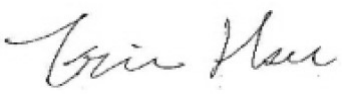
Test Report issued under the responsibility of:

TEST REPORT
UN38.3
TRANSPORT OF DANGEROUS GOODS - Lithium metal and lithium ion batteries

Report Number. .....:	4790912669-A-1
Date of issue .....:	2023-09-28
Total number of pages.....:	22
Manufacturer's identification:	
Name.....:	Orient Technology (S) Pte Ltd
Address .....:	178 Paya Lebar Road. #07-06 409030 Singapore
Phone number .....:	+65 63553388
Email.....:	sales@orient-technology.com.sg
Website.....:	https://www.orient-technology.com.sg/
Test specification:	
Standard.....:	ST/SG/AC.10/11/Rev.7/Amend. 1
Test procedure .....:	Type Test
Non-standard test method.....:	N/A
Test item description:	Lithium Ion
Trade Mark .....:	N/A
Manufacturer.....:	Orient Technology (S) Pte Ltd
Model/Type reference .....:	V1200
Ratings .....:	Capacity: 3300mAh Min. Capacity: 3350mAh

Testing procedure and testing location:		
Testing Laboratory:	Underwriters Laboratories Taiwan Co., Ltd.	
Address ..... :	No. 260, Daye Rd., Beitou Dist., Taipei City, TW-112, Chinese Taipei	
Phone number ..... :	+886-2-7737-3168	
Email ..... :	customerservice.tw@ul.com	
Website..... :	https://taiwan.ul.com/	
Tested by (name + title + signature)..... :	Richard Lin	
Approved by (name + title + signature)... :	Eric Hsu	

Summary of testing:

Tests conducted and results:

[X] T.1 Altitude simulation	**[X]** Pass;	**[ ]** Fail;
[X] T.2 Thermal test	**[X]** Pass;	**[ ]** Fail;
[X] T.3 Vibration	**[X]** Pass;	**[ ]** Fail;
[X] T.4 Shock	**[X]** Pass;	**[ ]** Fail;
[X] T.5 External short circuit	**[X]** Pass;	**[ ]** Fail;
[ ] T.6 Impact	**[ ]** Pass;	**[ ]** Fail;
[X] T.7 Overcharge	**[X]** Pass;	**[ ]** Fail;
[ ] T.8 Forced discharge	**[ ]** Pass;	**[ ]** Fail;

T.6 Impact and T.8 Forced discharge were considered in component Cell's report.

Test item particulars:

Chemistry ..... : ☐ **lithium metal** / ☒ **lithium ion**

Mass ..... : 63.2g

Lithium content (for lithium metal) ..... : --

Wh capacity (for lithium ion) ..... : 11.88 Wh

Battery connection configuration (X-S/Y-P) ..... : 1-S/1-P

Possible test case verdicts:

- test case does not apply to the test object ..... : N/A

- test object does meet the requirement ..... : P (Pass)

- test object does not meet the requirement ..... : F (Fail)

Testing:

Date of receipt of test item ..... : 2023-07-31

Date (s) of performance of tests ..... : 2022-08-09 to 2023-08-25

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a ☐ comma / ☒ point is used as the decimal separator.

Name and address of factory (ies) ..... : Orient Technology (S) Pte Ltd
178 Paya Lebar Road
#07-06
Singapore 409030

General product information:

Product Description
Rechargeable Lithium Battery Pack, with electronic components mounted on PWB with 1-series, 1-parallel cell, secured together in enclosure by snap locking.

