

	Test Report issued under the responsibility of: NCB TÜV SÜD PSB Pte. Ltd. 15 International Business Park, TÜV SÜD@IBP Singapore 609937	
TEST REPORT IEC 62133-2 Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems		
Report Number..... : 085-28225546-000 Date of issue..... : 2025-12-10 Total number of pages : 29 pages		
Name of CB Testing Laboratory preparing the Report : Guangzhou CPUP Certification Technology Service Co., Ltd.		
Applicant's name : Wintonic Battery & Magnet Co., Ltd. Address..... : No. 38, Yunfeng Road, XinHua Ind Park, 510800 Huadu, Guangzhou, PEOPLE'S REPUBLIC OF CHINA		
Test specification: Standard : IEC 62133-2:2017, IEC 62133-2:2017/AMD1:2021 Test procedure : CB Scheme Non-standard test method : N/A		
TRF template used..... : IECEE OD-2020-F1:2024, Ed.1.7 Test Report Form No. : IEC62133_2C Test Report Form(s) Originator : DEKRA Certification B.V. Master TRF : Dated 2025-09-26		
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Test item description..... :	Li-ion Rechargeable Cell	
Trade Mark(s) :	N/A	
Manufacturer :	Same as the applicant	
Model/Type reference :	1) INR18650-1300, 2) INR18650-1500, 3) INR18650-1800, 4) INR18650-2000, 5) INR18650-2200, 6) INR18650-2500, 7) INR18650-2600	
Ratings :	1) For model: INR18650-1300: 3.7Vd.c., 1300mAh 2) For model: INR18650-1500: 3.7Vd.c., 1500mAh 3) For model: INR18650-1800: 3.7Vd.c., 1800mAh 4) For model: INR18650-2000: 3.7Vd.c., 2000mAh 5) For model: INR18650-2200: 3.7Vd.c., 2200mAh 6) For model: INR18650-2500: 3.7Vd.c., 2500mAh 7) For model: INR18650-2600: 3.7Vd.c., 2600mAh	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒	CB Testing Laboratory:	Guangzhou CPUP Certification Technology Service Co., Ltd.
Testing location/ address..... :		Room C101/C102/C103/C104, No.9, Hengji Road, Yunxing Zhukeng, Shiqiao Street, Panyu District, Guangzhou, Guangdong, China
Tested by (name, function, signature)..... :		Jun Li Project Handler <i>Jun Li</i>
Approved by (name, function, signature)... :		Leo Zhi Project Reviewer <i>Leo Zhi</i>
☐	Testing procedure: CTF Stage 1:	
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature)... :		
☐	Testing procedure: CTF Stage 2:	
Testing location/ address..... :		
Tested by (name + signature) :		
Witnessed by (name, function, signature) . :		
Approved by (name, function, signature)... :		
☐	Testing procedure: CTF Stage 3:	
☐	Testing procedure: CTF Stage 4:	
Testing location/ address..... :		

Tested by (name, function, signature).....:		
Witnessed by (name, function, signature) .:		
Approved by (name, function, signature)...:		
Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment): Attachment No.1: 3 pages of (Republic of Korea) NATIONAL DIFFERENCES; Attachment No.2: 17 pages of Photo Documentation.	
Summary of testing:	
Tests performed (name of test, test clause and date test performed): Tests are made with the number of samples specified in Table 1 of IEC 62133-2:2017, IEC 62133-2:2017/AMD1:2021. clause 7.2.1 Continuous charging at constant voltage (cells) clause 7.3.1 External short circuit (cell) clause 7.3.3 Free fall clause 7.3.4 Thermal abuse (cells) clause 7.3.5 Crush (cells) clause 7.3.7 Forced discharge (cells) clause 7.3.9 Forced internal short-circuit (cells) Date test performed: 2025-11-10 to 2025-11-27 The samples comply with the requirements of IEC 62133-2:2017, IEC 62133-2:2017/AMD1:2021.	Testing location: (CBTL, SPTL, CTF, Subcontractor) Guangzhou CPUP Certification Technology Service Co., Ltd. Address: Room C101/C102/C103/C104, No.9, Hengji Road, Yunxing Zhukeng, Shiqiao Street, Panyu District, Guangzhou, Guangdong, China
Summary of compliance with National Differences - IECEE Member countries that are also CENELEC members Compliance with Group Differences evaluated ☐ yes ☐ No ☒ N/A Comply with EN 62133-2:2017/A1:2021 and BS EN 62133-2:2017+A1:2021. - IECEE Member countries with published National Differences which were evaluated: KR - IECEE Member countries that did not publish any National Differences: N/A To support compliance with published National Differences, attach a compilation of relevant ND and/or GD TRFs to the CB Test Report	

Use of uncertainty of measurement for decisions on conformity (decision rule):

☒ No decision rule is specified by the IEC standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

☐ Other: ... (to be specified, for example when required by the standard or client, or if national accreditation requirements apply)

Information on uncertainty of measurement:

The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

IEC Guide 115 provides guidance on the application of measurement uncertainty principles and applying the decision rule when reporting test results within IECEE scheme, noting that the reporting of the measurement uncertainty for measurements is not necessary unless required by the test standard or customer.

Calculations leading to the reported values are on file with the NCB and testing laboratory that conducted the testing.

Copy of marking plate:

The artwork below may be only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Mode: INR18650-1300 Li-ion Rechargeable Cell 251108 Mode:INR18650-1300 (INR19/66) + Rated:3.7V 1300mAh 4.81Wh - Wintonic Battery & Magnet Co., Ltd.	Mode: INR18650-1500 Li-ion Rechargeable Cell 251108 Mode:INR18650-1500 (INR19/66) + Rated:3.7V 1500mAh 5.55Wh - Wintonic Battery & Magnet Co., Ltd.
Mode: INR18650-1800 Li-ion Rechargeable Cell 251108 Mode:INR18650-1800 (INR19/66) + Rated:3.7V 1800mAh 6.66Wh - Wintonic Battery & Magnet Co., Ltd.	Mode: INR18650-2000mAh Li-ion Rechargeable Cell 251108 Mode:INR18650-2000 (INR19/66) + Rated:3.7V 2000mAh 7.4Wh - Wintonic Battery & Magnet Co., Ltd.
Mode: INR18650-2200 Li-ion Rechargeable Cell 251108 Mode:INR18650-2200 (INR19/66) + Rated:3.7V 2200mAh 8.14Wh - Wintonic Battery & Magnet Co., Ltd.	Mode: INR18650-2500mAh Li-ion Rechargeable Cell 251108 Mode:INR18650-2500 (INR19/66) + Rated:3.7V 2500mAh 9.25Wh - Wintonic Battery & Magnet Co., Ltd.
Mode: INR18650-2600 Li-ion Rechargeable Cell 251108 Mode:INR18650-2600 (INR19/66) + Rated:3.7V 2600mAh 9.62Wh - Wintonic Battery & Magnet Co., Ltd.	

Remark:

According to Clause 9.1, by agreement between the cell manufacturer and the battery and/or end product manufacturer, component cells used in the manufacture of a battery need not be marked.

Test item particulars.....:	
Classification of installation and use.....:	Used in portable applications
Supply Connection	Supplied by positive cap and negative can
Recommend charging method declared by the manufacturer	Charge at constant current 0.2ItA until voltage reaches 4.20V, then charge at constant voltage 4.20V till charge current is 0.02ItA.(See page 8)
Discharge current (0,2 It A)	See page 8
Specified final voltage.....:	2.75V
Upper limit charging voltage per cell.....:	4.25V
Maximum charging current	0.5ItA (see page 8)
Charging temperature upper limit	45°C
Charging temperature lower limit.....:	0°C
Polymer cell electrolyte type.....:	☐ gel polymer ☐ solid polymer ☒ N/A
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 : 2025-11-10	
Date (s) of performance of tests : 2025-11-10 to 2025-11-27	
General remarks:	
"(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.	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60068-2-1:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided:	☐ Yes ☒ Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies) : Same as the applicant	

General product information and other remarks:

1. The Li-ion Rechargeable Cell, Models 1) INR18650-1300, 2) INR18650-1500, 3) INR18650-1800, 4) INR18650-2000, 5) INR18650-2200, 6) INR18650-2500, 7) INR18650-2600 are used for portable appliance.
2. The 7 models have the same dimensions, chemistry, voltage, from the same manufacturer, but different capacities. All tests were conducted on representative model 1) INR18650-1300, 2) INR18650-1500, 3) INR18650-1800, 4) INR18650-2200, 5) INR18650-2600.
3. Additionally, detailed information of the cells are as following:

Model	Rated capacity (mAh)	Nominal voltage (V)	Recommended charge current 0.2ItA (mA)	0.2ItA discharge current (mA)	Charge voltage (V)	Final voltage (V)
INR18650-1300	1300	3.7	260	260	4.20	2.75
INR18650-1500	1500	3.7	300	300	4.20	2.75
INR18650-1800	1800	3.7	360	360	4.20	2.75
INR18650-2000	2000	3.7	400	400	4.20	2.75
INR18650-2200	2200	3.7	440	440	4.20	2.75
INR18650-2500	2500	3.7	500	500	4.20	2.75
INR18650-2600	2600	3.7	520	520	4.20	2.75

Model	Lower limited discharge voltage (V)	Max. charging current 0.5ItA (mA)	Upper limit charge voltage (V)	0.02ItA in First charging procedure (mA)	0.05ItA in Second charging procedure (mA)	Charging temperature upper/lower limit(°C)
INR18650-1300	2.75	650	4.25	26	65	45/0
INR18650-1500	2.75	750	4.25	30	75	45/0
INR18650-1800	2.75	900	4.25	36	90	45/0
INR18650-2000	2.75	1000	4.25	40	100	45/0
INR18650-2200	2.75	1100	4.25	44	110	45/0
INR18650-2500	2.75	1250	4.25	50	125	45/0
INR18650-2600	2.75	1300	4.25	52	130	45/0

Test procedures:

First charging procedure (20°C ± 5°C)	Charge at constant current 0.2ItA until voltage reaches 4.20V, then charge at constant voltage 4.20V till charge current is 0.02ItA.
Second charging procedure	After stabilization for 1h to 4h at 0°C and 45°C, respectively, cells are charged at constant current 0.5ItA until voltage reaches 4.25V, then charge at constant voltage 4.25V till charge current reduced to 0.05 It A.

For this series, same parameter as below:

Cell designation according to IEC 61960-3: 2017	INR19/66
Charging temperature range	0°C to +45°C

Remark: The final evaluation of the cells must be conducted in the end product for which the cells will be used.

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Clause	Requirement + Test	Result - Remark	Verdict
4	PARAMETER MEASUREMENT TOLERANCES		P
	Parameter measurement tolerances		P
5	GENERAL SAFETY CONSIDERATIONS		P
5.1	General		P
	Cells and batteries so designed and constructed that they are safe under conditions of both intended use and reasonably foreseeable misuse		P
5.2	Insulation and wiring		N/A
	The insulation resistance between the positive terminal and externally exposed metal surfaces of the battery (excluding electrical contact surfaces) is not less than 5 MΩ		N/A
	Insulation resistance (MΩ) :		—
	Internal wiring and insulation are sufficient to withstand maximum anticipated current, voltage and temperature requirements		N/A
	Orientation of wiring maintains adequate clearances and creepage distances between conductors		N/A
	Mechanical integrity of internal connections accommodates reasonably foreseeable misuse		N/A
5.3	Venting		P
	Battery cases and cells incorporate a pressure relief mechanism or are constructed so that they relieve excessive internal pressure at a value and rate that will preclude rupture, explosion and self-ignition		P
	Encapsulation used to support cells within an outer casing does not cause the battery to overheat during normal operation nor inhibit pressure relief		N/A
5.4	Temperature, voltage and current management		N/A
	Batteries are designed such that abnormal temperature rise conditions are prevented		N/A
	Batteries are designed to be within temperature, voltage and current limits specified by the cell manufacturer		N/A
	Batteries are provided with specifications and charging instructions for equipment manufacturers so that specified chargers are designed to maintain charging within the temperature, voltage and current limits specified		N/A
5.5	Terminal contacts		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The size and shape of the terminal contacts ensure that they can carry the maximum anticipated current		N/A
	External terminal contact surfaces are formed from conductive materials with good mechanical strength and corrosion resistance		N/A
	Terminal contacts are arranged to minimize the risk of short circuits		N/A
5.6	Assembly of cells into batteries		N/A
5.6.1	General		N/A
	Each battery has an independent control and protection for current, voltage, temperature and any other parameter required for safety and to maintain the cells within their operating region		N/A
	This protection may be provided external to the battery such as within the charger or the end devices		N/A
	If protection is external to the battery, the manufacturer of the battery provide this safety relevant information to the external device manufacturer for implementation		N/A
	If there is more than one battery housed in a single battery case, each battery has protective circuitry that can maintain the cells within their operating regions		N/A
	Manufacturers of cells specify current, voltage and temperature limits so that the battery manufacturer/designer may ensure proper design and assembly		N/A
	Batteries that are designed for the selective discharge of a portion of their series connected cells incorporate circuitry to prevent operation of cells outside the limits specified by the cell manufacturer		N/A
	Protective circuit components are added as appropriate and consideration given to the end-device application		N/A
	The manufacturer of the battery provide a safety analysis of the battery safety circuitry with a test report including a fault analysis of the protection circuit under both charging and discharging conditions confirming the compliance		N/A
5.6.2	Design recommendation		N/A
	For the battery consisting of a single cell or a single cellblock, it is recommended that the charging voltage of the cell does not exceed the upper limit of the charging voltage specified in Table 2		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	For the battery consisting of series-connected plural single cells or series-connected plural cellblocks, it is recommended that the voltages of any one of the single cells or single cellblocks does not exceed the upper limit of the charging voltage, specified in Table 2, by monitoring the voltage of every single cell or the single cellblocks		N/A
	For the battery consisting of series-connected plural single cells or series-connected plural cellblocks, it is recommended that charging is stopped when the upper limit of the charging voltage is exceeded for any one of the single cells or single cellblocks by measuring the voltage of every single cell or the single cellblocks		N/A
	For batteries consisting of series-connected cells or cell blocks, nominal charge voltage are not counted as an overcharge protection		N/A
	For batteries consisting of series-connected cells or cell blocks, cells have closely matched capacities, be of the same design, be of the same chemistry and be from the same manufacturer		N/A
	It is recommended that the cells and cell blocks are not discharged beyond the cell manufacturer's specified final voltage		N/A
	For batteries consisting of series-connected cells or cell blocks, cell balancing circuitry are incorporated into the battery management system		N/A
5.6.3	Mechanical protection for cells and components of batteries		N/A
	Mechanical protection for cells, cell connections and control circuits within the battery are provided to prevent damage as a result of intended use and reasonably foreseeable misuse		N/A
	The mechanical protection can be provided by the battery case or it can be provided by the end product enclosure for those batteries intended for building into an end product		N/A
	The battery case and compartments housing cells are designed to accommodate cell dimensional tolerances during charging and discharging as recommended by the cell manufacturer		N/A
	For batteries intended for building into a portable end product, testing with the battery installed within the end product is considered when conducting mechanical tests		N/A
5.7	Quality plan		P

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Clause	Requirement + Test	Result - Remark	Verdict
	The manufacturer prepares and implements a quality plan that defines procedures for the inspection of materials, components, cells and batteries and which covers the whole process of producing each type of cell or battery		P
5.8	Battery safety components		N/A

6	TYPE TEST AND SAMPLE SIZE		P
	Tests are made with the number of cells or batteries specified in Table 1 using cells or batteries that are not more than six months old		P
	The internal resistance of coin cells are measured in accordance with Annex D. Coin cells with internal resistance less than or equal to 3 Ω are tested in accordance with Table 1		N/A
	Unless otherwise specified, tests are carried out in an ambient temperature of 20 °C $\pm$ 5 °C		P
	The safety analysis of 5.6.1 identify those components of the protection circuit that are critical for short-circuit, overcharge and over discharge protection		N/A
	When conducting the short-circuit test, consideration is given to the simulation of any single fault condition that is likely to occur in the protecting circuit that would affect the short-circuit test		N/A

