



Test Report

Report No.:XNO250331024AX2-1

Date:Apr 08, 2025

Page 1 of 5

Applicant

Address:

The following sample(s) and information were submitted and identified by the applicant

Sample Name: Lithium ion cell
XNO Report Number: XNO250331024AX2-1
Model No.: INR18650X
Sub-Model No.: INR18650E, INR18650N, INR18650V
Manufacturer:
Manufacturer Address:

Origin Of The Product(s): China
Sample Received Date: Mar 31, 2025
Sample Tested Date: Mar 31, 2025 to Apr 08, 2025
Test Requested: Test as requested by client
Test Method: Please refer to next page(s)
Test Results: Please refer to next page(s)

Summary of test results:

Test Requested	Conclusion
Annex I of Regulation(EU)2023/1542-Heavy Metals Content in batteries and waste batteries	PASS



Authorized signature

Kyle Kuang
Assistant manager

Approved Signatory

Guangzhou Supreme Technology & Testing Service Co., Ltd.

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Page 2 of 5

Test Result(s):

Annex I of Regulation(EU)2023/1542-Heavy Metals Content in batteries and waste batteries

Test Method: IEC 62321-4:2013+A1:2017 & IEC 62321-5:2013, analyzed by ICP-OES.

<u>Test Item(s)</u>	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>Result</u>		
				No.1	No.2	No.3
Lead(Pb)	0.01	%	0.0002	N.D.	N.D.	N.D.
Cadmium(Cd)	0.002	%	0.0002	N.D.	N.D.	N.D.
Mercury(Hg)	0.0005	%	0.0002	N.D.	N.D.	N.D.

Remarks:

1. % = percentage by weight
2. 0.0001% = 1 mg/kg = 1ppm
3. MDL = Method Detection Limit
4. N.D. = Not Detected (Less than MDL)
5. Batteries accumulators and button cells containing more than 0.002% Cadmium or more than 0.004% Lead shall be marked with the chemical symbol for the metal concerned: Cd, Pb.
6. Batteries, whether or not incorporated into appliances, light means of transport or other vehicles, shall not contain more than 0.0005% of mercury (expressed as mercury metal) by weight.
7. Portable batteries, whether or not incorporated into appliances, light means of transport or other vehicles, shall not contain more than 0.002% of cadmium (expressed as cadmium metal) by weight.
8. According to the EU New Battery Regulation(EU) 2023/1542, portable batteries (non portable zinc-air button cells) containing between 0.004 %-0.01 % lead, shall be marked with the chemical symbol for the metal concerned: Pb.
9. The test model No. is INR18650X, and the difference between the Model No and the Sub-Model No is generally as follows: the model No. name is different, and the rest is exactly the same.

Note: As specified by applicant, to test content in the selected materials of the submitted samples. Pic.1 and Pic.8 is the sample tested. The test results are only responsible for the submitted sample. The test report is only for customer research, teaching, internal quality control, product development and other purposes, for reference only.

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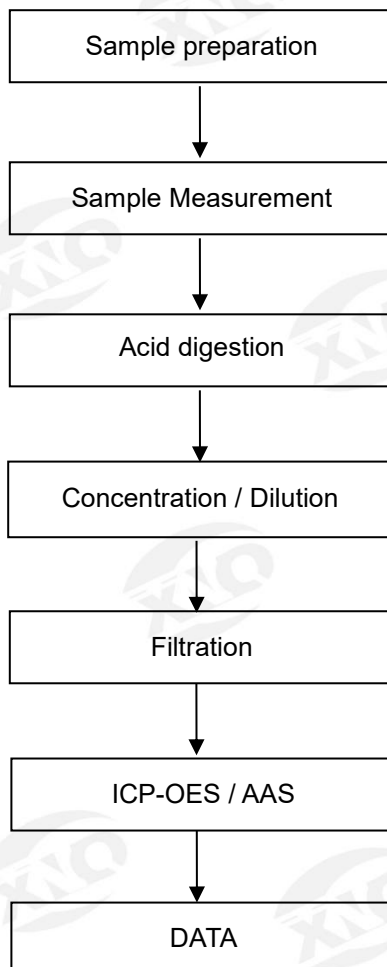
Test Report

Report No.:XNO250331024AX2-1

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Page 3 of 5

Lead, Cadmium & Mercury Testing Flow Chart



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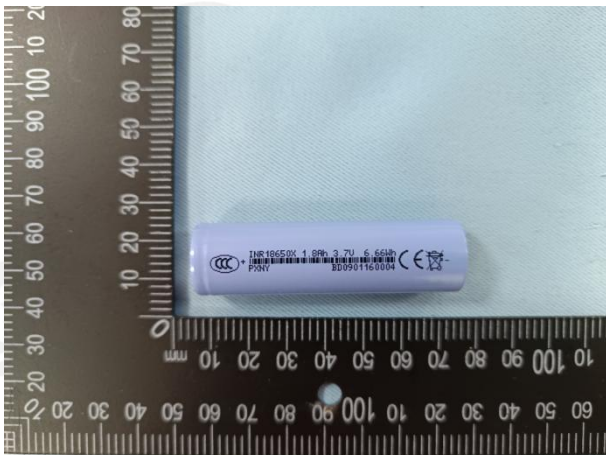
Date:Apr 08, 2025

Page 4 of 5

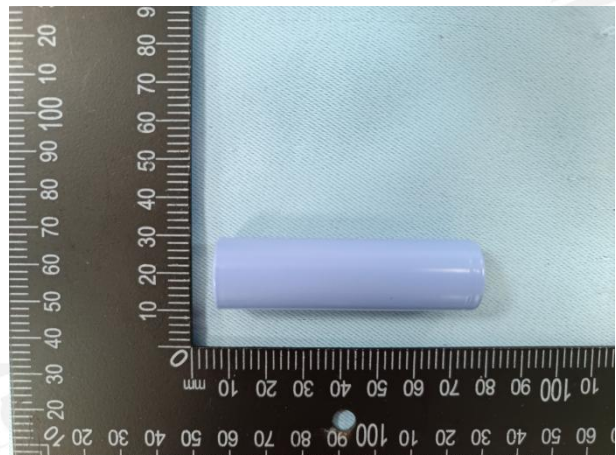
Sample Description:

Specimen No.	Description	Material	Location
1	Battery body	Whole battery	INR18650X

Sample Photo:



Pic.1



Pic.2



Pic.3



Pic.4

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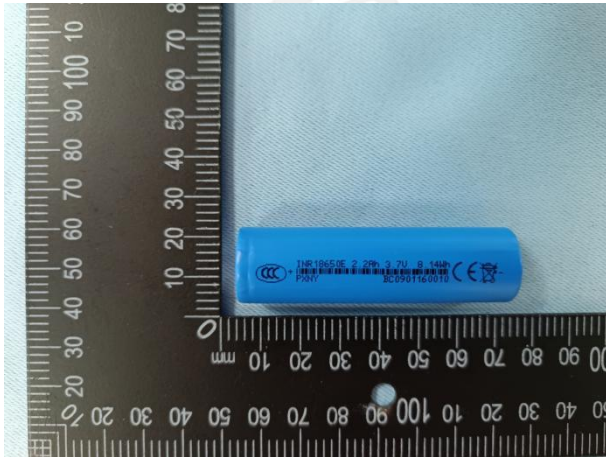