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
38.3.3	**Assembled battery testing requirements**		**Pass**
38.3.3 (f)	The battery assembly has aggregate lithium content of not more than 500 g (lithium metal type) or with a Watt-hour rating of not more than 6 200 Wh (lithium ion type), and is assembled from batteries that have passed all applicable tests. One assembled battery in a fully charged state is tested under tests T.3, T.4 and T.5, and, in addition, test T.7 in the case of rechargeable battery.		Pass
38.3.3 (g)	Batteries that have passed all applicable tests are electrically connected to form a battery in which the aggregate lithium content is more than 500 g (lithium metal type) or with a Watt-hour rating of more than 6 200 Wh (lithium ion type). The assembled battery is not tested if the assembled battery is of a type that has been verified as preventing: (i) Overcharge; (ii) Short circuits; and (iii) Over discharge between the batteries.	Battery is not more than 6200 Wh	N/A
38.3.4	**Transport tests**		Pass
38.3.4.1	Test T-1: Altitude simulation		Pass
	Cells or batteries are stored at a pressure of 11.6 kPa or less for at least 6 h at ambient temperature.		Pass
	Results: no leakage, no venting, no short-circuit, no rupture, no explosion and no fire during this test.	See appended Table 38.3.4.1	Pass
38.3.4.2	Test T-2: Thermal test		Pass
	Cells or batteries previously subjected to altitude simulation test.		Pass
	Cells or batteries are stored for at least 6 h at a test temperature of 72 ± 2 °C, followed by storage for at least 6 h at a test temperature of -40 ± 2 °C. Maximum time for transfer is 30 minutes. This procedure is repeated until 10 total cycles are complete, after which all test cells and batteries are to be stored for 24 hours at ambient temperature.		Pass
	For large cells or batteries the duration of exposure to the test temperatures is at least 12 h instead of 6 h.	Not large batteries	N/A
	Storage for at least 24 h at ambient temperature.		Pass
	Results: no leakage, no venting, no short-circuit, no rupture, no explosion and no fire during this test.	See appended Table 38.3.4.2	Pass
38.3.4.3	Test T-3: Vibration		Pass
	Cells or batteries previously subjected to thermal test		Pass

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	Cells or batteries are subjected to the following sinusoidal vibration with a logarithmic sweep: from 7 Hz a peak acceleration of 1 g_n is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm and the frequency increased until a peak acceleration of 8 g_n occurs (approximately 50 Hz). A peak acceleration of 8 g_n is then maintained until the frequency is increased to 200 Hz.		Pass
	Large batteries are subjected to the following sinusoidal vibration with a logarithmic sweep: from 7 Hz a peak acceleration of 1 g_n is maintained until 18 Hz is reached. The amplitude is then maintained at 0.8 mm and the frequency increased until a peak acceleration of 2 g_n occurs (approximately 25 Hz). A peak acceleration of 2 g_n is then maintained until the frequency is increased to 200 Hz.		N/A
	Cycle is repeated 12 times for a total of 3 h for each of three mutually perpendicular mounting positions. One of the directions is perpendicular to the terminal face.		Pass
	Results: no leakage, no venting, no short-circuit, no rupture, no explosion and no fire during this test.	See appended Table 38.3.4.3	Pass
38.3.4.4	Test T-4: Shock		Pass
	Cells or batteries previously subjected to vibration test.		Pass
	Cells or batteries are subjected to three shocks in each direction of three mutually perpendicular mounting positions of the cell or battery for a total of 18 shocks.		Pass
	Cells are subjected to half-sine shock of peak acceleration of 150 g_n and pulse duration of 6 ms.		N/A
	As an alternative, large cells are subjected to a half-sine shock of peak acceleration of 50 g_n and pulse duration of 11 ms.		N/A
	Small batteries are subjected to half-sine shock of peak acceleration of the smaller of the following and pulse duration of 6 ms: - 150 g_n; or - $\sqrt{(100850 / \text{mass in kg})}$ g_n	Peak acceleration: 150 g_n	Pass
	Large batteries are subjected to half-sine shock of peak acceleration of the smaller of the following and pulse duration of 11 ms: - 50 g_n; or - $\sqrt{(30000 / \text{mass in kg})}$ g_n		N/A

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	Results: no leakage, no venting, no short-circuit, no rupture, no explosion and no fire during this test.	See appended Table 38.3.4.4	Pass
38.3.4.5	Test T-5: External short-circuit		Pass
	Cells or batteries previously subjected to shock test.		Pass
	Cells or batteries are heated for a period of time necessary to reach a homogeneous stabilized temperature of 57 ± 4 °C, measured on the external case.		Pass
	Cells or batteries are subjected to a short-circuit condition with a total external resistance of less than 0.1 ohm at 57 ± 4 °C. Short-circuit condition is continued for at least 1 h after the cell or battery external case temperature has returned to 57 ± 4 °C, or in the case of the large batteries, has decreased by half of the maximum temperature increase observed during the test and remains below that value.		Pass
	The test sample is observed for a further 6 h.		Pass
	Results: no excessive temperature rise, no rupture, no explosion and no fire during this test and within the 6 h of observation.	See appended Table 38.3.4.5	Pass
38.3.4.6	Test T-6: Impact / crush	Considered in Cell UN38.3 report	N/A
	The test is conducted using test cells or component cells that have not been previously subjected to other transport tests.		N/A
	Each test cell or component cell shall be subjected to one impact / crush only.		N/A
	Cylindrical cells not less than 18.0 mm in diameter are tested with impact test procedure.		N/A
	The cell is placed on a flat smooth surface. A stainless steel bar with a diameter of 15.8 ± 0.1 mm and a length of at least 60 mm or of the longest dimension of the cell, whichever is greater, is placed across the centre of the test sample. A mass of 9.1 ± 0.1 kg is dropped from a height of 61 ± 2.5 cm at the intersection of the bar and the test sample using a vertical sliding track or channel. The vertical track is oriented 90 degrees from the horizontal supporting surface.		N/A
	The test sample is impacted with its longitudinal axis parallel to the flat surface and perpendicular to the longitudinal axis of the steel bar lying across the centre of the test sample.		N/A
	Prismatic, pouch, coin/button cells and cylindrical cells less than 18.0 mm in diameter are tested with crush test procedure.		N/A