7	SPECIFIC REQUIREMENTS AND TESTS		P
7.1	Charging procedure for test purposes		P
7.1.1	First procedure		P
	This charging procedure applies to subclauses other than those specified in 7.1.2		P
	Unless otherwise stated in this document, the charging procedure for test purposes is carried out in an ambient temperature of 20 °C $\pm$ 5 °C, using the method declared by the manufacturer		P
	Prior to charging, the battery has been discharged at 20 °C $\pm$ 5 °C at a constant current of 0,2 It A down to a specified final voltage		P
7.1.2	Second procedure		P
	This charging procedure applies only to 7.3.1, 7.3.4, 7.3.5, and 7.3.9		P

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Clause	Requirement + Test	Result - Remark	Verdict
	After stabilization for 1 h to 4 h, at an ambient temperature of the highest test temperature and the lowest test temperature, respectively, as specified in Table 2, cells are charged by using the upper limit charging voltage and maximum charging current, until the charging current is reduced to 0,05 It A, using a constant current to constant voltage charging method		P
7.2	Intended use		P
7.2.1	Continuous charging at constant voltage (cells)		P
	Fully charged cells are subjected for 7 days to a charge using the charging method for current and standard voltage specified by the cell manufacturer		P
	Results: no fire, no explosion, no leakage..... :	(See appended table 7.2.1)	P
7.2.2	Case stress at high ambient temperature (battery)		N/A
	Oven temperature (°C)..... :		—
	Results: no physical distortion of the battery case resulting in exposure of internal protective components and cells		N/A
7.3	Reasonably foreseeable misuse		P
7.3.1	External short-circuit (cell)		P
	The cells were tested until one of the following occurred:		P
	- 24 hours elapsed; or		N/A
	- The case temperature declined by 20 % of the maximum temperature rise		P
	Results: no fire, no explosion..... :	(See appended table 7.3.1)	P
7.3.2	External short-circuit (battery)		N/A
	The batteries were tested until one of the following occurred:		N/A
	- 24 hours elapsed; or		N/A
	- The case temperature declined by 20 % of the maximum temperature rise		N/A
	In case of rapid decline in short circuit current, the battery pack remained on test for an additional one hour after the current reached a low end steady state condition		N/A
	A single fault in the discharge protection circuit is conducted on one to four (depending upon the protection circuit) of the five samples before conducting the short-circuit test		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	A single fault applies to protective component parts such as MOSFET (metal oxide semiconductor field-effect transistor), fuse, thermostat or positive temperature coefficient (PTC) thermistor		N/A
	Results: no fire, no explosion..... :		N/A
7.3.3	Free fall		P
	Results: no fire, no explosion		P
7.3.4	Thermal abuse (cells)		P
	Oven temperature (°C) : 130°C±2°C		—
	Results: no fire, no explosion		P
7.3.5	Crush (cells)		P
	The crushing force was released upon:		P
	- The maximum force of 13 kN ± 0,78 kN has been applied; or		P
	- An abrupt voltage drop of one-third of the original voltage has been obtained		N/A
	Results: no fire, no explosion..... :	(See appended table 7.3.5)	P
7.3.6	Over-charging of battery		N/A
	The supply voltage which is:		N/A
	- 1,4 times the upper limit charging voltage presented in Table A.1 (but not to exceed 6,0 V) for single cell/cell block batteries or		N/A
	- 1,2 times the upper limit charging voltage resented in Table A.1 per cell for series connected multi-cell batteries, and		N/A
	- Sufficient to maintain a current of 2,0 It A throughout the duration of the test or until the supply voltage is reached		N/A
	Test was continued until the temperature of the outer casing:		N/A
	- Reached steady state conditions (less than 10 °C change in 30-minute period); or		N/A
	- Returned to ambient		N/A
	Results: no fire, no explosion..... :		N/A
7.3.7	Forced discharge (cells)		P
	Discharge a single cell to the lower limit discharge voltage specified by the cell manufacturer		P
	The discharged cell is then subjected to a forced discharge at 1 It A to the negative value of the upper limit charging voltage		P

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Clause	Requirement + Test	Result - Remark	Verdict
	- The discharge voltage reaches the negative value of upper limit charging voltage within the testing duration. The voltage is maintained at the negative value of the upper limit charging voltage by reducing the current for the remainder of the testing duration		N/A
	- The discharge voltage does not reach the negative value of upper limit charging voltage within the testing duration. The test is terminated at the end of the testing duration		P
	Results: no fire, no explosion..... :	(See appended table 7.3.7)	P
7.3.8	Mechanical tests (batteries)		N/A
7.3.8.1	Vibration		N/A
	Results: no fire, no explosion, no rupture, no leakage or venting. :		N/A
7.3.8.2	Mechanical shock		N/A
	Results: no leakage, no venting, no rupture, no explosion and no fire :		N/A
7.3.9	Design evaluation – Forced internal short-circuit (cells)		P
	The cells complied with national requirement for :	France, Japan, Korea, Switzerland	—
	The pressing was stopped upon:		P
	- A voltage drop of 50 mV has been detected; or		N/A
	- The pressing force of 800 N (cylindrical cells) or 400 N (prismatic cells) has been reached	800N	P
	Results: no fire..... :	(See appended table 7.3.9)	P
8	INFORMATION FOR SAFETY		P
8.1	General		P
	Manufacturers of secondary cells provides information about current, voltage and temperature limits of their products		P
	Manufacturers of batteries provides information regarding how to minimize and mitigate hazards to equipment manufacturers or end-users		N/A
	Systems analyses are performed by device manufacturers to ensure that a particular battery design prevents hazards from occurring during use of a product		N/A
	As appropriate, any information relating to hazard avoidance resulting from a system analysis is provided to the end user		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Do not allow children to replace batteries without adult supervision		P
8.2	Small cell and battery safety information		N/A
	The following warning language is to be provided with the information packaged with the small cells and batteries or equipment using them:		N/A
	- Keep small cells and batteries which are considered swallowable out of the reach of children		N/A
	- Swallowing may lead to burns, perforation of soft tissue, and death. Severe burns can occur within 2 h of ingestion		N/A
	- In case of ingestion of a cell or battery, seek medical assistance promptly		N/A
9	MARKING		P
9.1	Cell marking		P
	Cells are marked as specified in IEC 61960, except coin cells	Cell marked as specified in IEC 61960-3:2017	P
	Coin cells whose external surface area is too small to accommodate the markings on the cells show the designation and polarity		N/A
	By agreement between the cell manufacturer and the battery and/or end product manufacturer, component cells used in the manufacture of a battery need not be marked		N/A
9.2	Battery marking		N/A
	Batteries are marked as specified in IEC 61960, except for coin batteries		N/A
	Coin batteries whose external surface area is too small to accommodate the markings on the batteries show the designation and polarity		N/A
	Batteries are marked with an appropriate caution statement		N/A
	- Terminals have clear polarity marking on the external surface of the battery, or		N/A
	- Not be marked with polarity markings if the design of the external connector prevents reverse polarity connections		N/A
9.3	Caution for ingestion of small cells and batteries		N/A
	Coin cells and batteries identified as small batteries include a caution statement regarding the hazards of ingestion in accordance with 8.2		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Small cells and batteries are intended for direct sale in consumer-replaceable applications, caution for ingestion is given on the immediate package		N/A
9.4	Other information		N/A
	The following information are marked on or supplied with the battery:		N/A
	- Storage and disposal instructions		N/A
	- Recommended charging instructions		N/A
10	PACKAGING AND TRANSPORT		N/A
	Packaging for coin cells are not be small enough to fit within the limits of the ingestion gauge of Figure 3		N/A
ANNEX A	CHARGING AND DISCHARGING RANGE OF SECONDARY LITHIUM ION CELLS FOR SAFE USE		P
A.1	General		P
A.2	Safety of lithium ion secondary battery		P
A.3	Consideration on charging voltage		P
A.3.1	General		P
A.3.2	Upper limit charging voltage		P
A.3.2.1	General		P
A.3.2.2	Explanation of safety viewpoint		P
A.3.2.3	Safety requirements, when different upper limit charging voltage is applied		N/A
A.4	Consideration of temperature and charging current		P
A.4.1	General		P
A.4.2	Recommended temperature range		P
A.4.2.1	General		P
A.4.2.2	Safety consideration when a different recommended temperature range is applied		P
A.4.3	High temperature range		N/A
A.4.3.1	General		N/A
A.4.3.2	Explanation of safety viewpoint		N/A
A.4.3.3	Safety considerations when specifying charging conditions in the high temperature range		N/A
A.4.3.4	Safety considerations when specifying a new upper limit in the high temperature range		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
A.4.4	Low temperature range		N/A
A.4.4.1	General		N/A
A.4.4.2	Explanation of safety viewpoint		N/A
A.4.4.3	Safety considerations, when specifying charging conditions in the low temperature range		N/A
A.4.4.4	Safety considerations when specifying a new lower limit in the low temperature range		N/A
A.4.5	Scope of the application of charging current		P
A.4.6	Consideration of discharge		P
A.4.6.1	General		P
A.4.6.2	Final discharge voltage and explanation of safety viewpoint		P
A.4.6.3	Discharge current and temperature range		P
A.4.6.4	Scope of application of the discharging current		P
A.5	Sample preparation		P
A.5.1	General		P
A.5.2	Insertion procedure for nickel particle to generate internal short		P
A.5.3	Disassembly of charged cell		P
A.5.4	Shape of nickel particle		P
A.5.5	Insertion of nickel particle in cylindrical cell		P
A.5.5.1	Insertion of nickel particle in winding core		P
A.5.5.2	Marking the position of the nickel particle on both ends of the winding core of the separator		P
A.5.6	Insertion of nickel particle in prismatic cell		N/A
A.6	Experimental procedure of the forced internal short-circuit test		P
A.6.1	Material and tools for preparation of nickel particle		N/A
A.6.2	Example of a nickel particle preparation procedure		N/A
A.6.3	Positioning (or placement) of a nickel particle		P
A.6.4	Damaged separator precaution		P
A.6.5	Caution for rewinding separator and electrode		P
A.6.6	Insulation film for preventing short-circuit		P
A.6.7	Caution when disassembling a cell		P
A.6.8	Protective equipment for safety		P
A.6.9	Caution in the case of fire during disassembling		P

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Clause	Requirement + Test	Result - Remark	Verdict
A.6.10	Caution for the disassembling process and pressing the electrode core		P
A.6.11	Recommended specifications for the pressing device		P
ANNEX B	RECOMMENDATIONS TO EQUIPMENT MANUFACTURERS AND BATTERY ASSEMBLERS		P
ANNEX C	RECOMMENDATIONS TO THE END-USERS		N/A
ANNEX D	MEASUREMENT OF THE INTERNAL AC RESISTANCE FOR COIN CELLS		N/A
D.1	General		N/A
D.2	Method		N/A
	A sample size of three coin cells is required for this measurement		N/A
	Coin cells with an internal resistance greater than 3 Ω require no further testing		N/A
	Coin cells with an internal resistance less than or equal to 3 Ω are subjected to the testing according to Clause 6 and Table 1		N/A
ANNEX E	PACKAGING AND TRANSPORT		N/A
ANNEX F	COMPONENT STANDARDS REFERENCES		N/A

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Clause	Requirement + Test	Result - Remark	Verdict

7.2.1	TABLE: Continuous charging at constant voltage (cells)			P
Sample No.	Recommended charging voltage Vc (Vdc)	Recommended charging current I _{rec} (A)	OCV before test (Vdc)	Results
1-C1# *	4.20	0.26	4.172	A, B
1-C2# *	4.20	0.26	4.174	A, B
1-C3# *	4.20	0.26	4.174	A, B
1-C4# *	4.20	0.26	4.173	A, B
1-C5# *	4.20	0.26	4.172	A, B
2-C1# **	4.20	0.30	4.174	A, B
2-C2# **	4.20	0.30	4.176	A, B
2-C3# **	4.20	0.30	4.176	A, B
2-C4# **	4.20	0.30	4.172	A, B
2-C5# **	4.20	0.30	4.172	A, B
3-C1# ***	4.20	0.36	4.173	A, B
3-C2# ***	4.20	0.36	4.174	A, B
3-C3# ***	4.20	0.36	4.174	A, B
3-C4# ***	4.20	0.36	4.173	A, B
3-C5# ***	4.20	0.36	4.172	A, B
4-C1# ****	4.20	0.44	4.173	A, B
4-C2# ****	4.20	0.44	4.174	A, B
4-C3# ****	4.20	0.44	4.174	A, B
4-C4# ****	4.20	0.44	4.172	A, B
4-C5# ****	4.20	0.44	4.174	A, B
5-C1# *****	4.20	0.52	4.174	A, B
5-C2# *****	4.20	0.52	4.175	A, B
5-C3# *****	4.20	0.52	4.174	A, B
5-C4# *****	4.20	0.52	4.173	A, B
5-C5# *****	4.20	0.52	4.174	A, B

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
Supplementary information: A - No fire or explosion B - No leakage C - Others (please explain) Remark: *Tested with cell model: INR18650-1300 **Tested with cell model: INR18650-1500 ***Tested with cell model: INR18650-1800 ****Tested with cell model: INR18650-2200 *****Tested with cell model: INR18650-2600			

7.3.1	TABLE: External short circuit (cell)					P
Sample No.	Ambient (°C)	OCV at start of test (Vdc)	Resistance of circuit (mΩ)	Maximum case temperature rise ΔT (°C)	Results	
Samples charged at charging temperature upper limit						
1-C6# *	55.2	4.206	82	72.4	A	
1-C7# *	55.2	4.209	86	72.9	A	
1-C8# *	55.2	4.192	84	69.8	A	
1-C9# *	55.2	4.203	87	72.3	A	
1-C10# *	55.2	4.207	83	60.0	A	
2-C6# **	55.0	4.202	85	69.5	A	
2-C7# **	55.0	4.199	87	69.3	A	
2-C8# **	55.0	4.194	82	68.8	A	
2-C9# **	55.0	4.205	82	70.1	A	
2-C10# **	55.0	4.203	83	70.5	A	
3-C6# ***	55.0	4.198	82	69.5	A	
3-C7# ***	55.0	4.195	86	70.1	A	
3-C8# ***	55.0	4.202	87	70.5	A	
3-C9# ***	55.0	4.201	83	71.5	A	
3-C10# ***	55.0	4.194	88	61.9	A	
4-C6# ****	55.1	4.204	86	64.9	A	
4-C7# ****	55.1	4.206	87	72.8	A	
4-C8# ****	55.1	4.198	83	68.6	A	
4-C9# ****	55.1	4.203	88	71.0	A	
4-C10# ****	55.1	4.202	87	71.0	A	

IEC 62133-2					
Clause	Requirement + Test			Result - Remark	Verdict
5-C6# *****	55.0	4.204	85	70.8	A
5-C7# *****	55.0	4.203	86	72.2	A
5-C8# *****	55.0	4.199	87	71.8	A
5-C9# *****	55.0	4.192	87	70.9	A
5-C10# *****	55.0	4.194	88	70.7	A
Samples charged at charging temperature lower limit					
1-C11# *	55.2	4.146	82	59.5	A
1-C12# *	55.2	4.150	86	58.0	A
1-C13# *	55.2	4.154	85	66.7	A
1-C14# *	55.2	4.144	84	54.9	A
1-C15# *	55.2	4.149	88	66.3	A
2-C11# **	55.0	4.150	86	64.3	A
2-C12# **	55.0	4.144	87	64.6	A
2-C13# **	55.0	4.146	83	61.8	A
2-C14# **	55.0	4.151	88	64.9	A
2-C15# **	55.0	4.152	87	62.3	A
3-C11# ***	55.0	4.147	89	57.9	A
3-C12# ***	55.0	4.150	82	63.8	A
3-C13# ***	55.0	4.152	86	64.6	A
3-C14# ***	55.0	4.150	84	62.0	A
3-C15# ***	55.0	4.151	87	62.9	A
4-C11# ****	55.1	4.157	88	67.1	A
4-C12# ****	55.1	4.154	85	62.9	A
4-C13# ****	55.1	4.148	82	61.1	A
4-C14# ****	55.1	4.149	86	64.9	A
4-C15# ****	55.1	4.152	84	62.9	A
5-C11# *****	55.0	4.142	83	62.3	A
5-C12# *****	55.0	4.148	86	66.7	A
5-C13# *****	55.0	4.150	82	56.5	A
5-C14# *****	55.0	4.152	82	52.9	A
5-C15# *****	55.0	4.149	88	65.1	A