Test Report

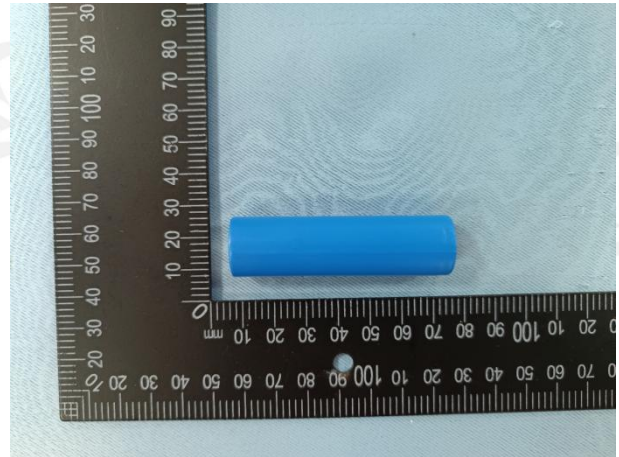
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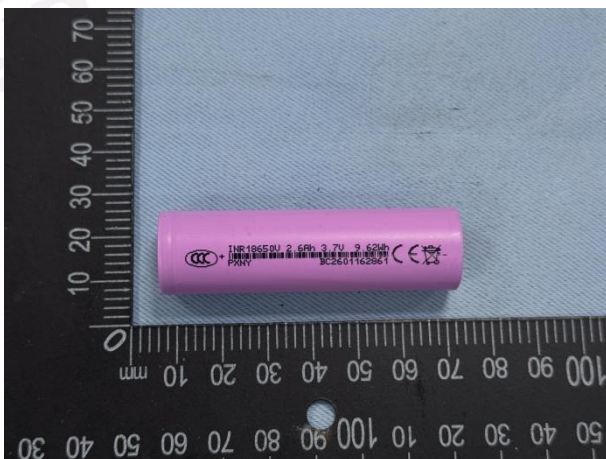
Page 5 of 5



Pic.5



Pic.6



Pic.7



Pic.8

*** End of Report ***

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Test Report issued under the responsibility of:



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. : CN257ZDN 001

Date of issue..... : 2025-04-27

Total number of pages : 30 pages

Name of Testing Laboratory

preparing the Report..... : Shenzhen NCT Testing Technology Co., Ltd

Applicant's name..... :

Address..... :

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-F1:2021, Ed.1.4

Test Report Form No..... : IEC62133_2C

Test Report Form(s) Originator.... : DEKRA Certification B.V.

Master TRF..... : Dated 2022-07-01

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This report is not valid as a CB Test Report unless signed by an approved IECEE Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

General disclaimer:

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 NCB. The authenticity of this Test Report and its contents can be verified by contacting the NCB, responsible for this Test Report.

Test item description..... :	Li-ion Cell	
Trade Mark(s)..... :	N/A	
Manufacturer..... :	Same as applicant	
Model/Type reference..... :	1). INR18650V; 2). INR18650N; 3). INR18650E; 4). INR18650X	
Ratings..... :	3.7V, 1). 2600mAh, 9.62Wh; 2). 2500mAh, 9.25Wh 3). 2200mAh, 8.14Wh; 4). 1800mAh, 6.66Wh	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
☒ CB Testing Laboratory:	Shenzhen NCT Testing Technology Co., Ltd	
Testing location/ address.....:	B2A101, B2A201, B2A202, Fuqiao 6th Area, Xintian, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China	
Tested by (name, function, signature).....:	Leo Huang (Project Engineer)	<i>Leo Huang</i>
Approved by (name, function, signature)....:	Boris Lin (Reviewer)	<i>Boris Lin</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 1: (Republic of Korea) National Differences (3 pages). Attachment 2: Photo documentation (8 pages).	
Summary of testing:	
Tests performed (name of test and test clause): cl.7.1 Charging procedure for test purposes (for Cells); cl.7.2.1 Continuous charging at constant voltage (Cells); cl.7.3.1 External short circuit (Cells); cl.7.3.3 Free fall (Cells); cl.7.3.4 Thermal abuse (Cells); cl.7.3.5 Crush (Cells); cl.7.3.7 Forced discharge (Cells); cl.7.3.9 Design evaluation – Forced internal short-circuit (Cells); Tests are made with the number of cells specified in IEC 62133-2: 2017, IEC 62133-2:2017/AMD1:2021 Table 1.	Testing location: Shenzhen NCT Testing Technology Co., Ltd B2A101, B2A201, B2A202, Fuqiao 6th Area, Xintian, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China
Summary of compliance with National Differences (List of countries addressed): KR KR=Korea, Republic of	

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:

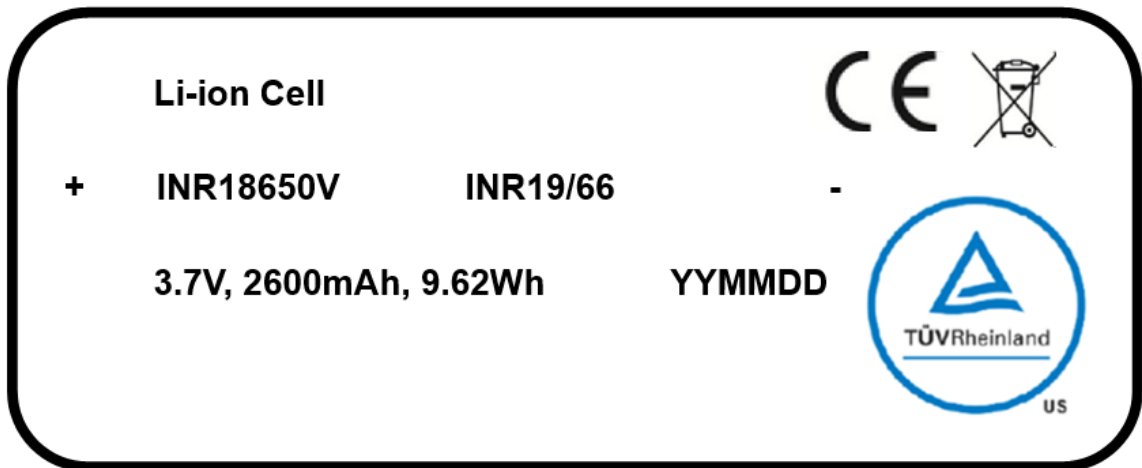
The uncertainties of measurement are calculated by the laboratory based on application of criteria given by OD-5014 for test equipment and application of test methods, decision sheets and operational procedures of IECEE.

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.



Label 1 for model: INR18650V



Label 2 for model: INR18650N

Li-ion Cell				
+	INR18650E	INR19/66	-	
3.7V, 2200mAh, 8.14Wh		YYMMDD		

Label 3 for model: INR18650E

Li-ion Cell				
+	INR18650X	INR19/66	-	
3.7V, 1800mAh, 6.66Wh		YYMMDD		

Label 4 for model: INR18650X

Date code: YYMMDD
“YY” means Year; “MM” means Month; “DD” means Date.

Test item particulars	
Classification of installation and use.....	To be defined in final product
Supply Connection	DC terminal contacts
Recommend charging method declared by the manufacturer.....	Charging the cell with 0.5C constant current until 4.2V, then constant voltage until the charge current reduces to 0.01C at ambient 20°C±5°C.
Discharge current (0,2 It A)	1). INR18650V: 520mA 2). INR18650N: 500mA 3). INR18650E: 440mA 4). INR18650X: 360mA
Specified final voltage.....	2.75V
Upper limit charging voltage per cell.....	4.2V
Maximum charging current.....	1.0C
Charging temperature upper limit.....	50°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..... : 2025-03-27	
Date (s) of performance of tests : 2025-03-31 to 2025-04-11	
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 applicant	

General product information and other remarks:

The cell consists of the positive electrode plate, negative electrode plate, separator, electrolyte, case. The positive and negative electrode plates are housed in the case in the state being separated by the separator.