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	The cell is crushed between two flat surfaces. The crushing is to be gradual with a speed of approximately 1.5 cm/s at the first point of contact.		N/A
	A prismatic or pouch cell shall be crushed by applying the force to the widest side. A button/coin cell shall be crushed by applying the force on its flat surfaces. For cylindrical cells, the crush force shall be applied perpendicular to the longitudinal axis.		N/A
	The crushing is to be continued until one of the three conditions below is reached: - The applied force reaches 13 ± 0.78 kN; - The voltage of the cell drops by at least 100 mV; or - The cell is deformed by 50 % or more of its original thickness. As soon as one of the above conditions has been obtained, the pressure shall be released.		N/A
	The test sample is observed for a further 6 h.		N/A
	Results: no excessive temperature rise, no explosion and no fire during this test and within the 6 h of observation.		N/A
38.3.4.7	Test T-7: Overcharge		Pass
	The charge current of the battery is twice the manufacturer's recommended maximum continuous charge current.	Charge current: 2*1.2A=2.4A	Pass
	The manufacturer's recommended charge voltage is not more than 18 V. The minimum voltage of the test is the lesser of two times the maximum charge voltage of the battery or 22 V.	Minimum voltage: 8.26Vdc	Pass
	The manufacturer's recommended charge voltage is more than 18 V. The voltage of the test is not less than 1.2 times the maximum charge voltage.		N/A
	The test is conducted at ambient temperature. The charging condition is maintained for at least 24 h.		Pass
	The test sample is observed for a further 7 days.		Pass
	Results: no explosion and no fire during this test and within the 7 days of observation.		Pass
38.3.4.8	Test T-8: Forced discharge	Considered in Cell UN38.3 report	N/A

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict
	Each cell is forced discharged at ambient temperature by connecting it in series with a 12 V direct current power supply at an initial current equal to the maximum continuous discharge current specified by the manufacturer. Time interval for discharging equals to rated capacity divided by the initial test current.		N/A
	The test sample is observed for a further 7 days.		N/A
	Results: no explosion and no fire during this test, nor within the 7 days of observation.		N/A

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.1	**TABLE: Altitude**							Pass
Sample No.	Pre-condition	Open circuit voltage before test (V)	Mass before test (g)	Open circuit voltage after test (V)	Mass after test (g)	Mass loss (%)	Voltage remain (%)	Results
6315817-S1	(C)	4.088	63.13	4.088	63.13	0.00	100.00	A
6315817-S2	(C)	4.088	62.91	4.088	62.91	0.00	100.00	A
6315817-S3	(C)	4.087	62.97	4.087	62.97	0.00	100.00	A
6315817-S4	(C)	4.088	62.98	4.088	62.98	0.00	100.00	A
6315817-S5	(D)	4.088	63.20	4.088	63.20	0.00	100.00	A
6315817-S6	(D)	4.088	63.07	4.088	63.07	0.00	100.00	A
6315817-S7	(D)	4.088	63.16	4.088	63.16	0.00	100.00	A
6315817-S8	(D)	4.088	63.16	4.088	63.16	0.00	100.00	A

Supplementary information:

Precondition:

A: Fully discharged state.
B: Undischarged state.
C: First cycle in fully charged state.
D: After 25 cycles ending in fully charged state.