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
Supplementary information: A - No fire or explosion B - Others (please explain) Remark: *Tested with cell model: INR18650-1300 **Tested with cell model: INR18650-1500 ***Tested with cell model: INR18650-1800 ****Tested with cell model: INR18650-2200 *****Tested with cell model: INR18650-2600			

7.3.5	TABLE: Crush (cells)				P
Sample No.	OCV before test (Vdc)	OCV at removal of crushing force (Vdc)	Maximum force applied to the cell during crush (kN)	Results	
Samples charged at charging temperature upper limit					
1-C26# *	4.207	4.204	12.92	A	
1-C27# *	4.193	4.190	13.05	A	
1-C28# *	4.194	4.192	13.06	A	
1-C29# *	4.202	4.200	12.88	A	
1-C30# *	4.205	4.203	12.97	A	
2-C26# **	4.199	4.197	13.05	A	
2-C27# **	4.194	4.192	12.97	A	
2-C28# **	4.202	4.200	12.98	A	
2-C29# **	4.198	4.195	13.01	A	
2-C30# **	4.198	4.196	13.02	A	
3-C26# ***	4.203	4.201	12.97	A	
3-C27# ***	4.197	4.195	13.08	A	
3-C28# ***	4.192	4.190	13.11	A	
3-C29# ***	4.201	4.198	12.94	A	
3-C30# ***	4.202	4.199	12.97	A	
4-C26# ****	4.198	4.195	12.97	A	
4-C27# ****	4.192	4.190	13.08	A	
4-C28# ****	4.204	4.202	13.04	A	
4-C29# ****	4.206	4.203	12.94	A	
4-C30# ****	4.197	4.194	12.95	A	
5-C26# *****	4.199	4.197	12.88	A	

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Clause	Requirement + Test		Result - Remark	Verdict
5-C27# *****	4.203	4.200	12.96	A
5-C28# *****	4.204	4.201	13.05	A
5-C29# *****	4.197	4.194	13.06	A
5-C30# *****	4.198	4.195	12.88	A
Samples charged at charging temperature lower limit				
1-C31# *	4.147	4.145	13.06	A
1-C32# *	4.144	4.142	12.92	A
1-C33# *	4.152	4.150	13.01	A
1-C34# *	4.150	4.148	13.04	A
1-C35# *	4.150	4.147	13.07	A
2-C31# **	4.148	4.145	12.97	A
2-C32# **	4.146	4.144	12.89	A
2-C33# **	4.152	4.150	12.93	A
2-C34# **	4.150	4.148	12.87	A
2-C35# **	4.148	4.146	13.05	A
3-C31# ***	4.144	4.141	13.05	A
3-C32# ***	4.150	4.148	13.06	A
3-C33# ***	4.151	4.148	13.14	A
3-C34# ***	4.152	4.150	12.94	A
3-C35# ***	4.143	4.140	12.90	A
4-C31# ****	4.149	4.147	13.08	A
4-C32# ****	4.148	4.145	13.06	A
4-C33# ****	4.157	4.155	12.92	A
4-C34# ****	4.152	4.150	12.89	A
4-C35# ****	4.154	4.151	12.88	A
5-C31# *****	4.145	4.142	12.94	A
5-C32# *****	4.148	4.145	13.04	A
5-C33# *****	4.152	4.150	13.05	A
5-C34# *****	4.149	4.147	12.88	A
5-C35# *****	4.147	4.143	12.90	A

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Clause	Requirement + Test	Result - Remark	Verdict
Supplementary information: A - No fire or explosion B - Others (please explain) Remark: *Tested with cell model: INR18650-1300 **Tested with cell model: INR18650-1500 ***Tested with cell model: INR18650-1800 ****Tested with cell model: INR18650-2200 *****Tested with cell model: INR18650-2600			

7.3.7	TABLE: Forced discharge (cells)				P
Sample No.	OCV before application of reverse charge (Vdc)	Measured reverse charge I_r (A)	Lower limit discharge voltage (Vdc)	Results	
1-C36# *	3.201	1.3	2.75	A	
1-C37# *	3.204	1.3	2.75	A	
1-C38# *	3.200	1.3	2.75	A	
1-C39# *	3.194	1.3	2.75	A	
1-C40# *	3.190	1.3	2.75	A	
2-C36# **	3.204	1.5	2.75	A	
2-C37# **	3.197	1.5	2.75	A	
2-C38# **	3.198	1.5	2.75	A	
2-C39# **	3.206	1.5	2.75	A	
2-C40# **	3.203	1.5	2.75	A	
3-C36# ***	3.203	1.8	2.75	A	
3-C37# ***	3.207	1.8	2.75	A	
3-C38# ***	3.202	1.8	2.75	A	
3-C39# ***	3.198	1.8	2.75	A	
3-C40# ***	3.201	1.8	2.75	A	
4-C36# ****	3.208	2.2	2.75	A	
4-C37# ****	3.199	2.2	2.75	A	
4-C38# ****	3.194	2.2	2.75	A	
4-C39# ****	3.205	2.2	2.75	A	
4-C40# ****	3.208	2.2	2.75	A	
5-C36# *****	3.202	2.6	2.75	A	
5-C37# *****	3.204	2.6	2.75	A	

IEC 62133-2				
Clause	Requirement + Test		Result - Remark	Verdict
5-C38# *****	3.199	2.6	2.75	A
5-C39# *****	3.194	2.6	2.75	A
5-C40# *****	3.206	2.6	2.75	A
Supplementary information: A - No fire or explosion B - Others (please explain) Remark: *Tested with cell model: INR18650-1300 **Tested with cell model: INR18650-1500 ***Tested with cell model: INR18650-1800 ****Tested with cell model: INR18650-2200 *****Tested with cell model: INR18650-2600				

7.3.9	TABLE: Forced internal short circuit (cells)					P
Sample No.	Chamber ambient T (°C)	OCV before test (Vdc)	Particle location ¹⁾	Maximum applied pressure (N)	Results	
Samples charged at charging temperature upper limit						
1-C44# *	45	4.197	1	800	A	
1-C45# *	45	4.202	1	800	A	
1-C46# *	45	4.199	1	800	A	
1-C47# *	45	4.194	1	800	A	
1-C48# *	45	4.205	1	800	A	
2-C44# **	45	4.203	1	800	A	
2-C45# **	45	4.194	1	800	A	
2-C46# **	45	4.198	1	800	A	
2-C47# **	45	4.202	1	800	A	
2-C48# **	45	4.204	1	800	A	
3-C44# ***	45	4.203	1	800	A	
3-C45# ***	45	4.198	1	800	A	
3-C46# ***	45	4.194	1	800	A	
3-C47# ***	45	4.196	1	800	A	
3-C48# ***	45	4.207	1	800	A	
4-C44# ****	45	4.205	1	800	A	
4-C45# ****	45	4.192	1	800	A	
4-C46# ****	45	4.198	1	800	A	

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Clause	Requirement + Test			Result - Remark	Verdict
4-C47# ****	45	4.203	1	800	A
4-C48# ****	45	4.204	1	800	A
5-C44# *****	45	4.204	1	800	A
5-C45# *****	45	4.199	1	800	A
5-C46# *****	45	4.203	1	800	A
5-C47# *****	45	4.204	1	800	A
5-C48# *****	45	4.198	1	800	A
Samples charged at charging temperature lower limit					
1-C49# *	0	4.144	1	800	A
1-C50# *	0	4.152	1	800	A
1-C51# *	0	4.150	1	800	A
1-C52# *	0	4.147	1	800	A
1-C53# *	0	4.148	1	800	A
2-C49# **	0	4.148	1	800	A
2-C50# **	0	4.152	1	800	A
2-C51# **	0	4.147	1	800	A
2-C52# **	0	4.149	1	800	A
2-C53# **	0	4.146	1	800	A
3-C49# ***	0	4.150	1	800	A
3-C50# ***	0	4.144	1	800	A
3-C51# ***	0	4.147	1	800	A
3-C52# ***	0	4.147	1	800	A
3-C53# ***	0	4.150	1	800	A
4-C49# ****	0	4.150	1	800	A
4-C50# ****	0	4.151	1	800	A
4-C51# ****	0	4.151	1	800	A
4-C52# ****	0	4.147	1	800	A
4-C53# ****	0	4.149	1	800	A
5-C49# *****	0	4.144	1	800	A
5-C50# *****	0	4.152	1	800	A
5-C51# *****	0	4.154	1	800	A
5-C52# *****	0	4.149	1	800	A
5-C53# *****	0	4.144	1	800	A

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
Supplementary information: ¹⁾ Identify one of the following: 1: Nickel particle inserted between positive and negative (active material) coated area. 2: Nickel particle inserted between positive aluminium foil and negative active material coated area. Remark: there is no particle location 2 for this cell. A- No fire B- Others (please explain) Remark: *Tested with cell model: INR18650-1300 **Tested with cell model: INR18650-1500 ***Tested with cell model: INR18650-1800 ****Tested with cell model: INR18650-2200 *****Tested with cell model: INR18650-2600			

D.2	TABLE: Internal AC resistance for coin cells				N/A
Sample no.	Ambient T (°C)	Store time (h)	Resistance Rac (Ω)	Results ¹⁾	
Supplementary information: ¹⁾ Coin cells with an internal resistance less than or equal to 3 Ω, see test result on corresponding tables according to Clause 6 and Table 1.					

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Critical components information					P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
1. Electrolyte	Xinxiang Huarui Lithium New Energy Co., Ltd.	YT-3620-1	LiPF ₆ , EC, EMC, DMC	IEC 62133-2:2017, IEC 62133-2:2017/AM D1:2021	Tested with cell
2. Separator	Shenzhen Jinbaisi Technology Co., Ltd.	(12+4) μm	PE, 16μm thick	IEC 62133-2:2017, IEC 62133-2:2017/AM D1:2021	Tested with cell
3. Positive electrode	Nantong Reshine New Material Technology Co., LTD.	HL05-H2	LiNiCoMnO ₂	IEC 62133-2:2017, IEC 62133-2:2017/AM D1:2021	Tested with cell
4. Negative electrode	Xinxiang Boruida Power Materials Co.,Ltd.	BR-04CY	Graphite	IEC 62133-2:2017, IEC 62133-2:2017/AM D1:2021	Tested with cell
5. Can	XINXIANG SHENGDA POWER TECHNOLOGY CO., LTD.	18650	Steel, 0.2mm thick.	IEC 62133-2:2017, IEC 62133-2:2017/AM D1:2021	Tested with cell
Supplementary information:					
¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

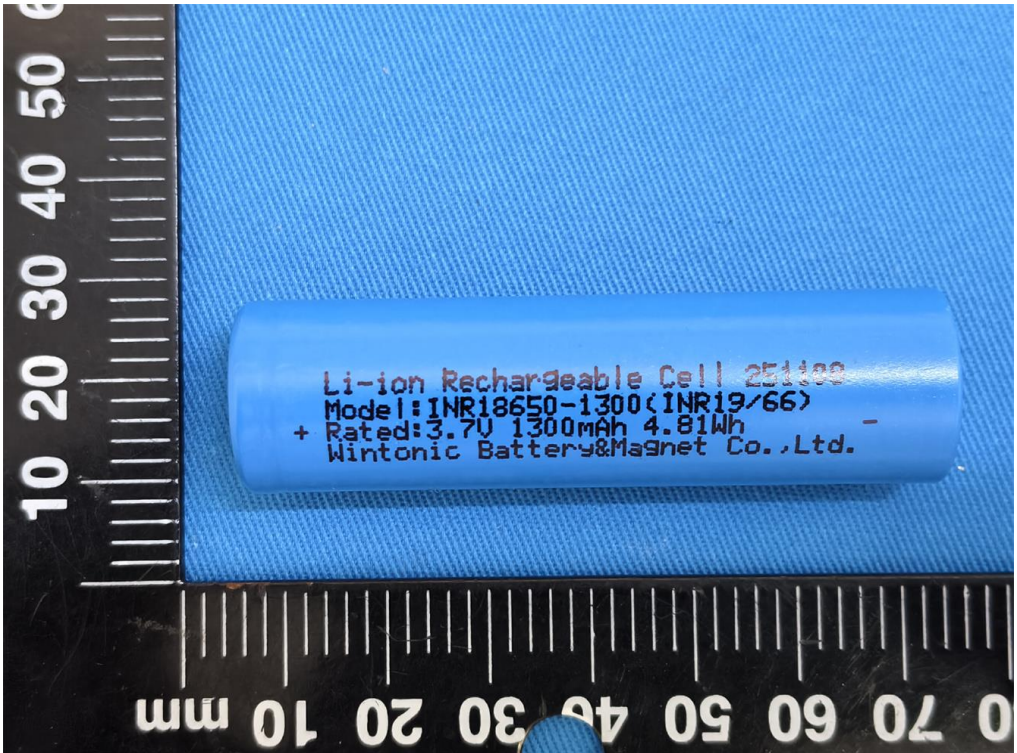
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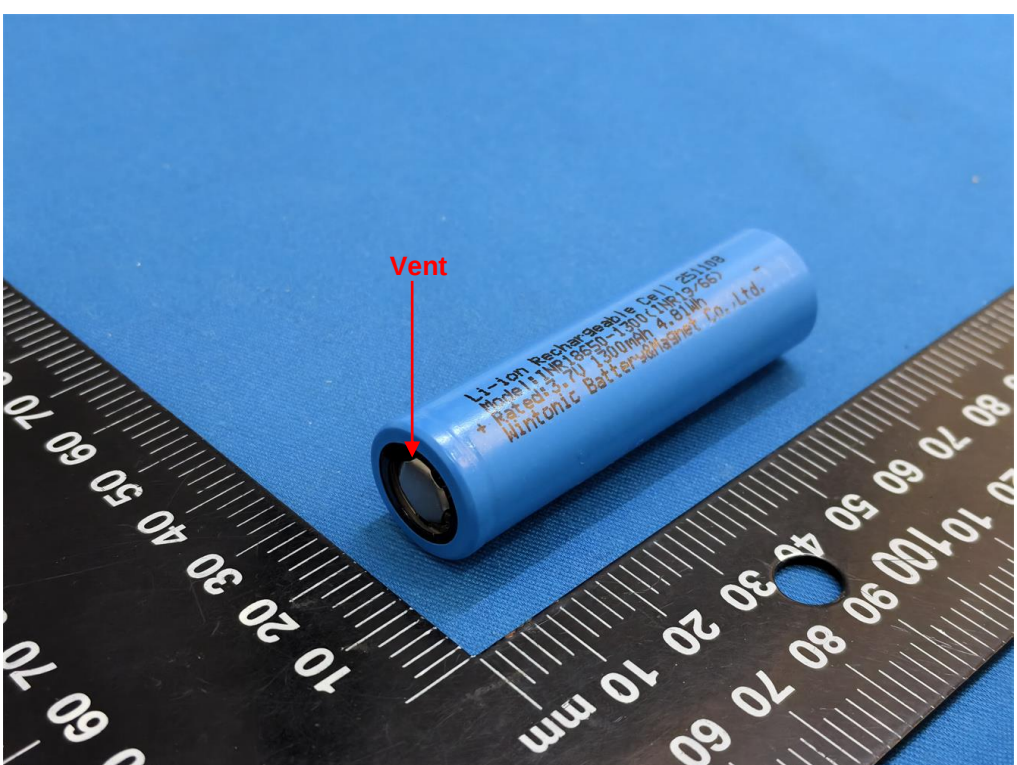
ATTACHMENT to IEC62133_2C			
Clause	Requirement + Test	Result - Remark	Verdict
ATTACHMENT TO TEST REPORT IEC 62133-2 (Republic of Korea) NATIONAL DIFFERENCES (Secondary cells and batteries containing alkaline or other non-acid electrolytes - Safety requirements for portable sealed secondary lithium cells, and for batteries made from them, for use in portable applications - Part 2: Lithium systems)			
Differences according to : National standard KC62133-2(2020-07)			
TRF template used:..... : IECEE OD-2020-F3:2022, Ed. 1.2			
Attachment Form No. : KR_ND_IEC62133_2C			
Attachment Originator : KTR			
Master Attachment..... : 2023-08-02			
Copyright © 2022 IEC System for Conformity Testing and Certification of Electrical Equipment (IECEE), Geneva, Switzerland. All rights reserved.			
	National Differences		P
7.3.6	Over-charging of battery		N/A
(Revision)	[Add the bolded text] b) Test The test shall be carried out in an ambient temperature of 20 °C ± 5 °C. Each test battery shall be discharged at a constant current of 0,2 I _A , to a final discharge voltage specified by the manufacturer. Sample batteries shall then be charged at a constant current of 2,0 I _A , using a supply voltage which is: • 1,4 times the upper limit charging voltage presented in Table A.1 (but not to exceed 6,0 V) for single cell/cell block batteries or • 1,2 times the upper limit charging voltage presented in Table A.1 per cell for series connected multi-cell batteries, and • sufficient to maintain a current of 2,0 I_A throughout the duration of the test or until the supply voltage is reached. <u>• In case the charging voltage specified by the manufacturer is higher than the overcharge test voltage, the maximum charging voltage specified by manufacturer should be applied with 2,0 I_A, (e.g., quick charging power bank, etc.)</u>		N/A