Remark: The product was also evaluated to fulfil the requirements of **EN 62133-2:2017**, **EN 62133-2:2017/A1:2021**.

Model Differences:

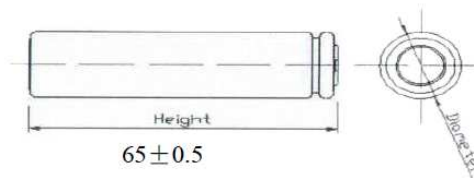
Models INR18650V, INR18650N, INR18650E and INR18650X are identical to each other except for capacity and colour. All the models are manufactured through the same production process, the tested models INR18650V, INR18650E, INR18650X are representatives of all models.

The main features of the cell are shown as below (clause 7.1.1):

Model (cell)	Rated capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	Final Voltage
INR18650V	2600mAh	3.7V	1300mA	1300mA	2600mA	13000mA	4.2V	2.75V
INR18650N	2500mAh	3.7V	1250mA	1250mA	2500mA	12500mA	4.2V	2.75V
INR18650E	2200mAh	3.7V	1100mA	1100mA	2200mA	11000mA	4.2V	2.75V
INR18650X	1800mAh	3.7V	900mA	900mA	1800mA	9000mA	4.2V	2.75V

The main features of the cell are shown as below (clause 7.1.2):

Model (cell)	Upper limit charge voltage	Taper-off current	Lower charge temperature	Upper charge temperature
INR18650V	4.2V	130mA	0°C	50°C
INR18650N	4.2V	125mA	0°C	50°C
INR18650E	4.2V	110mA	0°C	50°C
INR18650X	4.2V	90mA	0°C	50°C

Construction:

18.25±0.2mm

Cell (Unit: mm)

Circuit diagram:

None, cell only.

IEC 62133-2			
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	Cell only.	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	Venting mechanism exists on the top of cylindrical cell.	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	Cell only.	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		P
	The size and shape of the terminal contacts ensure that they can carry the maximum anticipated current		P

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
	External terminal contact surfaces are formed from conductive materials with good mechanical strength and corrosion resistance		P
	Terminal contacts are arranged to minimize the risk of short circuits		P
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	Cell only.	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	Cell only.	N/A

IEC 62133-2			
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	Cell only.	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

IEC 62133-2			
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	Complied. Provide quality plan	P
5.8	Battery safety components	See TABLE: Critical components information	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 $3\ \Omega$ are tested in accordance with Table 1	Not coin cells	N/A
	Unless otherwise specified, tests are carried out in an ambient temperature of $20\ ^\circ\text{C} \pm 5\ ^\circ\text{C}$		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	Cell only.	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	Cell only.	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 $20\ ^\circ\text{C} \pm 5\ ^\circ\text{C}$, using the method declared by the manufacturer		P
	Prior to charging, the battery has been discharged at $20\ ^\circ\text{C} \pm 5\ ^\circ\text{C}$ 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

IEC 62133-2			
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	Charge temperature range: 0-50°C declared. 0°C used for lower limit tests. 50°C used for upper limit tests.	P
7.2	Intended use		P
7.2.1	Continuous charging at constant voltage (cells)	Tested complied.	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	Charging for 7 days with 0.5C.	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)	Cell only.	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)	Tested complied.	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)	Cell only.	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

IEC 62133-2			
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	Tested complied.	P
	Results: no fire, no explosion	No fire. No explosion	P
7.3.4	Thermal abuse (cells)	Tested complied.	P
	Oven temperature (°C) : 130.1~130.2°C		—
	Results: no fire, no explosion	No fire. No explosion	P
7.3.5	Crush (cells)	Tested complied.	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	Cell only.	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)	Tested complied.	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

IEC 62133-2			
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	Cell only.	N/A
	Results: no fire, no explosion, no rupture, no leakage or venting.		N/A
7.3.8.2	Mechanical shock	Cell only.	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)	Tested complied.	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 for cylindrical cells.	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	Information for safety mentioned in manufacturer's specifications.	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

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Do not allow children to replace batteries without adult supervision		N/A
8.2	Small cell and battery safety information	Not small cells.	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	See marking plate on page 5 and page 6.	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	Cell only.	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	Not small cells.	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

IEC 62133-2			
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	Not coin cells.	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	Complied.	P
A.3	Consideration on charging voltage	Complied.	P
A.3.1	General		P
A.3.2	Upper limit charging voltage	4.2V applied.	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	4.2V applied.	P
A.4	Consideration of temperature and charging current		P
A.4.1	General		P
A.4.2	Recommended temperature range	Charging temperature range declared by client is: 0-50°C	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

IEC 62133-2			
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	Cell specified final voltage 2.75V, not exceed 2.75V specified by cell manufacturer.	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		P
A.6.2	Example of a nickel particle preparation procedure		P
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

IEC 62133-2			
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		N/A
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	Not coin cells.	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

IEC 62133-2				
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
Model: INR18650V				
NCT25013695-INR18650V-C1#	4.20	1.30	4.18	A, B
NCT25013695-INR18650V-C2#	4.20	1.30	4.18	A, B
NCT25013695-INR18650V-C3#	4.20	1.30	4.18	A, B
NCT25013695-INR18650V-C4#	4.20	1.30	4.18	A, B
NCT25013695-INR18650V-C5#	4.20	1.30	4.18	A, B
Model: INR18650E				
NCT25013695-INR18650E-C1#	4.20	1.10	4.19	A, B
NCT25013695-INR18650E-C2#	4.20	1.10	4.19	A, B
NCT25013695-INR18650E-C3#	4.20	1.10	4.19	A, B
NCT25013695-INR18650E-C4#	4.20	1.10	4.19	A, B
NCT25013695-INR18650E-C5#	4.20	1.10	4.19	A, B
Model: INR18650X				
NCT25013695-INR18650X-C1#	4.20	0.90	4.18	A, B
NCT25013695-INR18650X-C2#	4.20	0.90	4.18	A, B
NCT25013695-INR18650X-C3#	4.20	0.90	4.18	A, B
NCT25013695-INR18650X-C4#	4.20	0.90	4.18	A, B
NCT25013695-INR18650X-C5#	4.20	0.90	4.18	A, B
Supplementary information:				
-A: No fire or explosion				
-B: No leakage				

IEC 62133-2					
Clause	Requirement + Test			Result - Remark	Verdict
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 $\Delta T(K)$ °C	Results
Samples charged at charging temperature upper limit (50°C)					
Model: INR18650V					
NCT25013695-INR18650V-C6#	55.3	4.17	80.7	104.1	A
NCT25013695-INR18650V-C7#	55.3	4.16	85.4	99.3	A
NCT25013695-INR18650V-C8#	55.3	4.17	78.0	101.2	A
NCT25013695-INR18650V-C9#	55.3	4.17	82.3	102.7	A
NCT25013695-INR18650V-C10#	55.3	4.16	84.9	103.3	A
Model: INR18650E					
NCT25013695-INR18650E-C6#	55.5	4.16	88.2	107.5	A
NCT25013695-INR18650E-C7#	55.5	4.16	85.7	109.5	A
NCT25013695-INR18650E-C8#	55.5	4.17	83.9	106.8	A
NCT25013695-INR18650E-C9#	55.5	4.17	81.6	110.1	A
NCT25013695-INR18650E-C10#	55.5	4.17	80.4	107.0	A
Model: INR18650X					
NCT25013695-INR18650X-C6#	55.5	4.17	81.3	103.2	A
NCT25013695-INR18650X-C7#	55.5	4.16	78.9	98.7	A
NCT25013695-INR18650X-C8#	55.5	4.17	82.5	102.3	A
NCT25013695-INR18650X-C9#	55.5	4.16	80.9	100.7	A
NCT25013695-INR18650X-C10#	55.5	4.16	83.2	100.0	A
Samples charged at charging temperature lower limit (0°C)					
Model: INR18650V					
NCT25013695-	55.0	4.14	78.4	104.6	A