Results:

A: No leakage, no venting, no short-circuit (voltage remain ≥ 90%), no rupture, no disassembly (explosion), and no fire.
B: Other (please explain)

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.2	**TABLE: Thermal Test**							Pass
Sample No.	Pre-condition	Open circuit voltage before test (V)	Mass before test (g)	Open circuit voltage after test (V)	Mass after test (g)	Mass loss (%)	Voltage remain (%)	Results
6315817-S1	(C)	4.088	63.13	4.066	63.12	0.02	99.46	A
6315817-S2	(C)	4.088	62.91	4.066	62.89	0.03	99.46	A
6315817-S3	(C)	4.087	62.97	4.064	62.95	0.03	99.44	A
6315817-S4	(C)	4.088	62.98	4.065	62.96	0.03	99.44	A
6315817-S5	(D)	4.088	63.20	4.066	63.17	0.05	99.46	A
6315817-S6	(D)	4.088	63.07	4.066	63.05	0.03	99.46	A
6315817-S7	(D)	4.088	63.16	4.066	63.15	0.02	99.46	A
6315817-S8	(D)	4.088	63.16	4.066	63.15	0.02	99.46	A

Supplementary information:

Precondition:

A: Fully discharged state.
B: Undischarged state.
C: First cycle in fully charged state.
D: After 25 cycles ending in fully charged state.

Results:

A: No leakage, no venting, no short-circuit (voltage remain ≥ 90%), no rupture, no disassembly (explosion), and no fire.
B: Other (please explain))

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.3	**TABLE: Vibration**							Pass
Sample No.	Pre-condition	Open circuit voltage before test (V)	Mass before test (g)	Open circuit voltage after test (V)	Mass after test (g)	Mass loss (%)	Voltage remain (%)	Results
6315817-S1	C	4.066	63.12	4.065	63.12	0.000	99.98	A
6315817-S2	C	4.066	62.89	4.065	62.89	0.000	99.98	A
6315817-S3	C	4.064	62.95	4.062	62.95	0.000	99.95	A
6315817-S4	C	4.065	62.96	4.064	62.96	0.000	99.98	A
6315817-S5	D	4.066	63.17	4.065	63.17	0.000	99.98	A
6315817-S6	D	4.066	63.05	4.065	63.05	0.000	99.98	A
6315817-S7	D	4.066	63.15	4.065	63.15	0.000	99.98	A
6315817-S8	D	4.066	63.15	4.065	63.15	0.000	99.98	A

Supplementary information:

Precondition:

A: Fully discharged state.
B: Undischarged state.
C: First cycle in fully charged state.
D: After 25 cycles ending in fully charged state.

Results:

A: No leakage, no venting, no short-circuit (voltage remain ≥ 90%), no rupture, no disassembly (explosion), and no fire.
B: Other (please explain)

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.4	**TABLE: Shock**							Pass
Sample No.	Pre-condition	Open circuit voltage before test (V)	Mass before test (g)	Open circuit voltage after test (V)	Mass after test (g)	Mass loss (%)	Voltage remain (%)	Results
6315817-S1	(C)	4.065	63.12	4.065	63.12	0.00	100.00	A
6315817-S2	(C)	4.065	62.89	4.065	62.89	0.00	100.00	A
6315817-S3	(C)	4.062	62.95	4.062	62.95	0.00	100.00	A
6315817-S4	(C)	4.064	62.96	4.063	62.96	0.00	99.98	A
6315817-S5	(D)	4.065	63.17	4.064	63.17	0.00	99.98	A
6315817-S6	(D)	4.065	63.05	4.064	63.05	0.00	99.98	A
6315817-S7	(D)	4.065	63.15	4.065	63.14	0.02	100.00	A
6315817-S8	(D)	4.065	63.15	4.064	63.14	0.02	99.98	A

Supplementary information:

Precondition:

A: Fully discharged state.
B: Undischarged state.
C: First cycle in fully charged state.
D: After 25 cycles ending in fully charged state.

Results:

A: No leakage, no venting, no short-circuit (voltage remain ≥ 90%), no rupture, no disassembly (explosion), and no fire.
B: Other (please explain)

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.5	**TABLE: External short-circuit**				Pass
Sample No.	Pre-condition	Open circuit voltage before test (V)	Maximum case temperature (°C)	Total external resistance (Ω)	Results
6315817-S1	C	4.065	55.8	76.52m	A
6315817-S2	C	4.065	55.8	87.16m	A
6315817-S3	C	4.062	55.7	74.58m	A
6315817-S4	C	4.063	55.9	81.06m	A
6315817-S5	D	4.064	55.7	81.45m	A
6315817-S6	D	4.064	56.1	79.58m	A
6315817-S7	D	4.065	56.1	79.35m	A
6315817-S8	D	4.064	56.1	85.42m	A

Supplementary information:

Precondition:

A: Fully discharged state.
B: Undischarged state.
C: First cycle in fully charged state.
D: After 25 cycles ending in fully charged state.