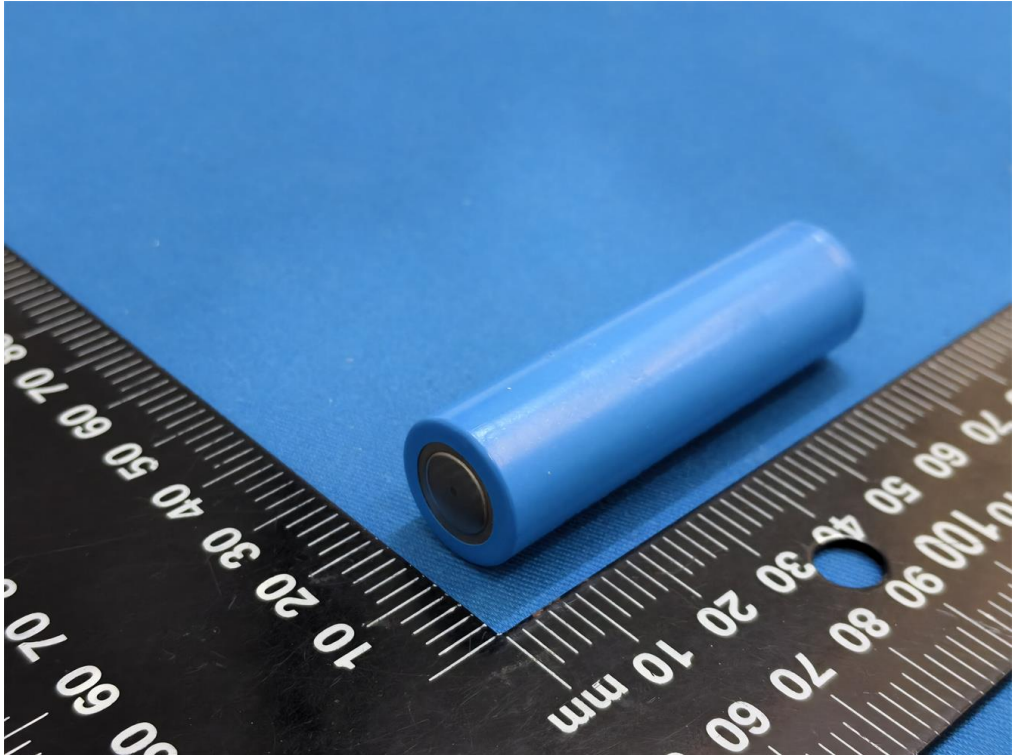
ATTACHMENT to IEC62133_2C			
Clause	Requirement + Test	Result - Remark	Verdict
	[Replace to the following statement] c) Acceptance criteria Filling beyond the manufacturer's specified limits should not result in ignition or explosion		N/A
Annex G	Definition for shape and materials of outer case for cell		—
(Addition)	G.1 General Annex G provides definitions for shape and materials of outer case for cell G.2 Shape of outer case for cell G 2.1 Cylindrical cell Cell with a cylindrical shape in which the overall height is equal to or greater than diameter. G 2.2 Prismatic cell Cell having the shape of a parallelepiped whose faces are rectangular G.3 Materials of outer case for cell G.3.1 Soft case Non-metallic outer case or container for cell G.3.2 Hard case Metallic outer case or container for cell.	(Shape of outer cases) ☒ Cylindrical ☐ Prismatic (Materials of outer cases) ☒ Hard ☐ Soft	—
Annex H	Calculation method of the volumetric energy density for cell		—
(Addition)	Annex H provide a calculation method of the volumetric energy density for cell in use of smart phone, tablet, notebook. H.1 General Unless otherwise stated in the Annex E, the dimensions for calculation are based on these for cell before shipment and the volumetric energy density shall be calculated with a maximum values specified by manufacturer. If the specification for cell can't be provided a dimension for calculation, the manufacturer's other documentation shall be provided to demonstrate compliance for its calculation.	Not in use of smart phone, tablet, notebook	—

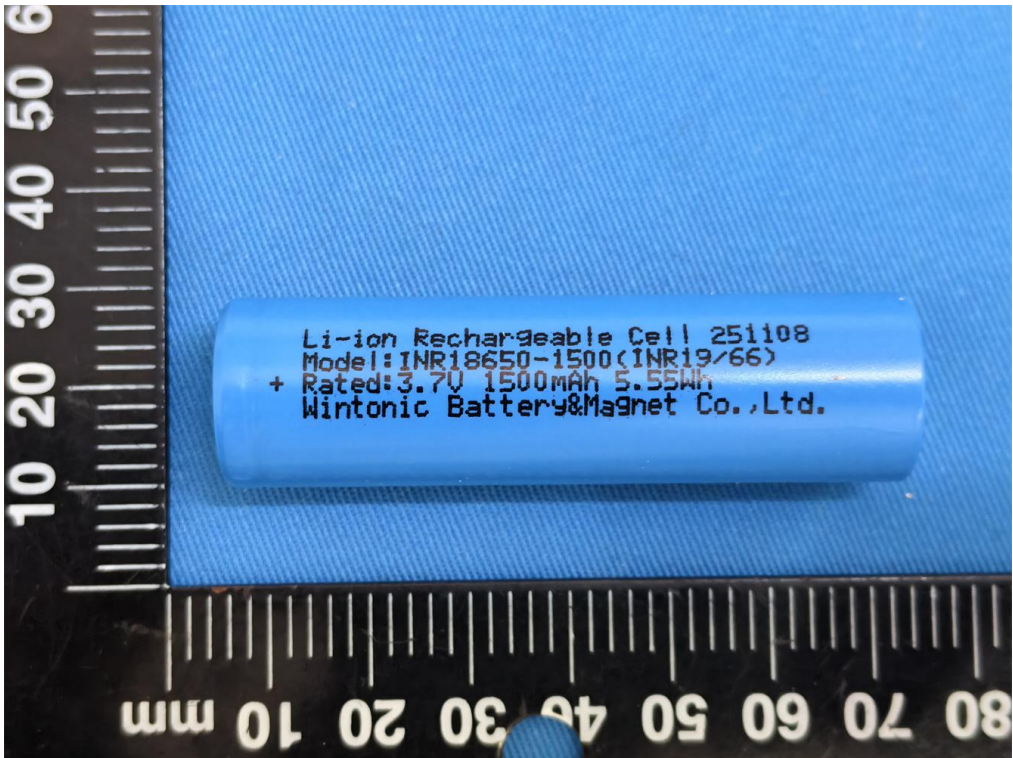
ATTACHMENT to IEC62133_2C			
Clause	Requirement + Test	Result - Remark	Verdict
	H.2 Calculation Method L : Length (max.) of cell (including terrace) W : Width (max.) of cell T : Thickness (max.) when shipping charge (For reference, Please Exclude the dimension of any tape that is attached to cell) $\text{Volumetric energy density (Wh/L)} = \frac{\text{Nominal voltage (V)} \times \text{Rated capacity (Ah)}}{\text{Length (L)} \times \text{Width (W)} \times \text{Thickness (T)}}$ [H.1 – Prismatic cell using soft case] L : Length (max.) of cell W : Width (max.) of cell T : Thickness when shipping charge (For reference, Please Exclude the dimension of any tape that is attached to cell) $\text{Volumetric energy density (Wh/L)} = \frac{\text{Nominal voltage (V)} \times \text{Rated capacity (Ah)}}{\text{Length (L)} \times \text{Width (W)} \times \text{Thickness (T)}}$ [H.2 – Prismatic cell using hard case] D : Diameter (max.) of cell L : Length (max.) of cell (According to shape of cell at shipping, The dimension of tube for cell may be included In overall dimension of cell) $\text{Volumetric energy density (Wh/L)} = \frac{\text{Nominal voltage (V)} \times \text{Rated capacity (Ah)}}{3.14159 \times \frac{\text{Diameter (D)}^2}{4} \times \text{Length (L)}}$ [H.3 – Cylindrical cell using hard case]		

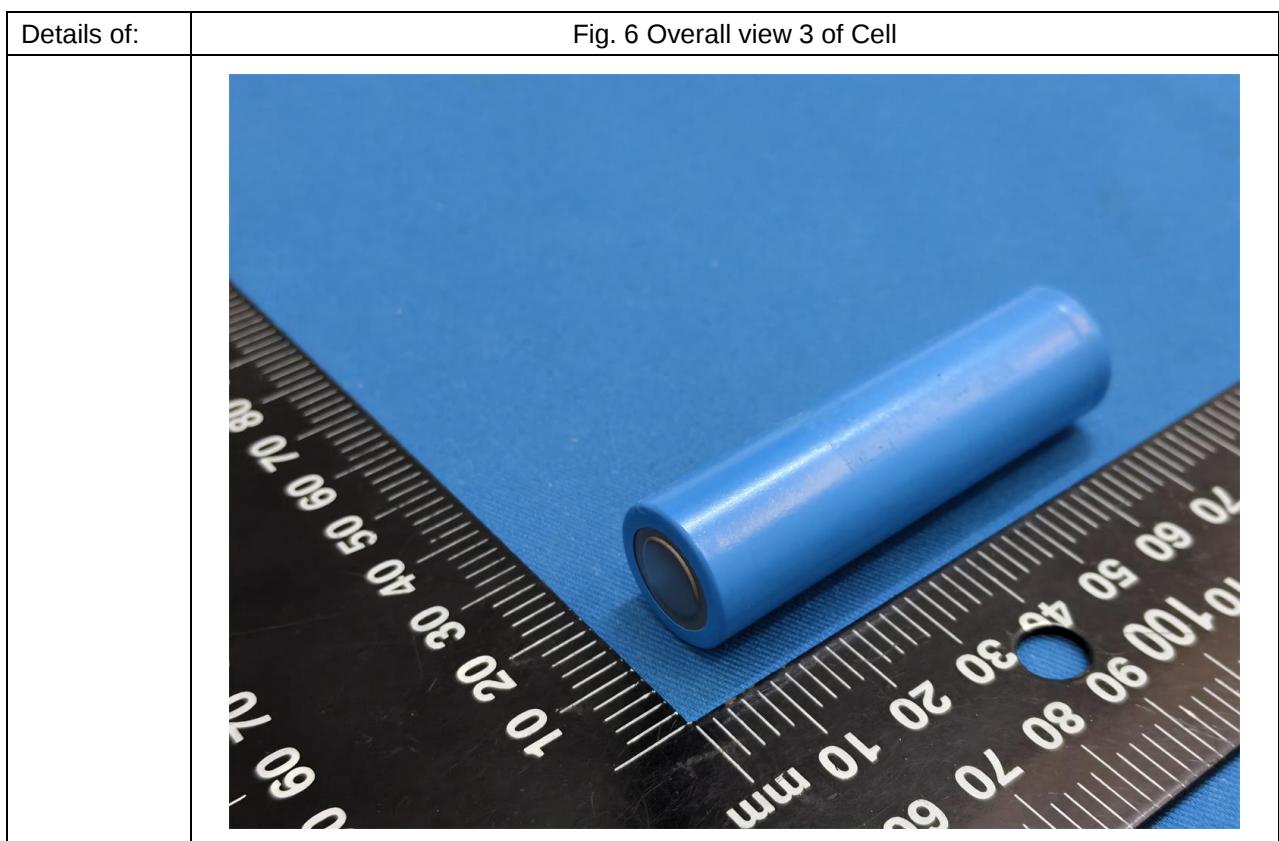
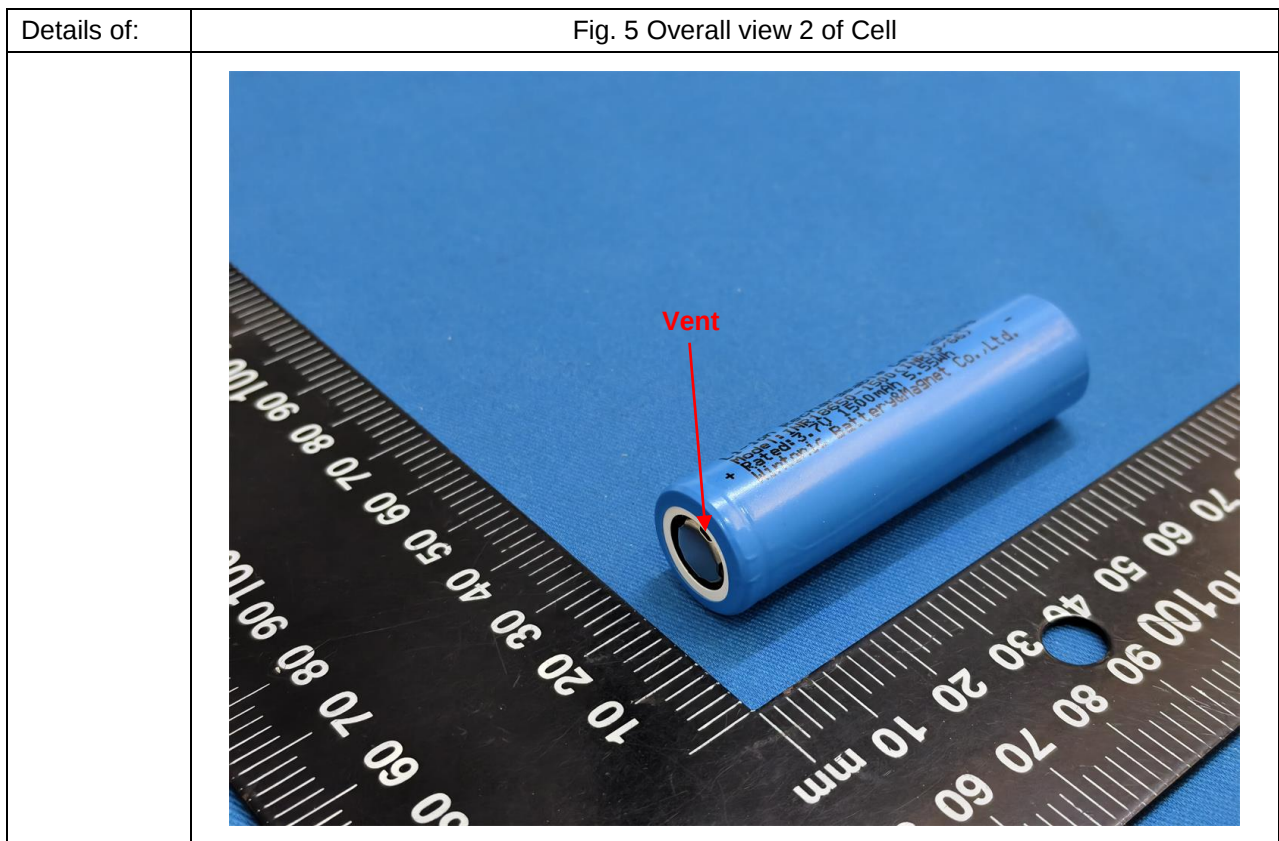
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Details of:	Fig. 1 Overall view 1 of Li-ion Rechargeable Cell, model INR18650-1300 (See page 6 of TRF for final label)
	