IEC 62133-2					
Clause	Requirement + Test			Result - Remark	Verdict
INR18650V-C11#					
NCT25013695- INR18650V-C12#	55.0	4.13	81.9	105.4	A
NCT25013695- INR18650V-C13#	55.0	4.13	83.8	102.4	A
NCT25013695- INR18650V-C14#	55.0	4.13	82.1	106.1	A
NCT25013695- INR18650V-C15#	55.0	4.14	80.2	106.8	A
Model: INR18650E					
NCT25013695- INR18650E-C11#	55.1	4.14	82.1	106.3	A
NCT25013695- INR18650E-C12#	55.1	4.13	87.5	111.7	A
NCT25013695- INR18650E-C13#	55.1	4.14	86.9	110.2	A
NCT25013695- INR18650E-C14#	55.1	4.14	83.8	108.9	A
NCT25013695- INR18650E-C15#	55.1	4.13	81.9	106.0	A
Model: INR18650X					
NCT25013695- INR18650X-C11#	55.6	4.14	79.4	105.4	A
NCT25013695- INR18650X-C12#	55.6	4.13	82.2	104.9	A
NCT25013695- INR18650X-C13#	55.6	4.14	84.1	102.3	A
NCT25013695- INR18650X-C14#	55.6	4.14	81.6	100.9	A
NCT25013695- INR18650X-C15#	55.6	4.13	82.7	104.2	A
Supplementary information:					
-A: No fire or explosion					

IEC 62133-2						
Clause	Requirement + Test			Result - Remark		Verdict
7.3.2	TABLE: External short circuit (battery)					N/A
Sample No.	Ambient T (°C)	OCV before test (Vdc)	Resistance of circuit (mΩ)	Maximum case temperature rise ΔT (K) °C	Component single fault condition	Results
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Supplementary information:						

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 (50°C)					
Model: INR18650V					
NCT25013695-INR18650V-C29#	4.17	4.17	13.04	A	
NCT25013695-INR18650V-C30#	4.17	4.17	13.05	A	
NCT25013695-INR18650V-C31#	4.17	4.16	13.02	A	
NCT25013695-INR18650V-C32#	4.16	4.16	12.98	A	
NCT25013695-INR18650V-C33#	4.17	4.17	13.03	A	
Model: INR18650E					
NCT25013695-INR18650E-C29#	4.17	4.16	12.91	A	
NCT25013695-INR18650E-C30#	4.16	4.16	12.98	A	
NCT25013695-INR18650E-C31#	4.17	4.17	12.97	A	
NCT25013695-INR18650E-C32#	4.16	4.15	13.09	A	
NCT25013695-INR18650E-C33#	4.17	4.17	13.03	A	

IEC 62133-2				
Clause	Requirement + Test		Result - Remark	Verdict
Model: INR18650X				
NCT25013695-INR18650X-C29#	4.17	4.16	12.98	A
NCT25013695-INR18650X-C30#	4.16	4.15	13.04	A
NCT25013695-INR18650X-C31#	4.17	4.17	12.92	A
NCT25013695-INR18650X-C32#	4.16	4.16	13.06	A
NCT25013695-INR18650X-C33#	4.17	4.17	13.05	A
Samples charged at charging temperature lower limit (0°C)				
Model: INR18650V				
NCT25013695-INR18650V-C34#	4.13	4.12	13.04	A
NCT25013695-INR18650V-C35#	4.14	4.14	12.97	A
NCT25013695-INR18650V-C36#	4.14	4.13	12.98	A
NCT25013695-INR18650V-C37#	4.14	4.14	13.02	A
NCT25013695-INR18650V-C38#	4.13	4.13	13.05	A
Model: INR18650E				
NCT25013695-INR18650E-C34#	4.14	4.13	12.96	A
NCT25013695-INR18650E-C35#	4.13	4.13	13.04	A
NCT25013695-INR18650E-C36#	4.14	4.14	12.98	A
NCT25013695-INR18650E-C37#	4.13	4.12	12.93	A
NCT25013695-INR18650E-C38#	4.13	4.13	13.02	A
Model: INR18650X				
NCT25013695-INR18650X-C34#	4.14	4.14	13.02	A
NCT25013695-INR18650X-C35#	4.13	4.12	12.94	A
NCT25013695-INR18650X-C36#	4.14	4.13	13.08	A
NCT25013695-	4.14	4.14	13.03	A

IEC 62133-2				
Clause	Requirement + Test		Result - Remark	Verdict
INR18650X-C37#				
NCT25013695- INR18650X-C38#	4.13	4.13	13.06	A
Supplementary information: -A: No fire or explosion				

7.3.6	TABLE: Over-charging of battery				N/A
Constant charging current (A)		--			—
Supply voltage (Vdc)		--			—
Sample No.	OCV before charging (Vdc)	Total charging time (minute)	Maximum outer case temperature (°C)	Results	
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Supplementary information:					

7.3.7	TABLE: Forced discharge (cells)				P
Sample No.	OCV before application of reverse charge (Vdc)	Measured reverse charge I _t (A)	Lower limit discharge voltage (Vdc)	Results	
Model: INR18650V					
NCT25013695-INR18650V-C39#	3.13	2.60	2.75	A	
NCT25013695-INR18650V-C40#	3.12	2.60	2.75	A	
NCT25013695-INR18650V-C41#	3.13	2.60	2.75	A	
NCT25013695-INR18650V-C42#	3.12	2.60	2.75	A	
NCT25013695-INR18650V-C43#	3.13	2.60	2.75	A	
Model: INR18650E					
NCT25013695-INR18650E-C39#	3.11	2.20	2.75	A	
NCT25013695-INR18650E-C40#	3.12	2.20	2.75	A	
NCT25013695-	3.12	2.20	2.75	A	

IEC 62133-2				
Clause	Requirement + Test		Result - Remark	Verdict
INR18650E-C41#				
NCT25013695- INR18650E-C42#	3.11	2.20	2.75	A
NCT25013695- INR18650E-C43#	3.11	2.20	2.75	A
Model: INR18650X				
NCT25013695- INR18650X-C39#	3.12	1.80	2.75	A
NCT25013695- INR18650X-C40#	3.12	1.80	2.75	A
NCT25013695- INR18650X-C41#	3.13	1.80	2.75	A
NCT25013695- INR18650X-C42#	3.12	1.80	2.75	A
NCT25013695- INR18650X-C43#	3.13	1.80	2.75	A
Supplementary information: -A: No fire or explosion				

7.3.8.1	TABLE: Vibration					N/A
Sample No.	OCV before test (Vdc)	OCV after test (Vdc)	Mass before test (g)	Mass after test (g)	Results	
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Supplementary information:						

7.3.8.2	TABLE: Mechanical shock					N/A
Sample No.	OCV before test (Vdc)	OCV after test (Vdc)	Mass before test (g)	Mass after test (g)	Results	
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Supplementary information:						