Results:

A: No excessive temperature rise (above 170°C), no rupture, no disassembly (explosion), and no fire.
B: Other (please explain)

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.6a	**TABLE: Impact**			N/A
Sample No.	Precondition	Open circuit voltage before test (V)	Maximum case temperature (°C)	Results

Supplementary information:

Precondition:

A: Undischarged.
B: Fully discharged.
C: First cycle in one-half discharged state.
D: After 25 cycles in one-half discharged state.

Results:

A: No excessive temperature rise (above 170°C), no disassembly (explosion), and no fire.
B: Other (please explain)

38.3.4.6b	**TABLE: Crush**						N/A
Sample No.	Open circuit voltage before test (V)	Voltage drop of the cell (mV)	Applied force (kN)	Thickness before test (mm)	Thickness after test (mm)	Maximum case temperature (°C)	Results

Supplementary information:

Precondition:

A: Undischarged.
B: Fully discharged.
C: First cycle in one-half discharged state.
D: After 25 cycles in one-half discharged state.

Results:

A: No excessive temperature rise (above 170°C), no disassembly (explosion), and no fire.
B: Other (please explain)

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.7	**TABLE: Overcharge**					Pass
Sample No.	Precondition	Open circuit voltage before test (V)	Maximum charging current (A)	Maximum charging voltage (V)	Total charging time (h)	Results
6315817-S9	A	4.090	2.4045	8.26	24	A
6315817-S10	A	4.090	2.4030	8.26	24	A
6315817-S11	A	4.089	2.4025	8.26	24	A
6315817-S12	A	4.090	2.4050	8.26	24	A
6315817-S13	B	4.090	2.1026	8.26	24	A
6315817-S14	B	4.090	2.4013	8.26	24	A
6315817-S15	B	4.090	2.4025	8.26	24	A
6315817-S16	B	4.090	2.4048	8.26	24	A

Supplementary information:

Precondition:

A: First cycle in fully charged state.

B: After 25 cycles ending in fully charged state.

Results:

A: No disassembly (explosion), and no fire.

B: Other (please explain)

Note:

Charging current: 1.2A*2=2.4A

Charging voltage: 8.26Vdc (4.13V*2=8.26Vdc which is less than 22V)

UN 38.3			
Clause	Requirement + Test	Result - Remark	Verdict

38.3.4.8	**TABLE: Forced discharge**				N/A
Sample No.	Precondition	Open circuit voltage before test (V)	Measured reverse charging current (mA)	Total time for reversed charging application (min)	Results

Supplementary information:

Precondition:

A: Fully discharged state.
B: First cycle in fully discharged state.
C: After 25 cycles ending in fully discharged state.