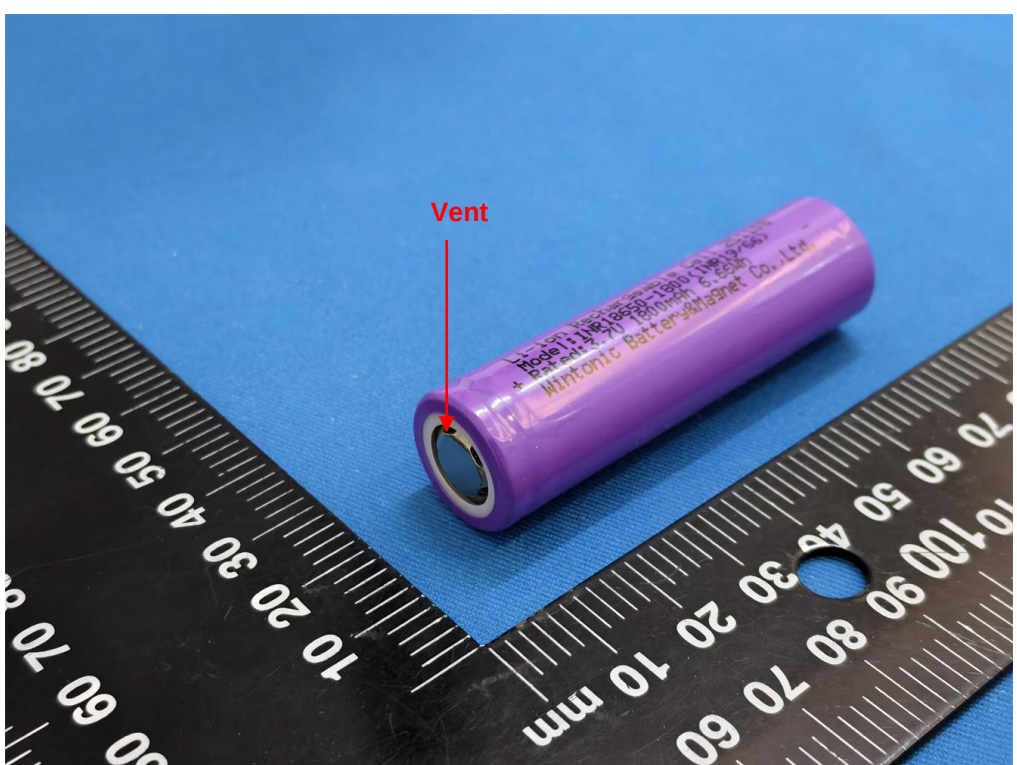
Details of:	Fig. 2 Overall view 2 of Cell
	

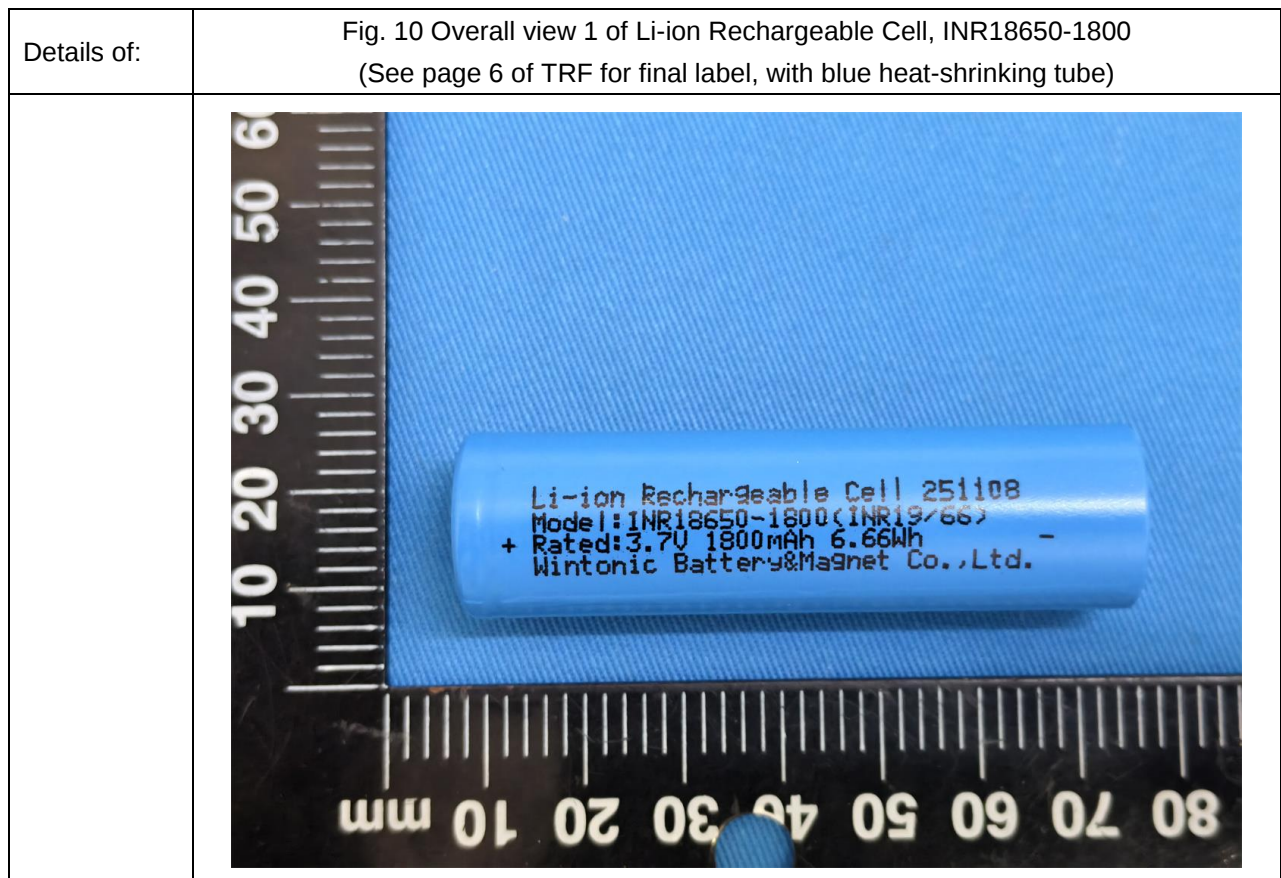
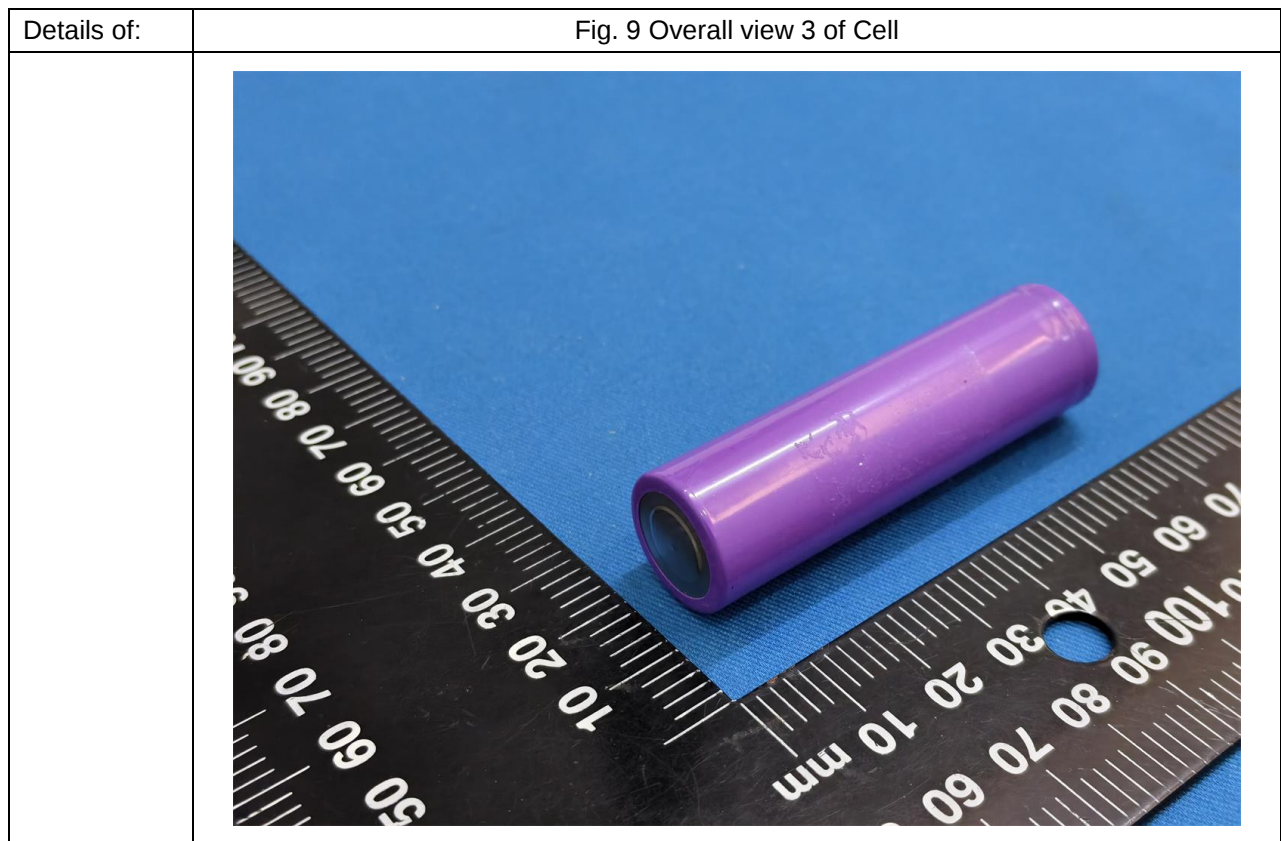
Details of:	Fig. 3 Overall view 3 of Cell
	 A photograph showing the side profile of a blue cylindrical cell. The cell is positioned diagonally on a blue surface. A black ruler with white markings is placed below the cell, showing measurements in millimeters. The cell's length is approximately 30 mm.

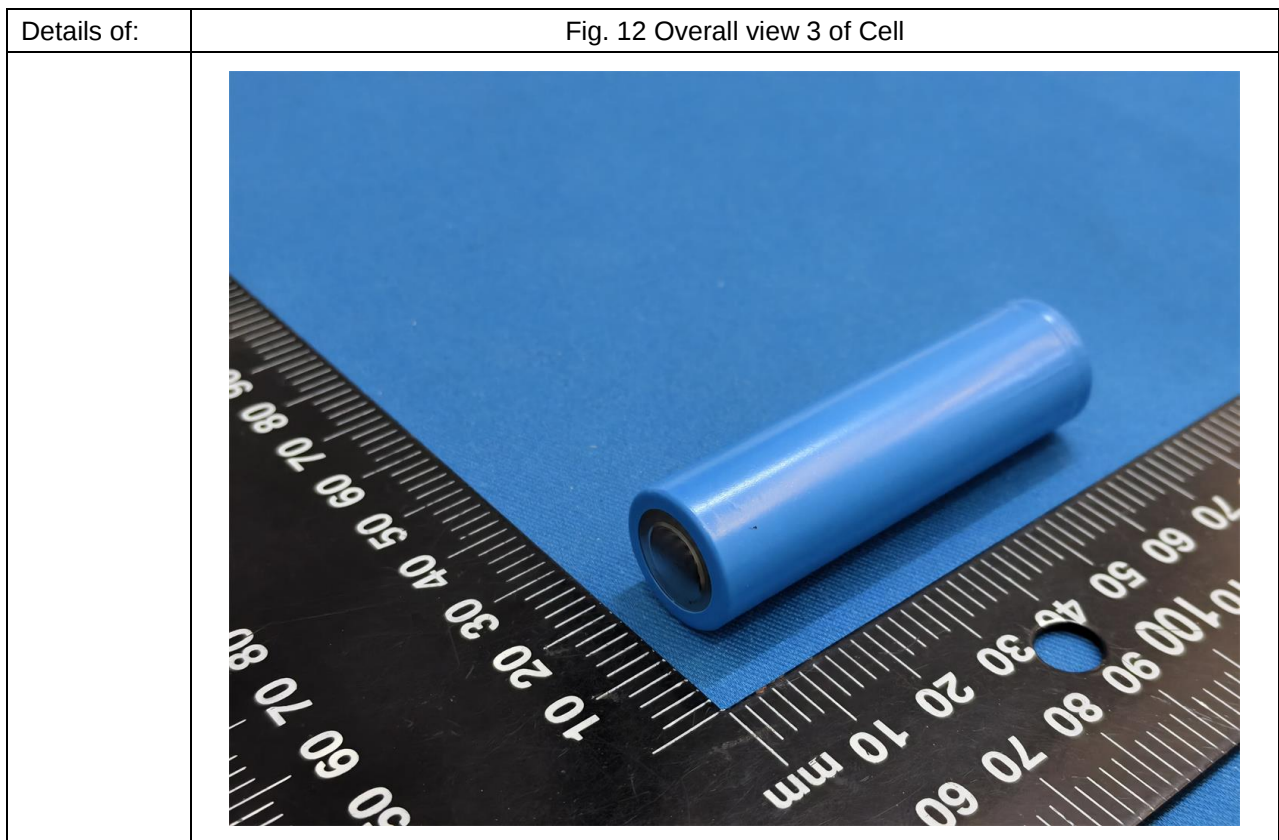
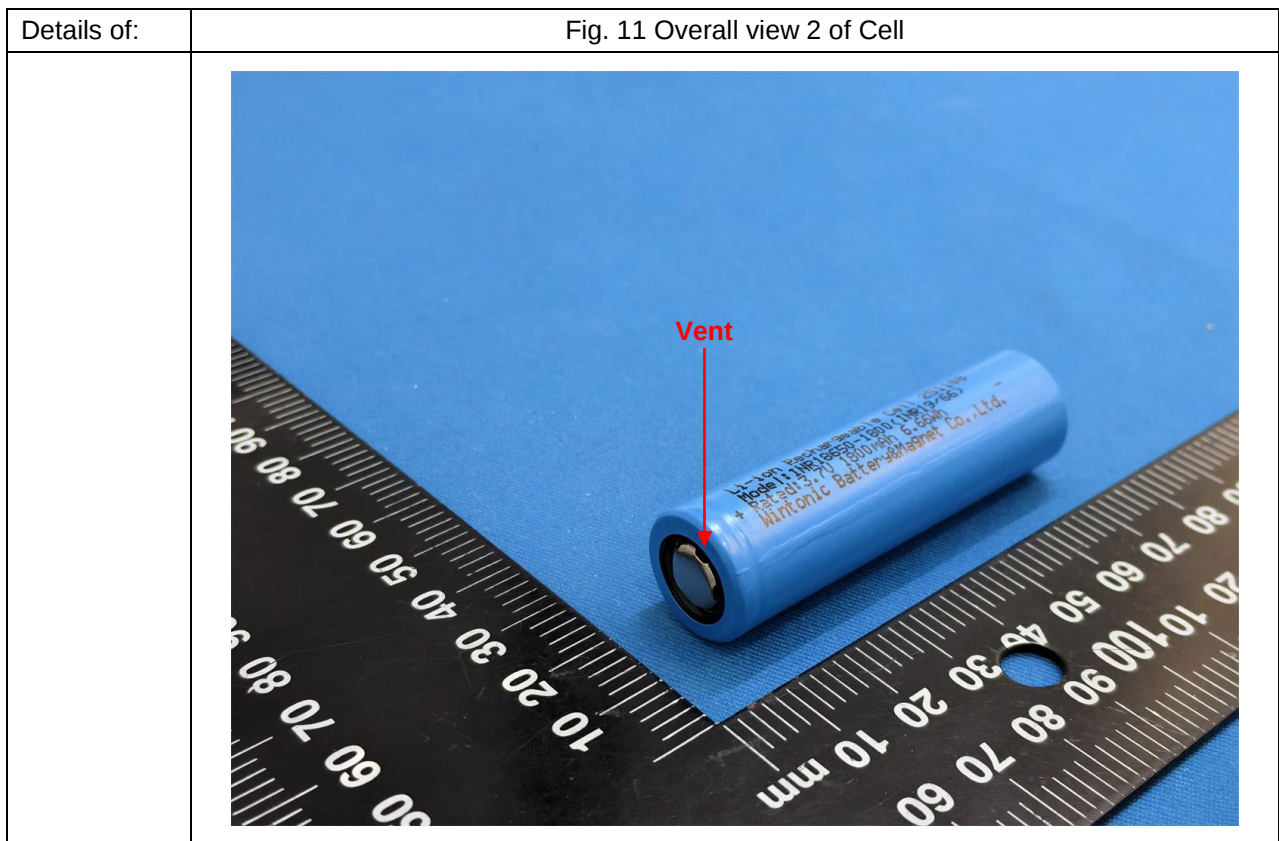
Details of:	Fig. 4 Overall view 1 of Li-ion Rechargeable Cell, INR18650-1500 (See page 6 of TRF for final label)
	 A photograph showing the top surface of the blue cylindrical cell. The cell is positioned horizontally on a blue surface. A black ruler with white markings is placed below the cell, showing measurements in millimeters. The cell's length is approximately 30 mm. The label on the cell reads: Li-ion Rechargeable Cell 251108 Model: INR18650-1500 (INR19/66) + Rated: 3.7V 1500mAh 5.55Wh Wintonic Battery & Magnet Co., Ltd.