IEC 62133-2					
Clause	Requirement + Test			Result - Remark	Verdict
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 (50°C)					
Model: INR18650V					
NCT25013695-INR18650V-C44#	50	4.17	1	800	A
NCT25013695-INR18650V-C45#	50	4.17	1	800	A
NCT25013695-INR18650V-C46#	50	4.17	1	800	A
NCT25013695-INR18650V-C47#	50	4.16	1	800	A
NCT25013695-INR18650V-C48#	50	4.16	1	800	A
Model: INR18650E					
NCT25013695-INR18650E-C44#	50	4.16	1	800	A
NCT25013695-INR18650E-C45#	50	4.17	1	800	A
NCT25013695-INR18650E-C46#	50	4.17	1	800	A
NCT25013695-INR18650E-C47#	50	4.16	1	800	A
NCT25013695-INR18650E-C48#	50	4.17	1	800	A
Model: INR18650X					
NCT25013695-INR18650X-C44#	50	4.17	1	800	A
NCT25013695-INR18650X-C45#	50	4.16	1	800	A

IEC 62133-2					
Clause	Requirement + Test		Result - Remark		Verdict
NCT25013695- INR18650X- C46#	50	4.17	1	800	A
NCT25013695- INR18650X- C47#	50	4.16	1	800	A
NCT25013695- INR18650X- C48#	50	4.17	1	800	A
Samples charged at charging temperature lower limit (0°C)					
Model: INR18650V					
NCT25013695- INR18650V- C49#	0	4.13	1	800	A
NCT25013695- INR18650V- C50#	0	4.13	1	800	A
NCT25013695- INR18650V- C51#	0	4.14	1	800	A
NCT25013695- INR18650V- C52#	0	4.14	1	800	A
NCT25013695- INR18650V- C53#	0	4.13	1	800	A
Model: INR18650E					
NCT25013695- INR18650E- C49#	0	4.14	1	800	A
NCT25013695- INR18650E- C50#	0	4.13	1	800	A
NCT25013695- INR18650E- C51#	0	4.14	1	800	A
NCT25013695- INR18650E- C52#	0	4.13	1	800	A
NCT25013695- INR18650E- C53#	0	4.13	1	800	A
Model: INR18650X					
NCT25013695- INR18650X-	0	4.14	1	800	A

IEC 62133-2					
Clause	Requirement + Test		Result - Remark		Verdict
C49#					
NCT25013695- INR18650X- C50#	0	4.13	1	800	A
NCT25013695- INR18650X- C51#	0	4.13	1	800	A
NCT25013695- INR18650X- C52#	0	4.14	1	800	A
NCT25013695- INR18650X- C53#	0	4.14	1	800	A
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. -A: No fire					

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:					

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⁾
-Positive electrode	Anhui Tianli Lithium Energy Co., Ltd	TL811	Li(Ni _{0.83} Co _{0.12} Mn _{0.05})O ₂	--	--
-Negative electrode	Yunnan Zhongsheng Materials Co., Ltd	AG-1	Graphite	--	--
-Separator	Guangdong Hongtuo New Energy Technology Co., Ltd	16µm	PE+Al ₂ O ₃ +PVDF, 16µm, Shutdown temperature: 130°C	--	--
-Electrolyte	Guizhou Hangsheng Lithium Energy Technology Co., Ltd	HS24428	LiPF ₆ +EC+EMC+DMC	--	--
-Cell case	Xinxiang Xuri power supply material Co., LTD	shell	Nickel-plated steel shell, 68.3*18.1*17.66mm	--	--
Supplementary information:					
1) Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

-- End of Report --

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 _n A, to a final discharge voltage specified by the manufacturer. Sample batteries shall then be charged at a constant current of 2,0 I _n 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_n 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_n A₂</u> <u>(e.g., quick charging power bank, etc.)</u>	Cell only.	N/A

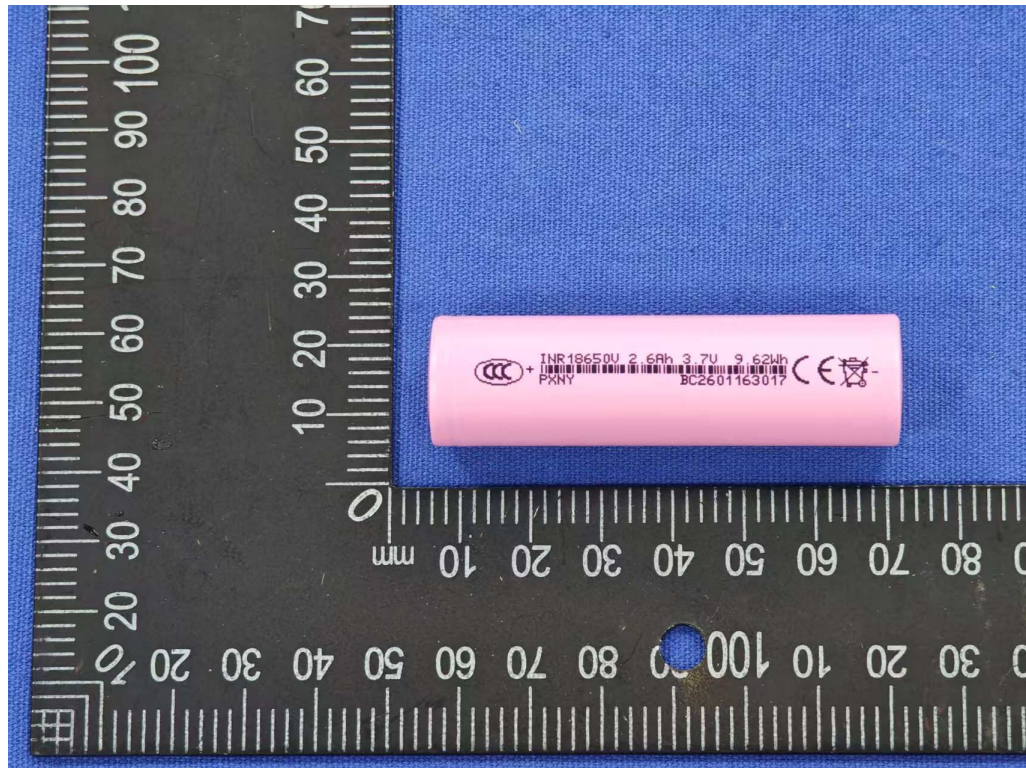
ATTACHMENT to IEC62133_2C			
Clause	Requirement + Test	Result - Remark	Verdict
	[Replace to the following statement] c) Acceptance criteria Filling beyond the manufacturer's specified limits should not result in ignition or explosion		N/A
Annex G	Definition for shape and materials of outer case for cell		—
(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.	INR18650V: 549.4Wh / L INR18650N: 528.2Wh / L INR18650E: 464.8Wh / L INR18650X: 380.3Wh / L	—