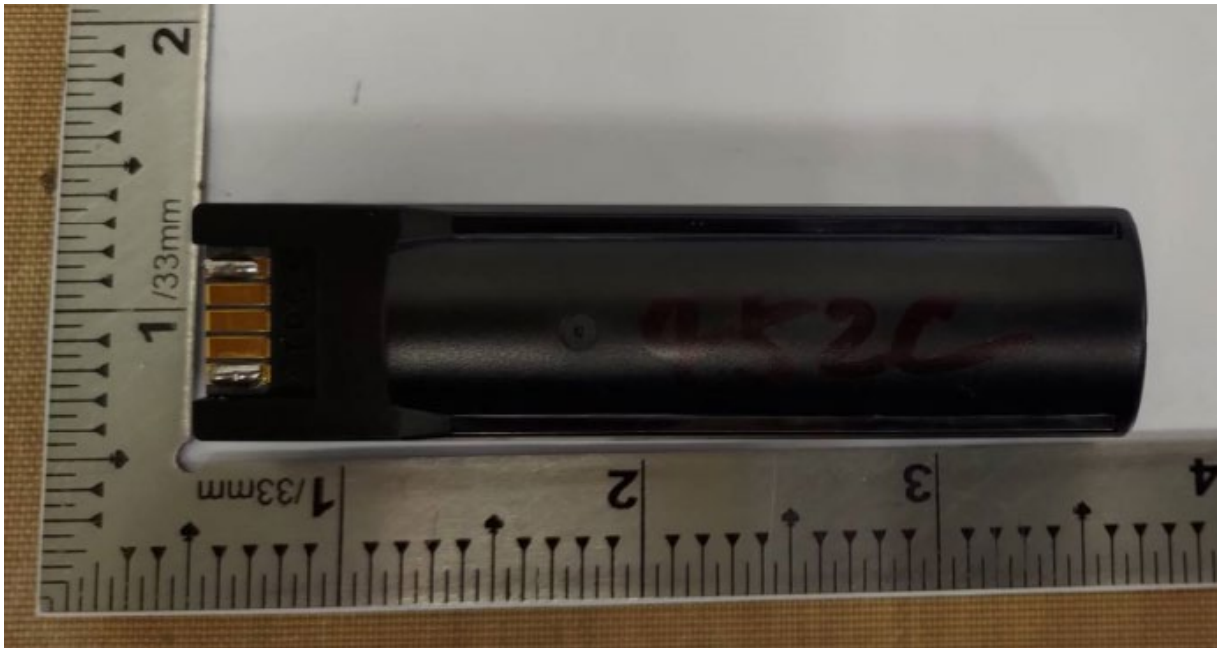
Results:

A: No disassembly (explosion), and no fire.
B: Other (please explain)

ENCLOSURE

Supplement Id	Description
01	Overall view
02	Specification
03-1~3	Critical component list
04	Packaging Method

ID 01



ID 02

3. DESCRIPTION AND MODEL

a. Description : Lithium Ion Battery Pack
b. Cell : NCR18650GA
c. Configuration : 1 series and 1 parallel
d. Model Number : OTPL103300
e. Model Name : 1NCR18650GA-CC
f. Customer Model Number : V1200

4. GENERAL SPECIFICATIONS

	Item	Specification	
3.1	Rated Capacity	4.20V Charge: 3300mAh Discharge : 670mA (at 20degC)	
		4.15V Charge: 3190mAh Discharge : 670mA (at 20degC)	
3.2	Capacity (Minimum)	4.20V Charge: 3350mAh Discharge : 670mA (at 25degC)	
		4.15V Charge: 3235mAh Discharge : 670mA (at 25degC)	
3.3	Capacity (Typical)	4.20V Charge: 3450mAh (Reference only)	
		4.15V Charge: 3360mAh (Reference only)	
3.4	Charging Voltage	4.10 ± 0.03 V	
3.5	Nominal Voltage	3.60V	
3.6	Charging Method	CC-CV (constant voltage with limited current)	
3.7	Charging Current	1.2A	
3.8	Charging Time (Std)	4.0 hours	
3.9	Max. Discharge Current	3A	
3.10	Device Discharge Cut-off Voltage	3.0V (Recommended)	
3.11	Battery Pack Impedance	TBC	
3.12	Battery Pack Weight	TBC	
3.13	Operating Temperature (Ambient) ※3	Charge	0°C ~ 45°C
		Discharge	-20°C ~ 60°C
3.14	Storage Condition※4	Less than 1 month	-20°C ~ 50°C
		Less than 3 months	-20°C ~ 40°C
		Less than 1 year	-20°C ~ 20°C