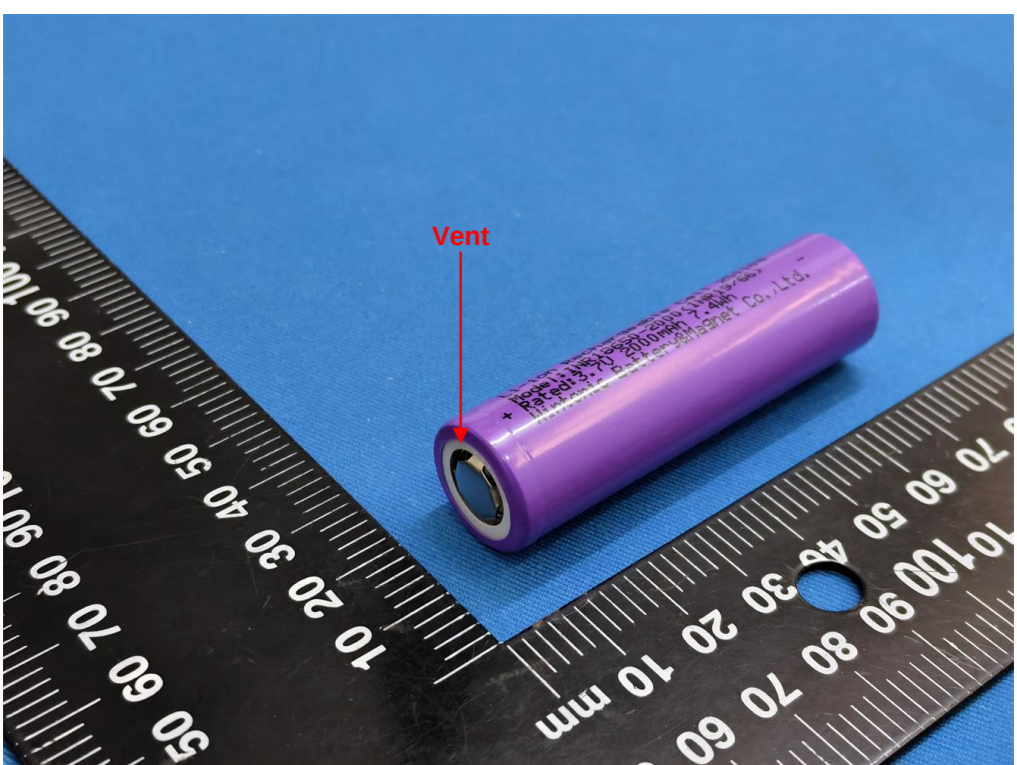
Details of:	Fig. 7 Overall view 1 of Li-ion Rechargeable Cell, INR18650-1800 (See page 6 of TRF for final label, with purple heat-shrinking tube)
	 A photograph of a purple cylindrical Li-ion rechargeable cell lying horizontally on a blue textured surface. A black ruler with white markings is positioned vertically to the left of the cell, showing measurements from 10 to 60 mm. The cell's label is printed in black and reads: "Li-ion Rechargeable Cell 251108", "Model: INR18650-1800 (INR19/66)", "+ Rated: 3.7V 1800mAh 6.66Wh", and "Wintonic Battery & Magnet Co., Ltd.".

Details of:	Fig. 8 Overall view 2 of Cell
	 A photograph of the same purple cylindrical Li-ion rechargeable cell, viewed from an angle. A red arrow points to the vent on the cell's end, which is labeled "Vent" in red text. The cell is resting on a blue textured surface, and a black ruler with white markings is visible in the foreground, showing measurements from 10 to 80 mm.



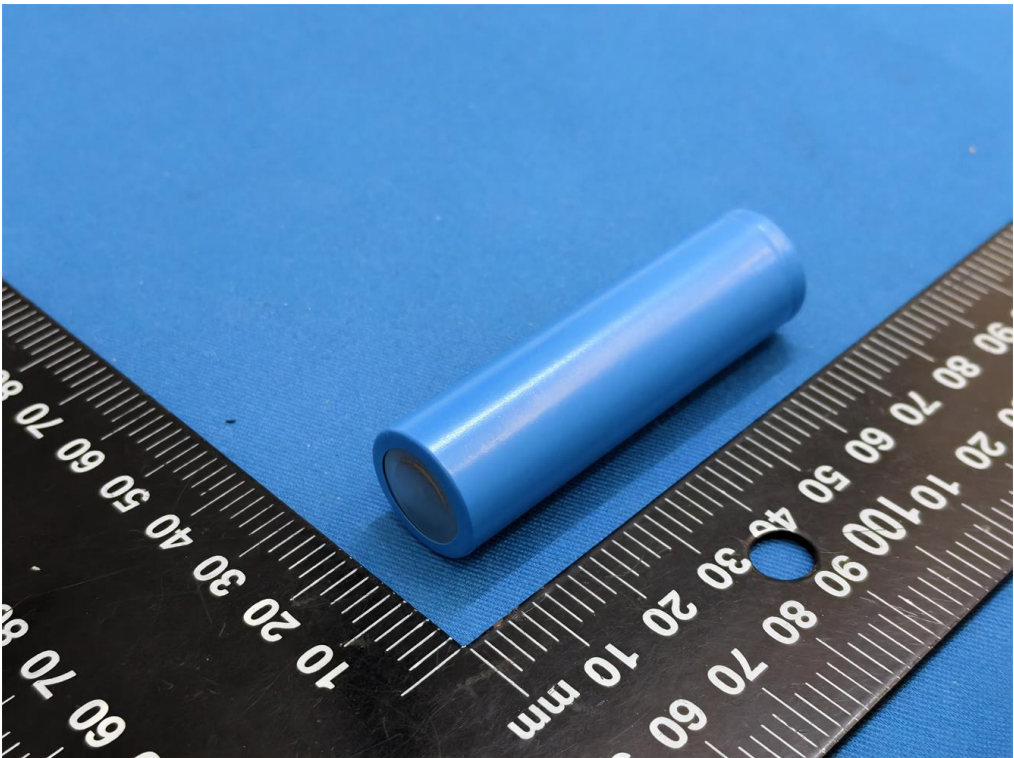


Details of:	Fig. 13 Overall view 1 of Li-ion Rechargeable Cell, INR18650-2000 (See page 6 of TRF for final label, with purple heat-shrinking tube)
	 A photograph of a purple cylindrical Li-ion rechargeable cell (INR18650-2000) lying horizontally on a blue textured surface. A black ruler with white markings is positioned vertically to the left of the cell, showing measurements from 10 to 60 mm. The cell's label is printed in black and reads: "Li-ion Rechargeable Cell 251108", "Model: INR18650-2000 (INR19/66)", "+ Rated: 3.7V 2000mAh 7.4Wh", and "Wintonic Battery & Magnet Co., Ltd.".

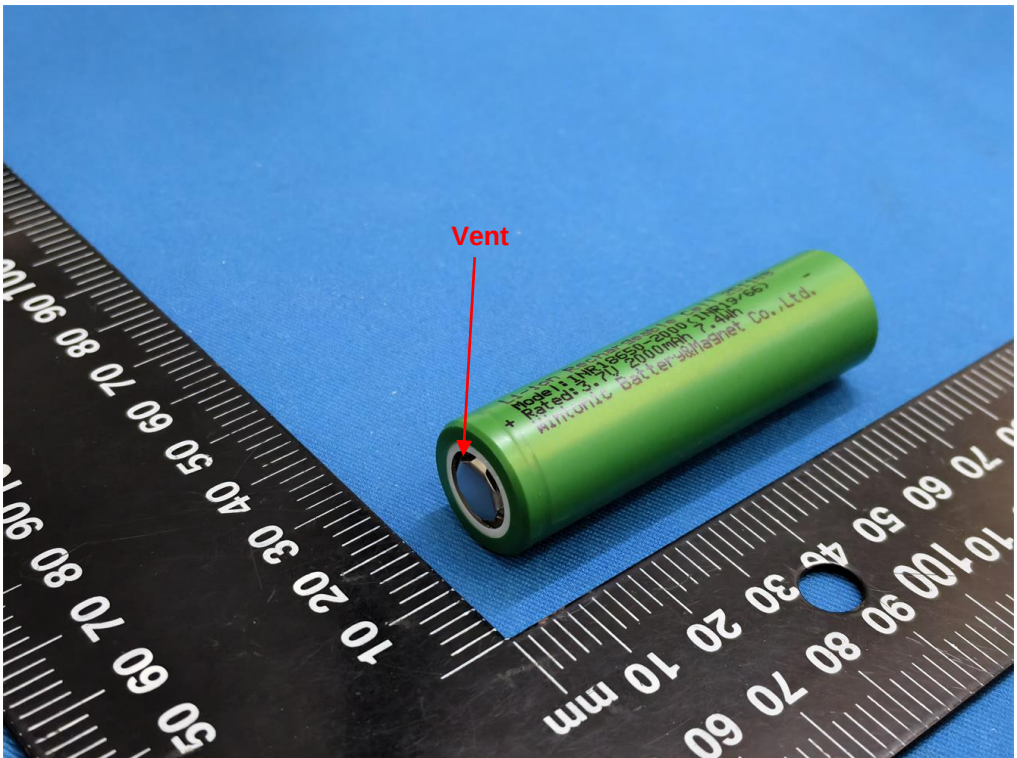
Details of:	Fig. 14 Overall view 2 of Cell
	 A photograph of the same purple cylindrical Li-ion rechargeable cell (INR18650-2000) lying diagonally on a blue textured surface. A black ruler with white markings is positioned below the cell, showing measurements from 10 to 100 mm. A red arrow points to the bottom of the cell, labeled "Vent". The cell's label is partially visible and reads: "Li-ion Rechargeable Cell 251108", "Model: INR18650-2000 (INR19/66)", "+ Rated: 3.7V 2000mAh 7.4Wh", and "Wintonic Battery & Magnet Co., Ltd.".

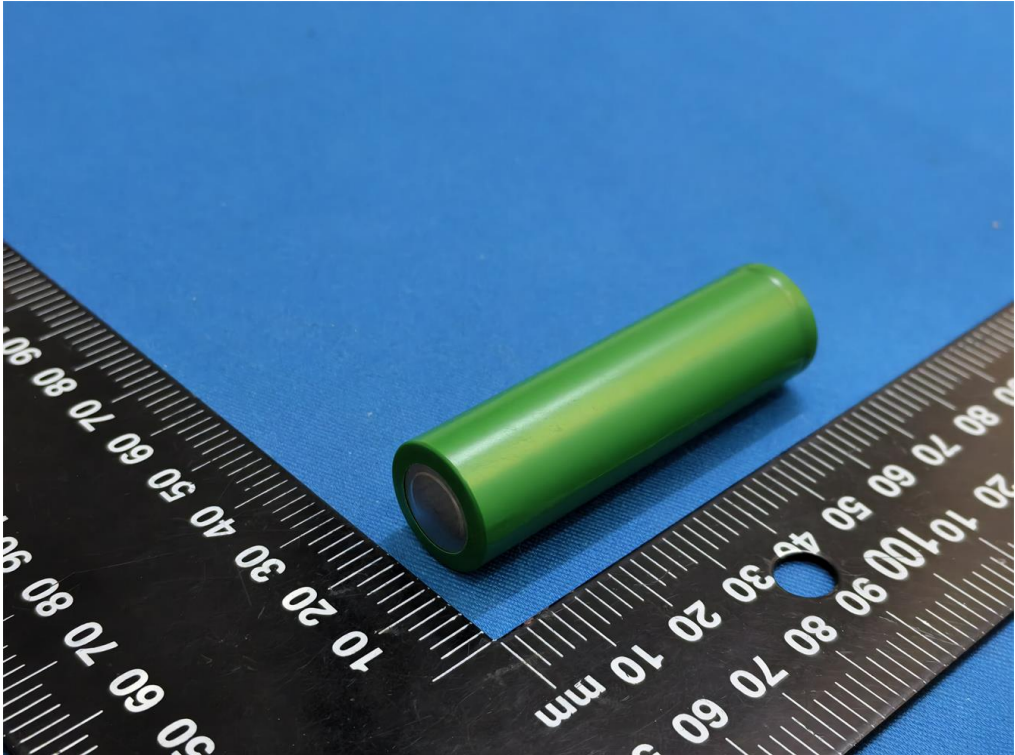
Details of:	Fig. 15 Overall view 3 of Cell
	 A photograph showing a purple cylindrical cell lying horizontally on a blue surface. A black ruler with white markings is placed below the cell, showing measurements in millimeters. The cell is positioned between the 10 mm and 40 mm marks on the ruler.

Details of:	Fig. 16 Overall view 1 of Li-ion Rechargeable Cell, INR18650-2000 (See page 6 of TRF for final label, with blue heat-shrinking tube)
	 A photograph showing a blue cylindrical cell lying horizontally on a blue surface. A black ruler with white markings is placed below the cell, showing measurements in millimeters. The cell is positioned between the 10 mm and 40 mm marks on the ruler. The cell has a label with the following text: "Li-ion Rechargeable Cell 251108", "Model: INR18650-2000 (INR19/66)", "+ Rated: 3.7V 2000mAh 7.4Wh", and "Wintonic Battery & Magnet Co., Ltd.".