ATTACHMENT to IEC62133_2C

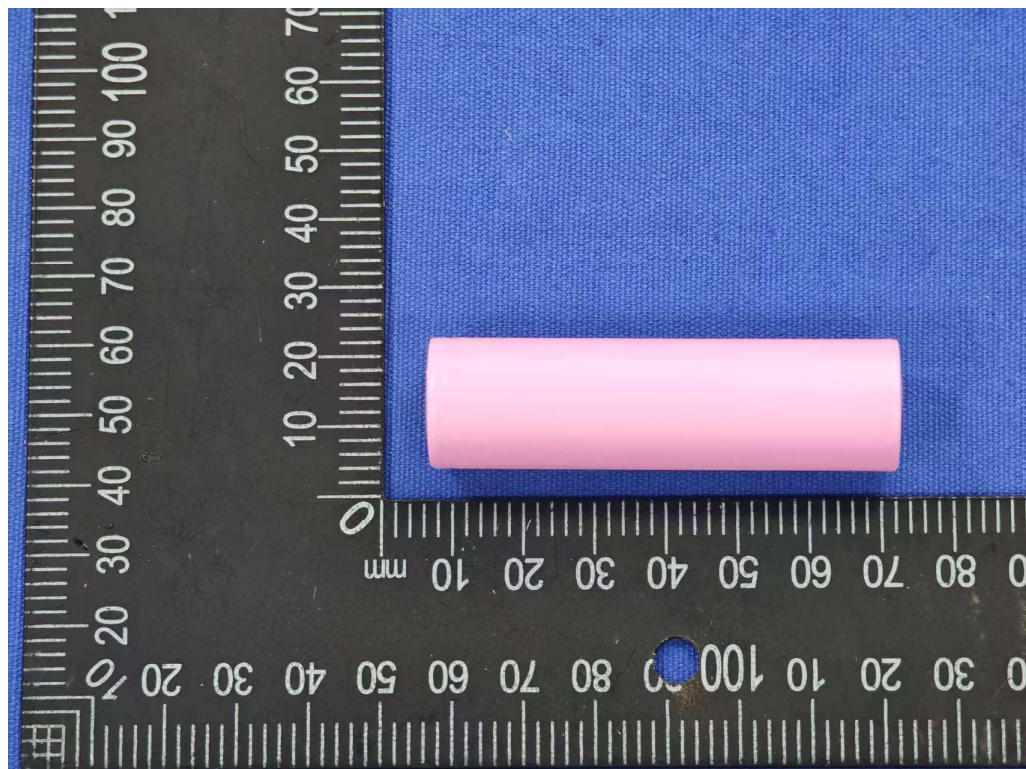
Clause	Requirement + Test	Result - Remark	Verdict
	H.2 Calculation Method L : Length (max.) of cell (including terrace) W : Width (max.) of cell T : Thickness (max.) when shipping charge (For reference, Please Exclude the dimension of any tape that is attached to cell) $\text{Volumetric energy density (Wh/L)} = \frac{\text{Nominal voltage (V)} \times \text{Rated capacity (Ah)}}{\text{Length (L)} \times \text{Width (W)} \times \text{Thickness (T)}}$ [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]		

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



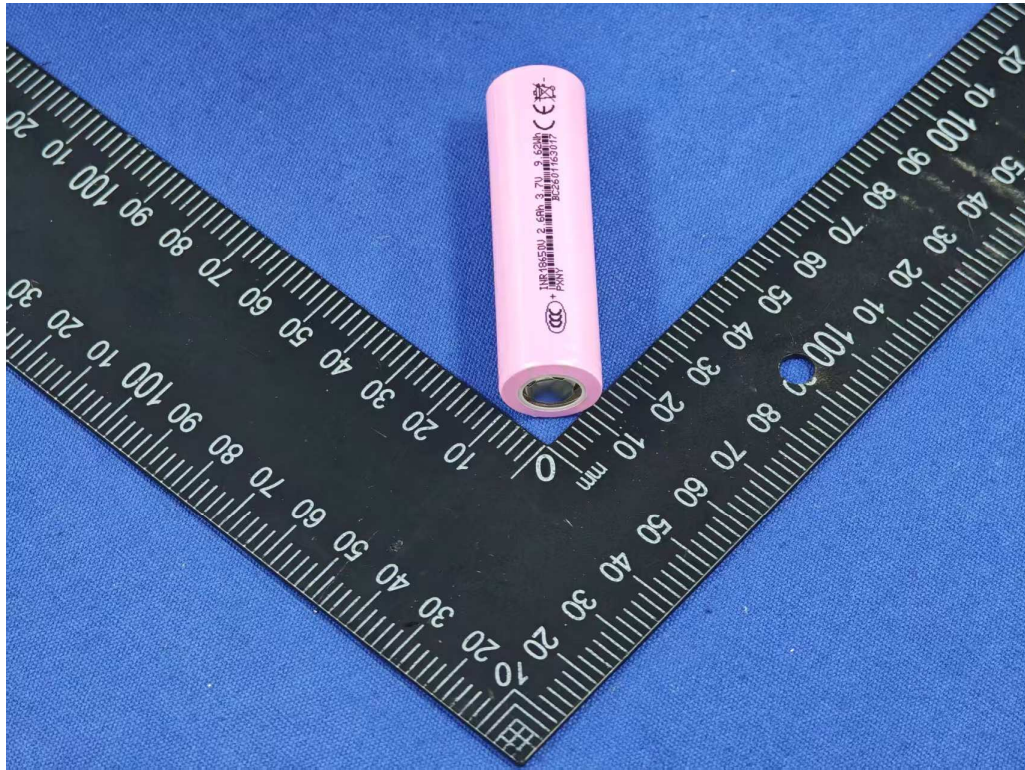
Picture 1 Front view of cell (Model: INR18650V)



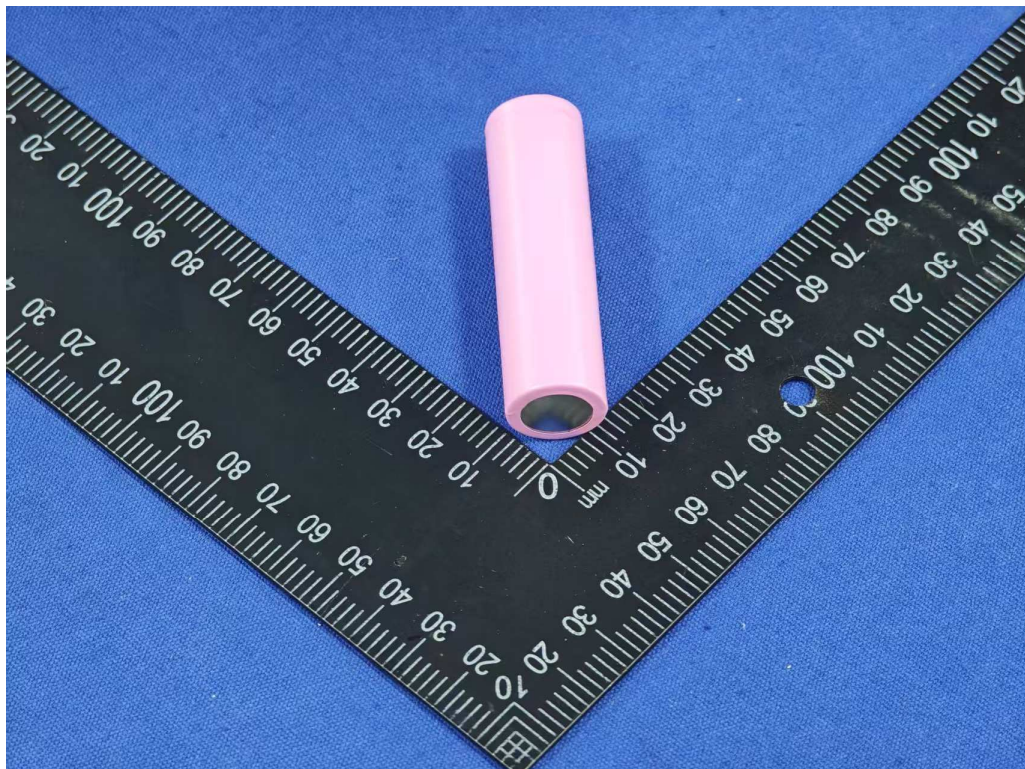
Picture 2 Back view of cell (Model: INR18650V)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