	TABLE: Critical components information				Pass
Object/part no.	**Manufacturer/ trademark**	**Type/model**	**Technical data**	**Standard**	**Mark(s) of conformity [1)]**
01. Connectors and Receptacles (secondary SELV circuits)	Interchangeable	Metal/Plastic	Copper alloy pins housed in bodies of PWB rated V-1 minimum.	UL 94, UL746C	Tested in this report.
02. Plastic Enclosure	Mitsubishi Engineering - Plastics Corp	FPR3500+	Minimum 0.75 mm thickness, V-0, 80 degree C.	UL 94, UL746C	UL(E41179). Tested in this report.
03. Cell Holder	Mitsubishi Engineering - Plastics Corp	FPR3500+	Minimum 0.75 mm thickness, V-0, 80 degree C.	UL 94, UL746C	UL(E41179). Tested in this report.
04. Internal Plastic Part Materials (for parts greater than 1.75cm³)	Interchangeable	Interchangeable	Min. V-2.	UL 94, UL746C	UL. Tested in this report.
05. PWB	SK Printed Circuit Enterprise Co Ltd.	4L	Minimum 0.1mm thickness, V-0, 130 degree C.	UL 796	UL(E208126). Tested in this report.
05a. PWB (Alternate)	Interchangeable	Interchangeable	V-1, 105 degree C.	UL 796	UL
06. Battery cells (1S-1P)	Panasonic	NCR18650GA	3.6 Vdc, Rated Capacity: 3300 mAh, Typical Capacity: 3450mAh	IEC 62133-2:2017, IEC 62133-2:2017/AMD1:2021	IEC (CBTC No.: NL-78016/A2, issued on 2023-04-13, CBTR Ref. No.: 4902080.50, issued on 2023-04-12 by DEKRA CBTL)
07. IC (U1)	Texas Instruments	BQ27542-G1	--	--	Tested in this report.
08. IC (U2)	ABLIC Inc.	S-8211CAM-I6T1G	--	--	Tested in this report.
09. IC (U3)	ABLIC Inc.	S-8206AAI-I6T1G	--	--	Tested in this report.
10. MOSFET (Q1)	SamHop Microelectronics Corp.	STF8211	--	--	Tested in this report.
11. MOSFET (Q2)	Alpha & Omega Semiconductor	A03400A	--	--	Tested in this report.
11a. MOSFET (Q2) (Alternate)	Interchangeable	Interchangeable	--	--	--
12. Current Sensing Resistor (R2)	Prosperity Dielectrics Co., Ltd.	FMF25FPHR010-LH	10m ohm, 1W	--	Tested in this report.
12a. Current Sensing Resistor (R2) (Alternate)	Interchangeable	Interchangeable	10m ohm, 1W	--	--

13. Thermistor (RT1)	Thinking Electronic Industrial Co., Ltd	TSM0A103F34D 1RZ	10Kohm at 25 degree C.	UL1434	UL(E138827). Tested in this report.
13a. Thermistor (RT1) (Alternate)	Interchangeable	Interchangeable	10Kohm at 25 degree C.	UL1434	UL
14. Thermistor (RT2)	Thinking Electronic Industrial Co., Ltd	TSM0A103F34D 1RZ	10Kohm at 25 degree C.	UL1434	UL(E138827). Tested in this report.
14a. Thermistor (RT2) (Alternate)	Interchangeable	Interchangeable	10Kohm at 25 degree C.	UL1434	UL
15. Fuse (F1)	Bel Fuse Inc	C1H10	32Vdc, 10A	UL 248-1, UL 248-14	UL (E20624). Tested in this report.
16. Fuse (F2)	Polytronics Technology Corp.	CLM1612P0412	36Vdc, 12A	UL 248-1, UL 248-14	UL(E331807). Tested in this report.

Supplementary information:

