 mm in diameter

☒ Crush - Prismatic, pouch, coin/button cells and cylindrical cells less than 18.0 mm in diameter

Start time: 2019/08/07 13:00	Ambient temp.: 24.3 °C				Operator: Mia			
Finish time: 2019/08/07 16:40	Sample 01C	Sample 02C	Sample 03C	Sample 04C	Sample 05C			
Initial OCV (V)	3.756	3.750	3.764	3.761	3.767			
Max Temp. (< 170°C)	23.8	24.4	23.6	23.3	24.0			
Results	P	P	P	P	P			
Sample No.	Sample 06C	Sample 07C	Sample 08C	Sample 09C	Sample 10C			
Initial OCV (V)	3.758	3.766	3.760	3.759	3.752			
Max Temp. (< 170°C)	24.1	24.7	23.5	24.3	24.0			
Results	P	P	P	P	P			

T.7 Overcharge

Start time: 2018/02/02 09:20	Ambient temp.: 21.5 °C				Operator: Betty			
Finish time: 2018/02/12 09:30	Sample 09	Sample 10	Sample 11	Sample 12	Sample 13	Sample 14	Sample 15	Sample 16
Initial OCV (V)	12.934	12.930	12.928	12.928	12.931	12.926	12.929	12.928
Results	P	P	P	P	P	P	P	P

T.8 Forced Discharge (Component Cell)

Start time: 2018/01/31 09:20	Ambient temp.: 21.5 °C				Operator: Betty			
Finish time: 2018/02/08 09:20	Sample 11C	Sample 12C	Sample 13C	Sample 14C	Sample 15C	Sample 16C	Sample 17C	Sample 18C
Initial OCV (V)	3.436	3.425	3.421	3.431	3.436	3.420	3.429	3.434
Results	P	P	P	P	P	P	P	P
Sample No.	Sample 19C	Sample 20C	Sample 21C	Sample 22C	Sample 23C	Sample 24C	Sample 25C	Sample 26C
Initial OCV (V)	3.428	3.417	3.426	3.437	3.429	3.418	3.422	3.430
Results	P	P	P	P	P	P	P	P
Sample No.	Sample 27C	Sample 28C	Sample 29C	Sample 30C				
Initial OCV (V)	3.416	3.430	3.424	3.429				
Results	P	P	P	P				

9. Test Sample:



Form No. : W11-002-B05

本資料為新普科技股份有限公司之智慧財產權，非經本公司書面授權許可，不得透露或使用本資料，亦不得複印、複製或轉變成其它任何形式使用。
The information contained herein is the exclusive property of SIMPLO TECHNOLOGY CO., LTD, and shall not be distributed, reproduced, or disclosed in whole or in part without prior written permission.

本測試報告僅對上述測試項目有效，本報告分離使用無效

This test report is valid only to the items, Invalid for separation using.