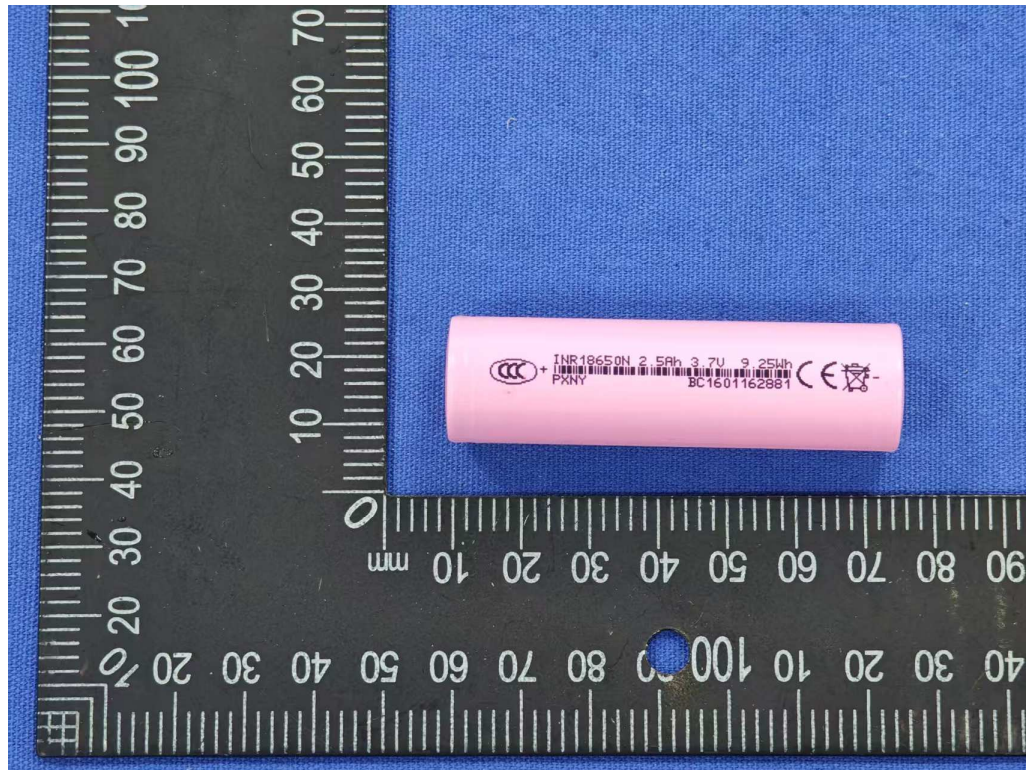
Picture 3 Top view of cell (Model: INR18650V)



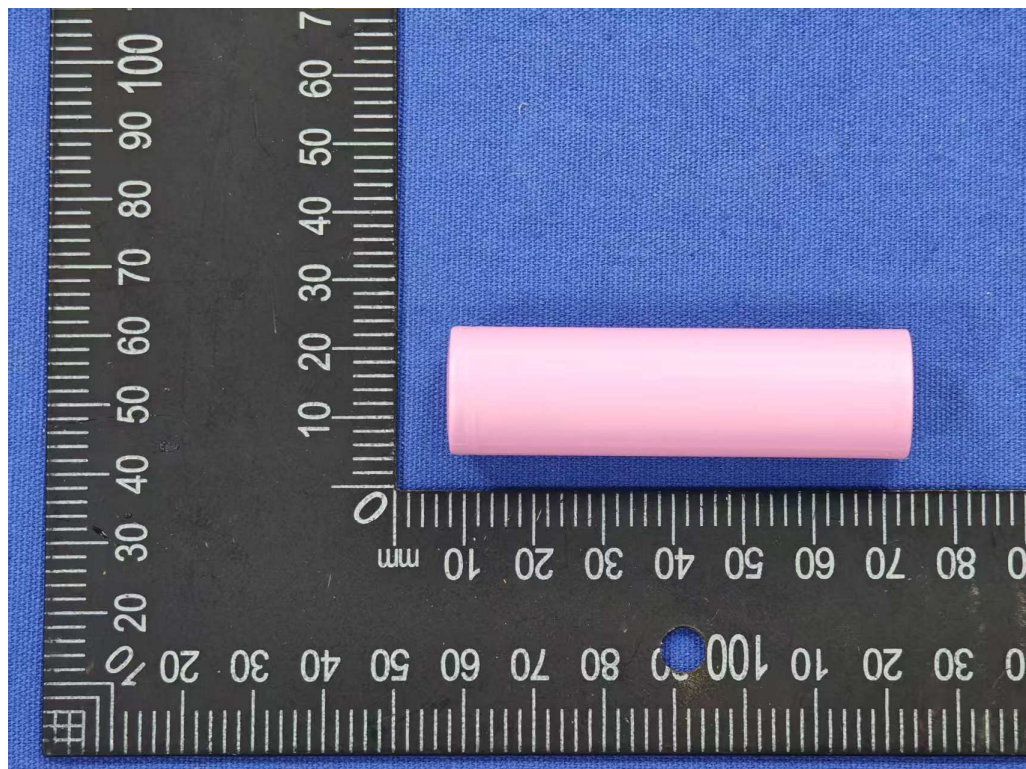
Picture 4 Bottom view of cell (Model: INR18650V)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



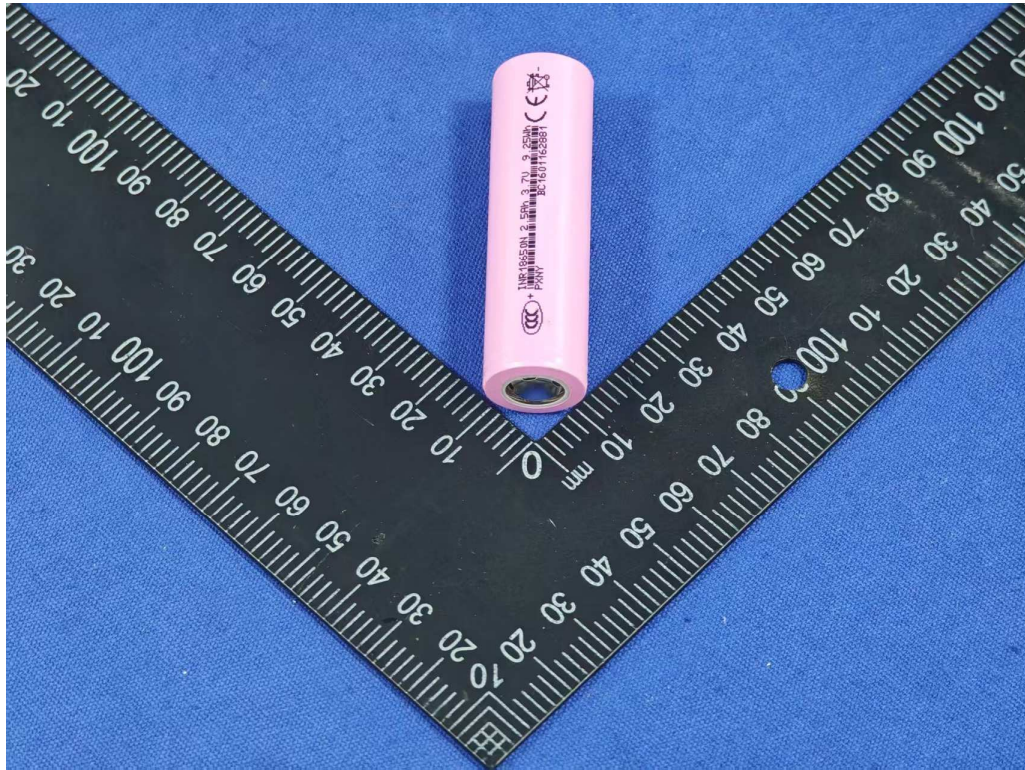
Picture 5 Front view of cell (Model: INR18650N)