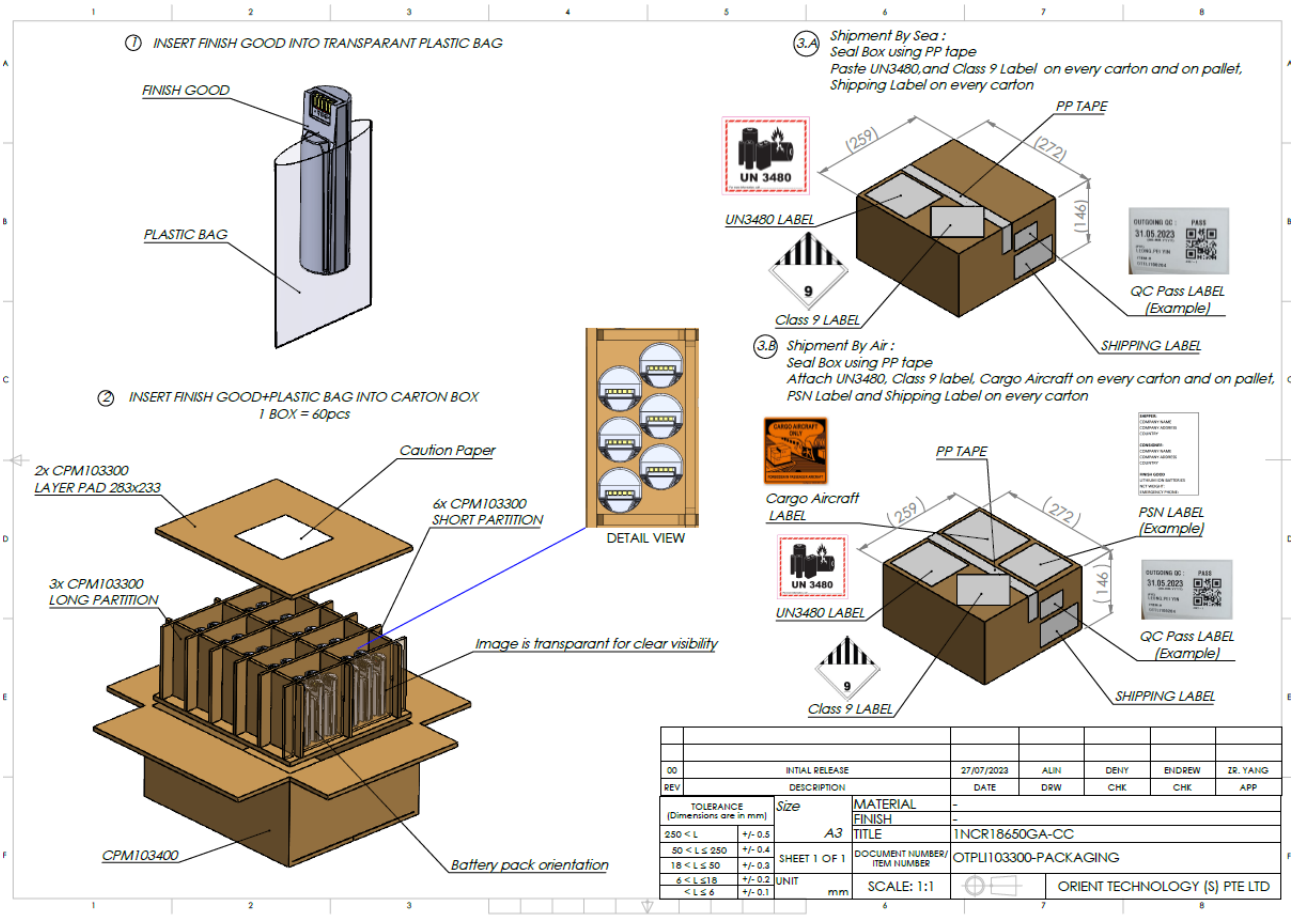
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.

2) Description line content is optional. Main line description needs to clearly detail the component used for testing.

3) The CBTL has verified the component information.

4) License available upon request for UL standard.

ID 04


① INSERT FINISH GOOD INTO TRANSPARANT PLASTIC BAG
FINISH GOOD
PLASTIC BAG
② INSERT FINISH GOOD+PLASTIC BAG INTO CARTON BOX
1 BOX = 60pcs
2x CPM103300
LAYER PAD 283x233
Caution Paper
6x CPM103300
SHORT PARTITION
3x CPM103300
LONG PARTITION
DETAIL VIEW
Image is transparant for clear visibility
CPM103400
Battery pack orientation
3.A Shipment By Sea :
Seal Box using PP tape
Paste UN3480,and Class 9 Label on every carton and on pallet,
Shipping Label on every carton
UN 3480
UN3480 LABEL
9
Class 9 LABEL
PP TAPE
(259)
(272)
(146)
QC Pass LABEL
(Example)
SHIPPING LABEL
3.B Shipment By Air :
Seal Box using PP tape
Attach UN3480, Class 9 label, Cargo Aircraft on every carton and on pallet,
PSN Label and Shipping Label on every carton
Cargo Aircraft
LABEL
PP TAPE
PSN LABEL
(Example)
UN 3480
UN3480 LABEL
9
Class 9 LABEL
QC Pass LABEL
(Example)
SHIPPING LABEL
00 INTIAL RELEASE 27/07/2023 ALIN DENY ENDREW ZR. YANG
REV DESCRIPTION DATE DRW CHK CHK APP
TOLERANCE (Dimensions are in mm)
250 < L +/- 0.5
50 < L ≤ 250 +/- 0.4
18 < L ≤ 50 +/- 0.3
6 < L ≤18 +/- 0.2
< L ≤ 6 +/- 0.1
Size A3
SHEET 1 OF 1
UNIT mm
MATERIAL -
FINISH -
TITLE 1NCR18650GA-CC
DOCUMENT NUMBER/ ITEM NUMBER OTPLI103300-PACKAGING
SCALE: 1:1
ORIENT TECHNOLOGY (S) PTE LTD