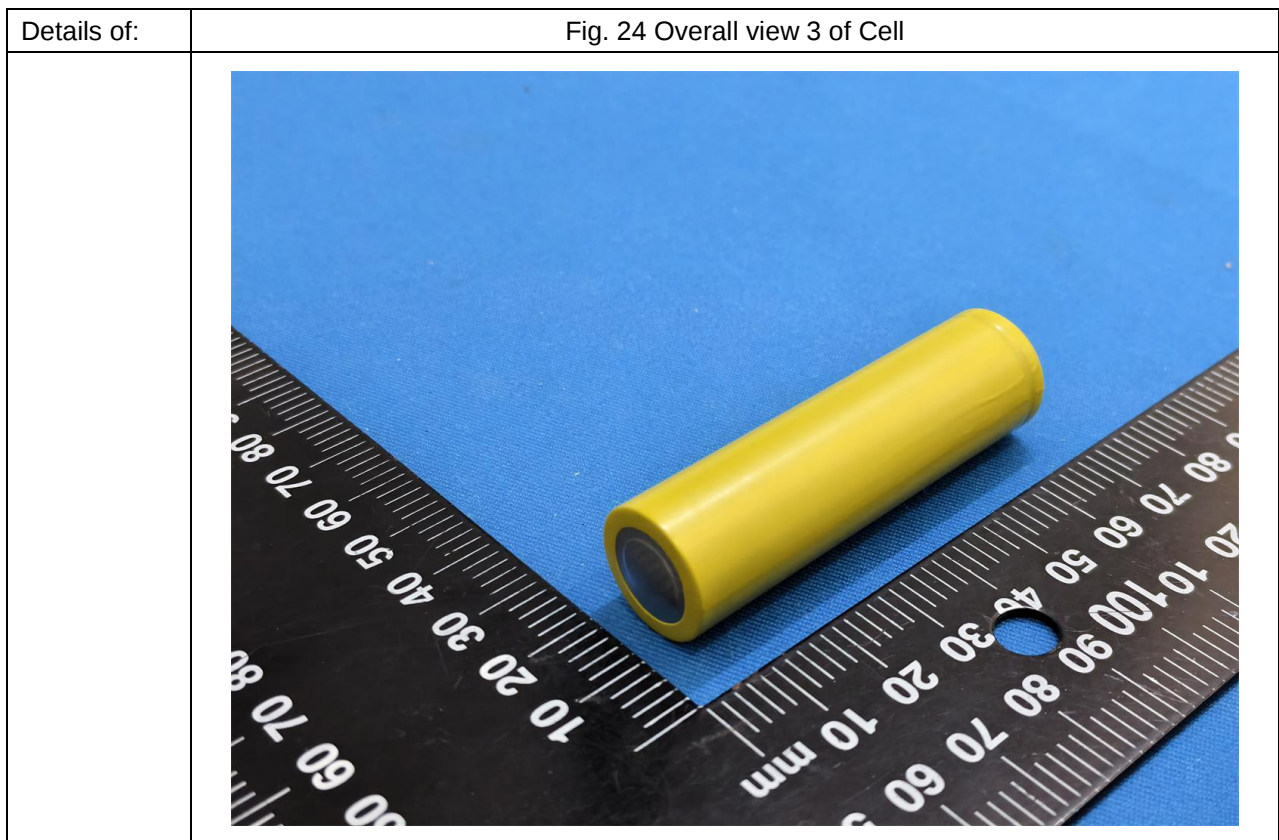
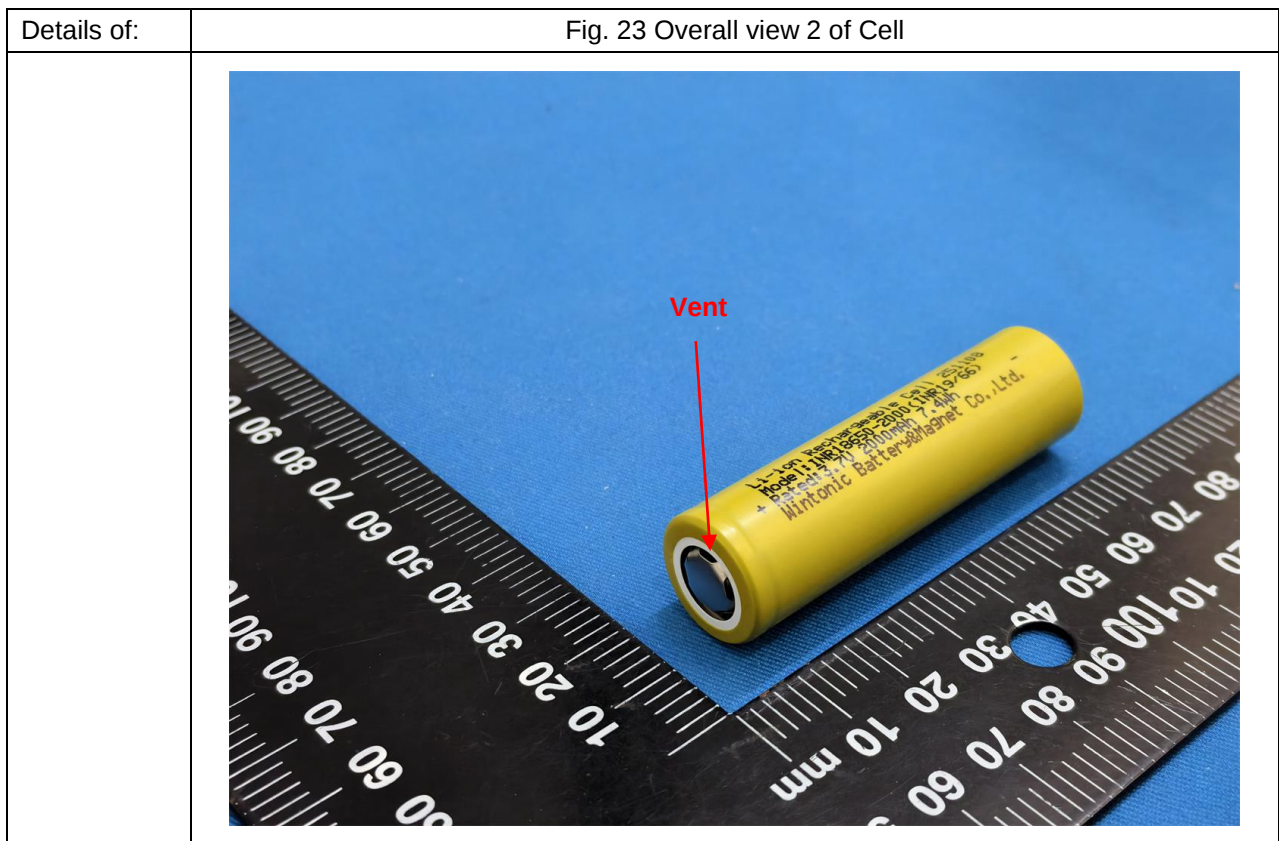
Details of:	Fig. 18 Overall view 3 of Cell
	 This image shows a blue cylindrical cell, likely a battery or capacitor, lying on a blue surface. A black ruler is placed diagonally across the bottom of the frame to provide a scale. The ruler has markings in millimeters (mm) and centimeters (cm). The cell is positioned horizontally, and its length is approximately 40 mm. The background is a solid blue color.

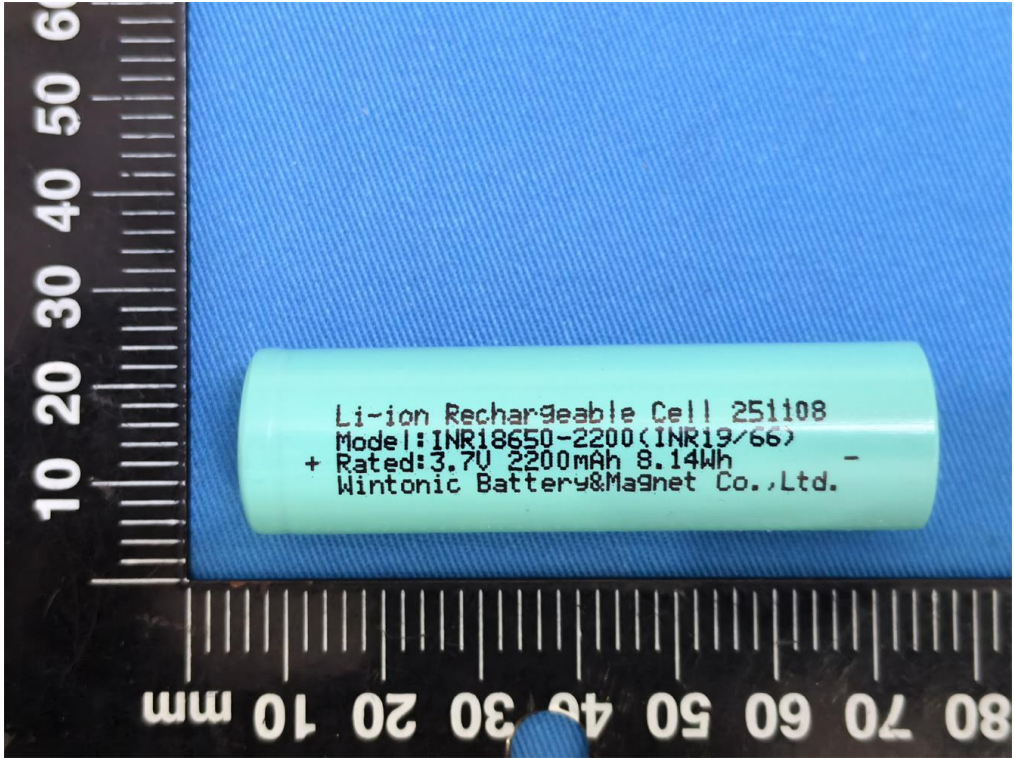
Details of:	Fig. 19 Overall view 1 of Li-ion Rechargeable Cell, INR18650-2000 (See page 6 of TRF for final label, with green heat-shrinking tube)
	 A photograph of a green cylindrical Li-ion rechargeable cell (Model: INR18650-2000) lying horizontally on a blue textured surface. A black ruler with white markings is positioned vertically to the left of the cell, showing measurements from 10 to 60 mm. The cell's label is printed in black and includes the following text: "Li-ion Rechargeable Cell 251108", "Model: INR18650-2000 (INR19/66)", "+ Rated: 3.7V 2000mAh 7.4Wh", and "Wintonic Battery&Magnet Co., Ltd.".

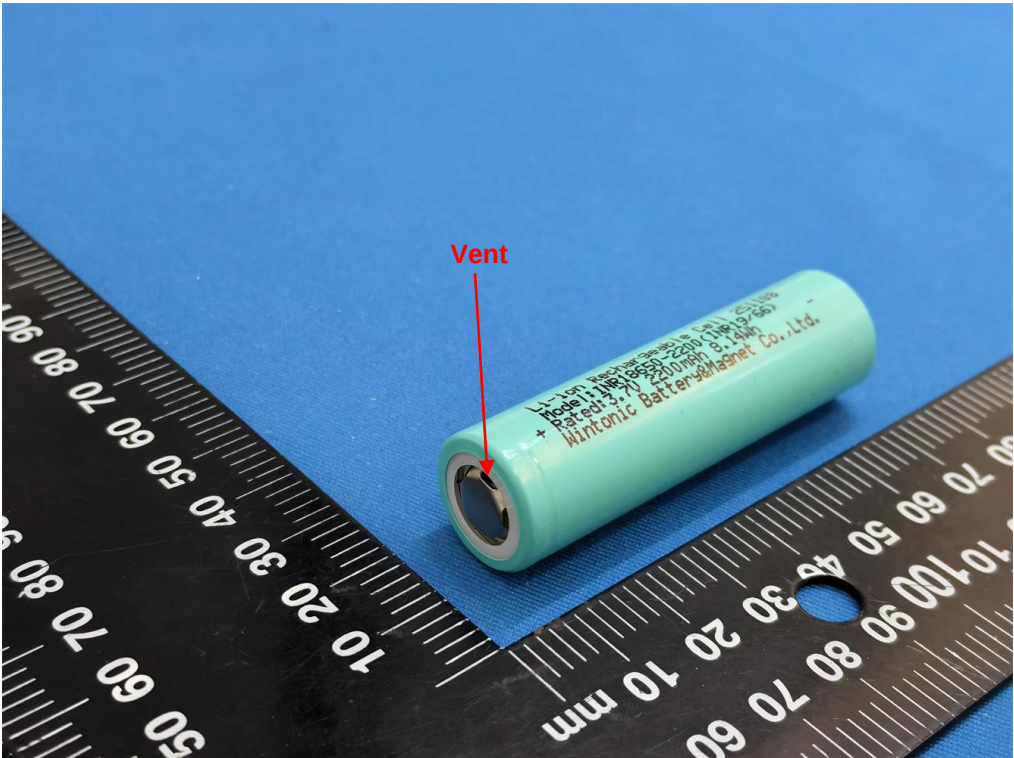
Details of:	Fig. 20 Overall view 2 of Cell
	 A photograph of the same green cylindrical Li-ion rechargeable cell (Model: INR18650-2000) lying horizontally on a blue textured surface. A black ruler with white markings is positioned diagonally below the cell, showing measurements from 10 to 100 mm. A red arrow points to the bottom of the cell, labeled "Vent". The cell's label is printed in black and includes the following text: "Li-ion Rechargeable Cell 251108", "Model: INR18650-2000 (INR19/66)", "+ Rated: 3.7V 2000mAh 7.4Wh", and "Wintonic Battery&Magnet Co., Ltd.".

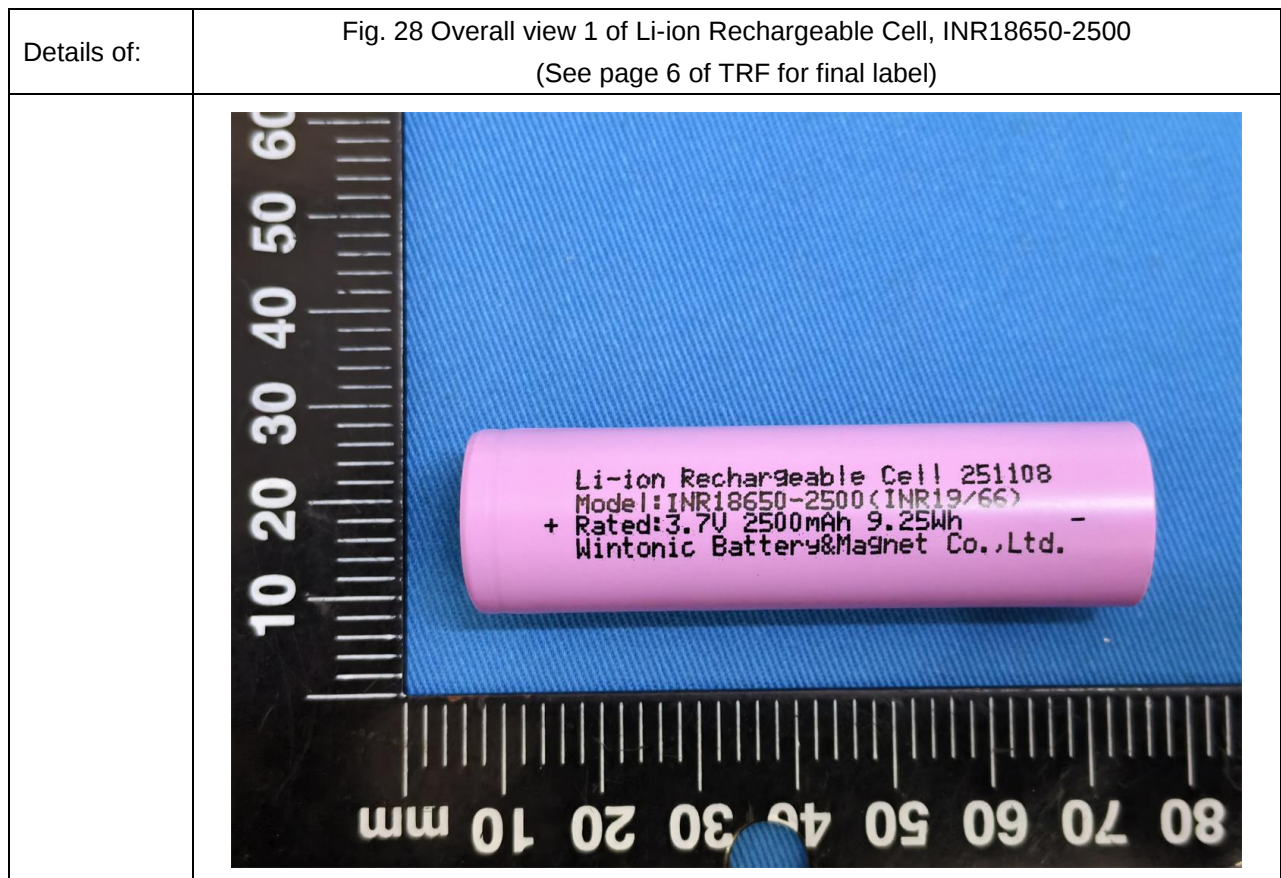
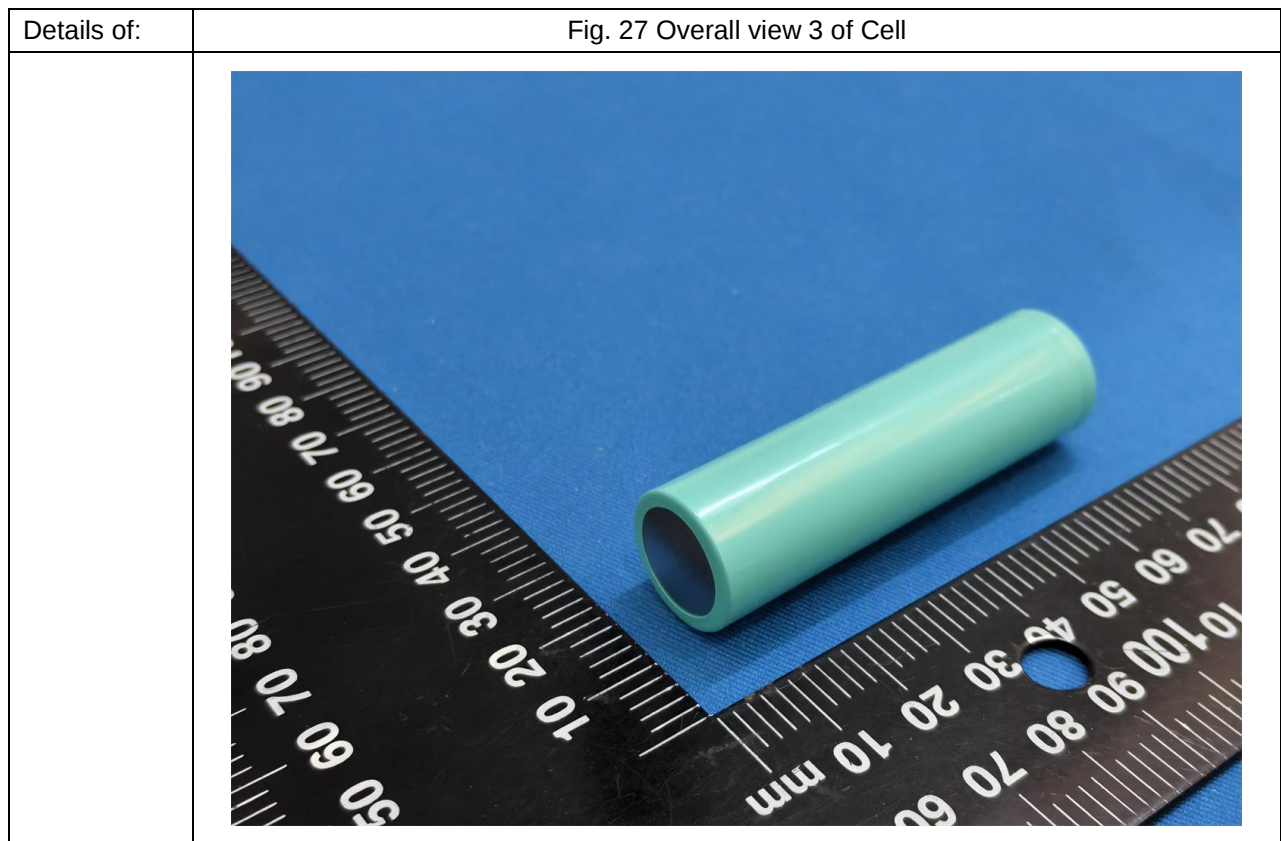
Details of:	Fig. 21 Overall view 3 of Cell
	

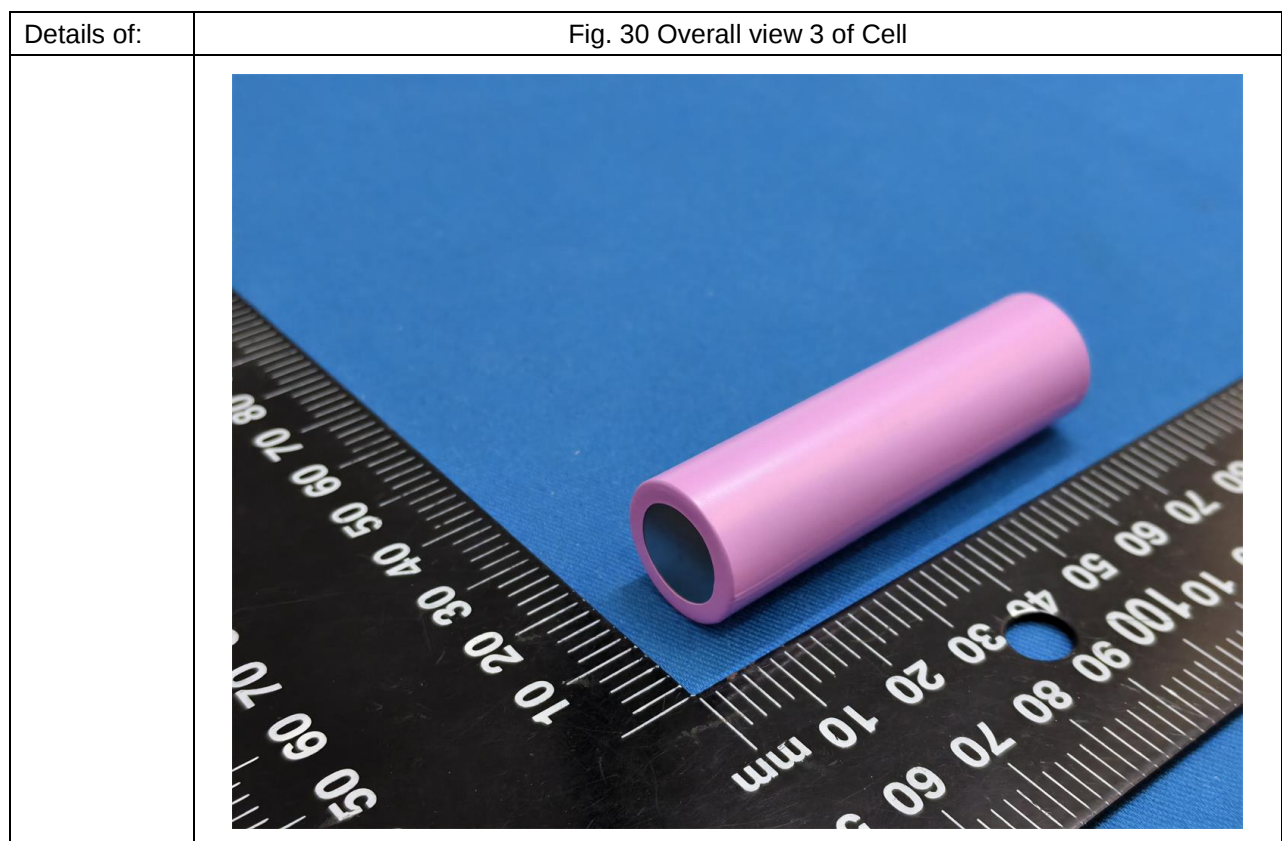
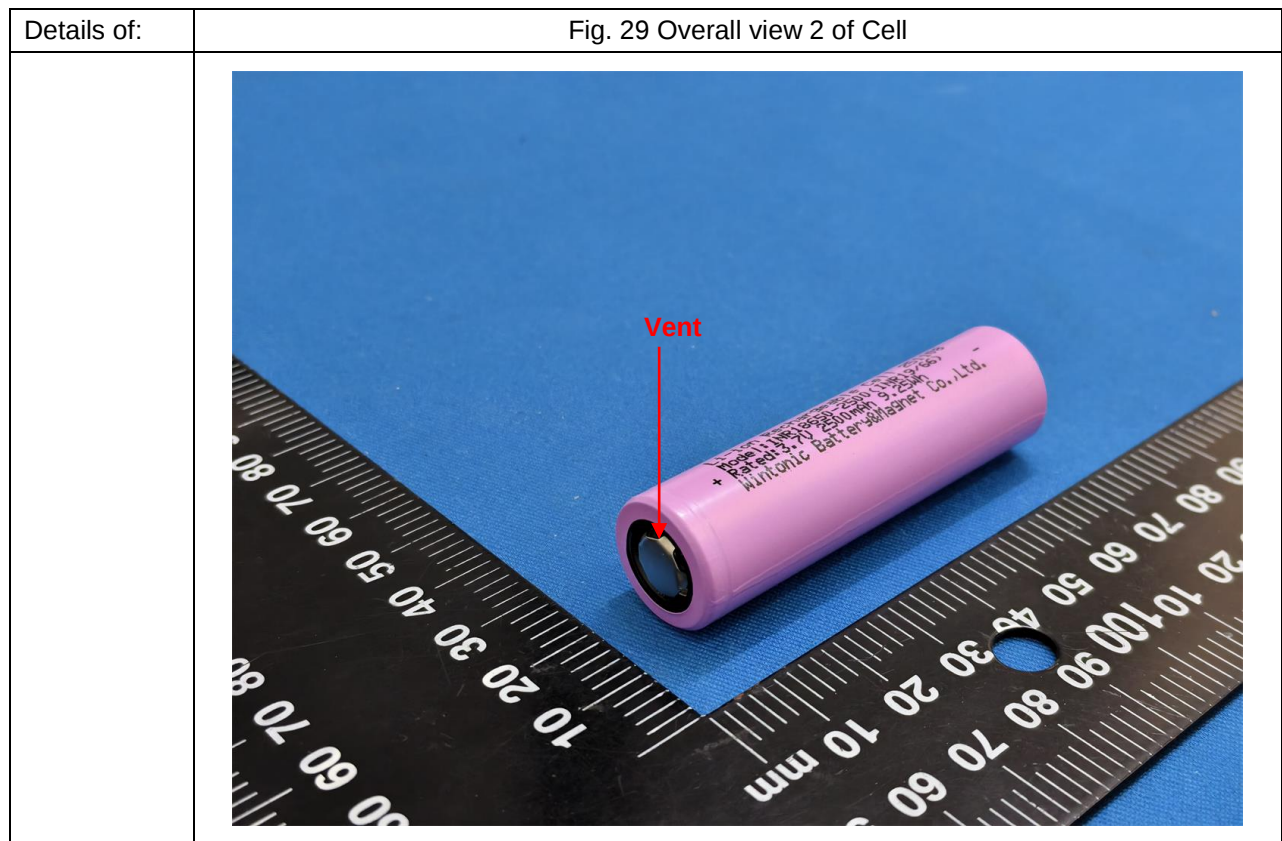
Details of:	Fig.22 Overall view 1 of Li-ion Rechargeable Cell, INR18650-2000 (See page 6 of TRF for final label, with yellow heat-shrinking tube)
	



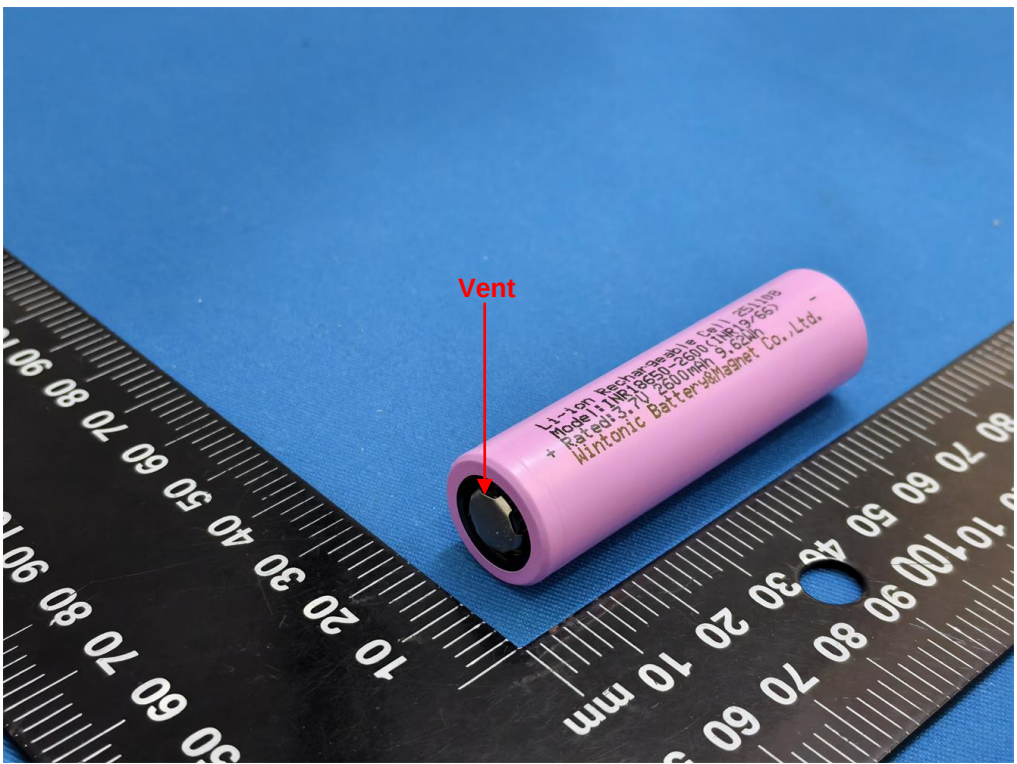
Details of:	Fig. 25 Overall view 1 of Li-ion Rechargeable Cell, INR18650-2200 (See page 6 of TRF for final label)
	

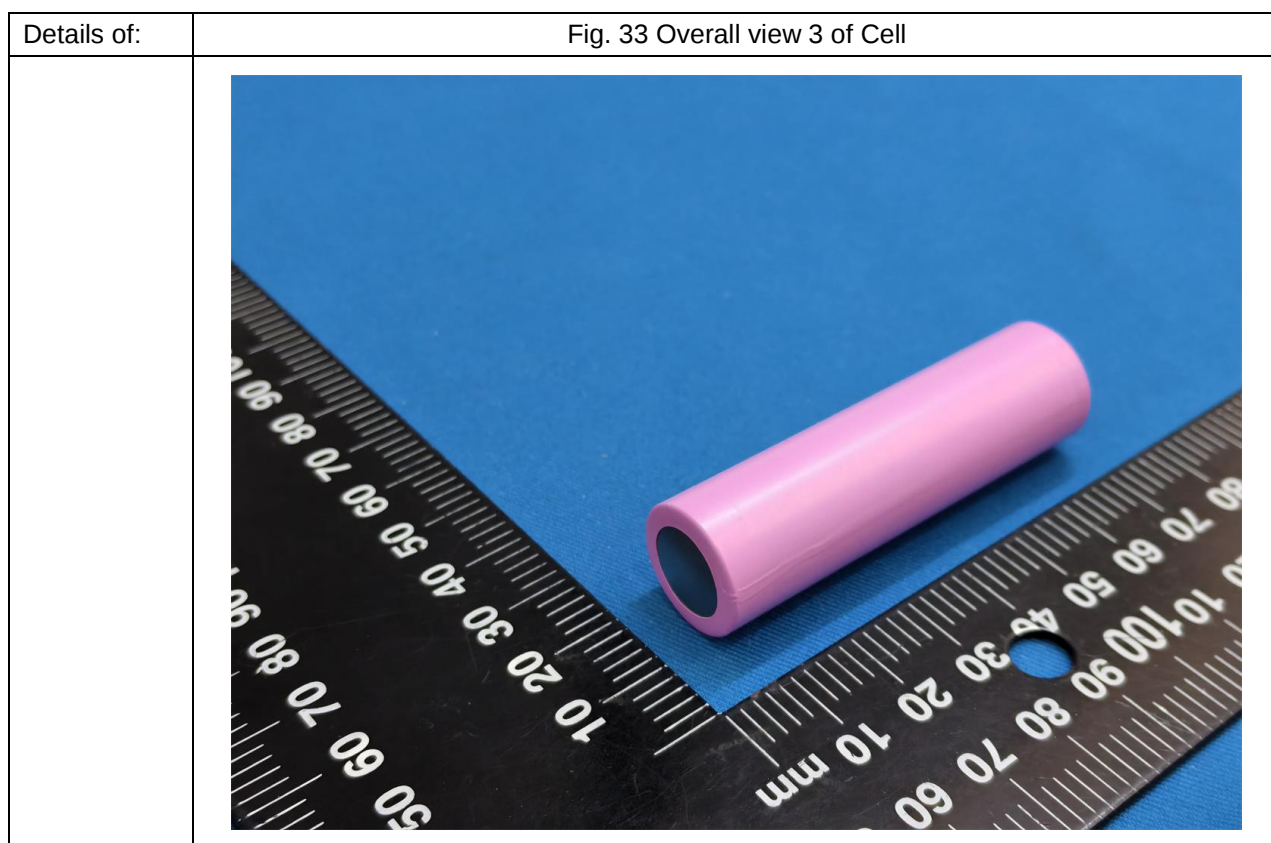
Details of:	Fig. 26 Overall view 2 of Cell
	





Details of:	Fig. 31 Overall view 1 of Li-ion Rechargeable Cell, INR18650-2600 (See page 6 of TRF for final label)
	 A photograph of a cylindrical pink Li-ion rechargeable cell lying horizontally on a blue textured surface. A black ruler with white markings is positioned vertically to the left of the cell, showing measurements from 10 to 50 mm. The cell's label is printed in black and reads: "Li-ion Rechargeable Cell 251108", "Model: INR18650-2600 (INR19/66)", "+ Rated: 3.7V 2600mAh 9.62Wh", and "Wintonic Battery & Magnet Co., Ltd." with a minus sign at the end.

Details of:	Fig. 32 Overall view 2 of Cell
	 A photograph of the same cylindrical pink Li-ion rechargeable cell, viewed from the side, resting on a blue textured surface. A black ruler with white markings is placed diagonally across the frame, showing measurements from 10 to 90 mm. A red arrow points to the circular vent on the end of the cell, which is labeled "Vent" in red text. The cell's label is partially visible and matches the text in Fig. 31.



---END OF REPORT---