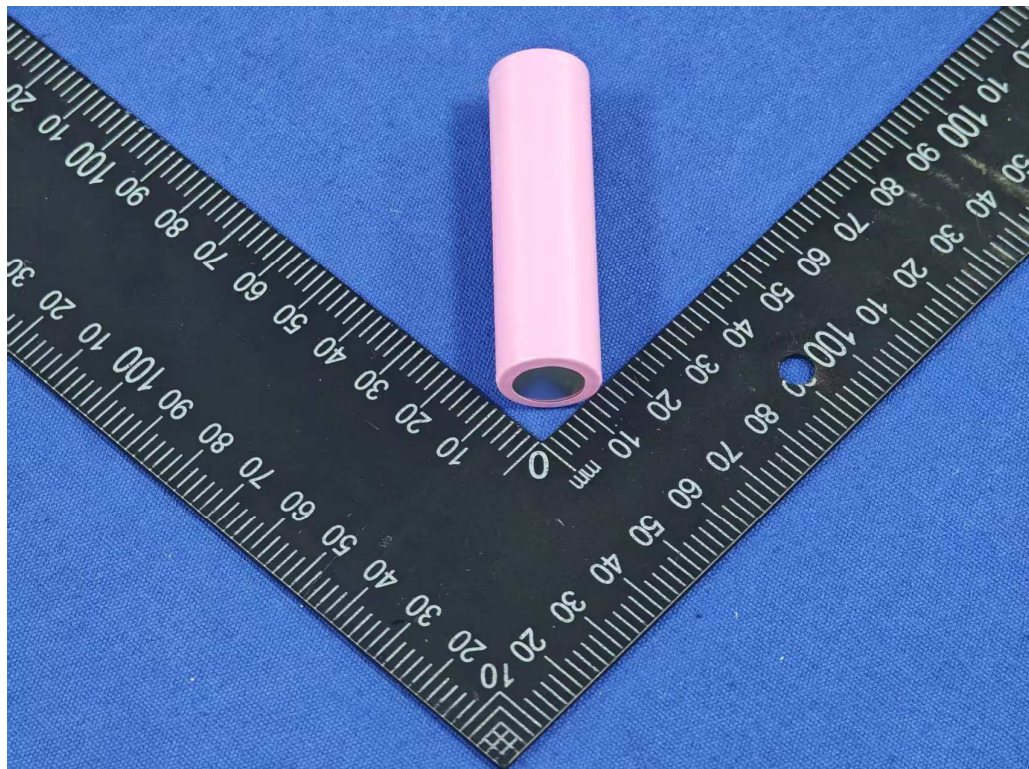
Picture 6 Back view of cell (Model: INR18650N)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



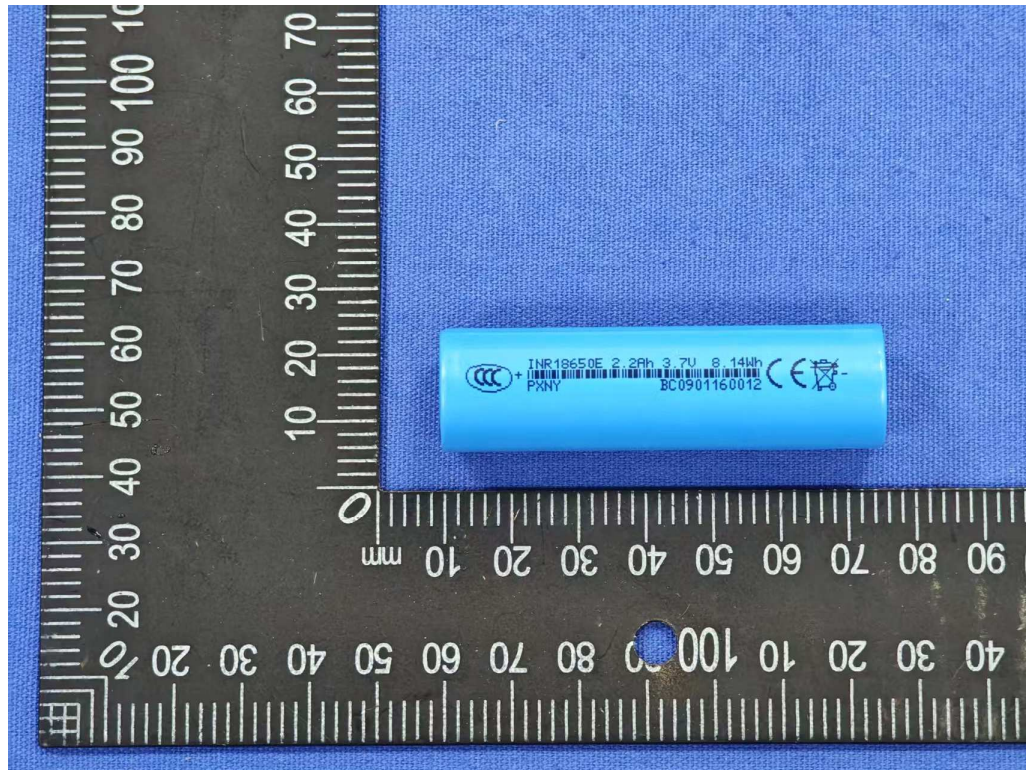
Picture 7 Top view of cell (Model: INR18650N)



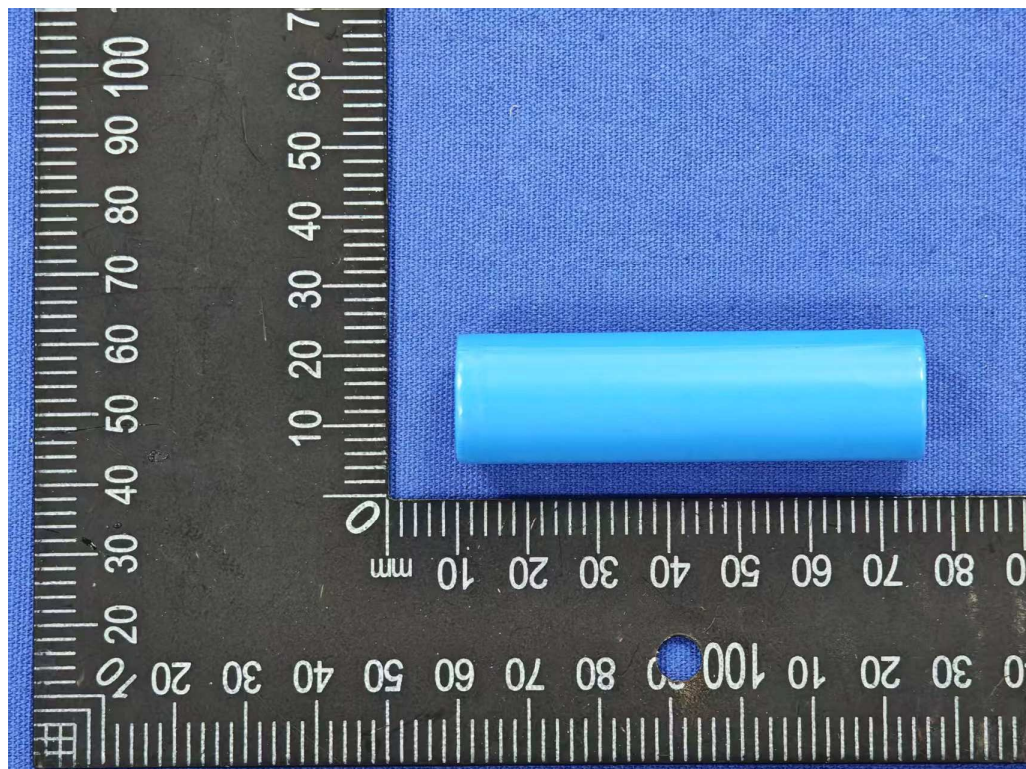
Picture 8 Bottom view of cell (Model: INR18650N)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



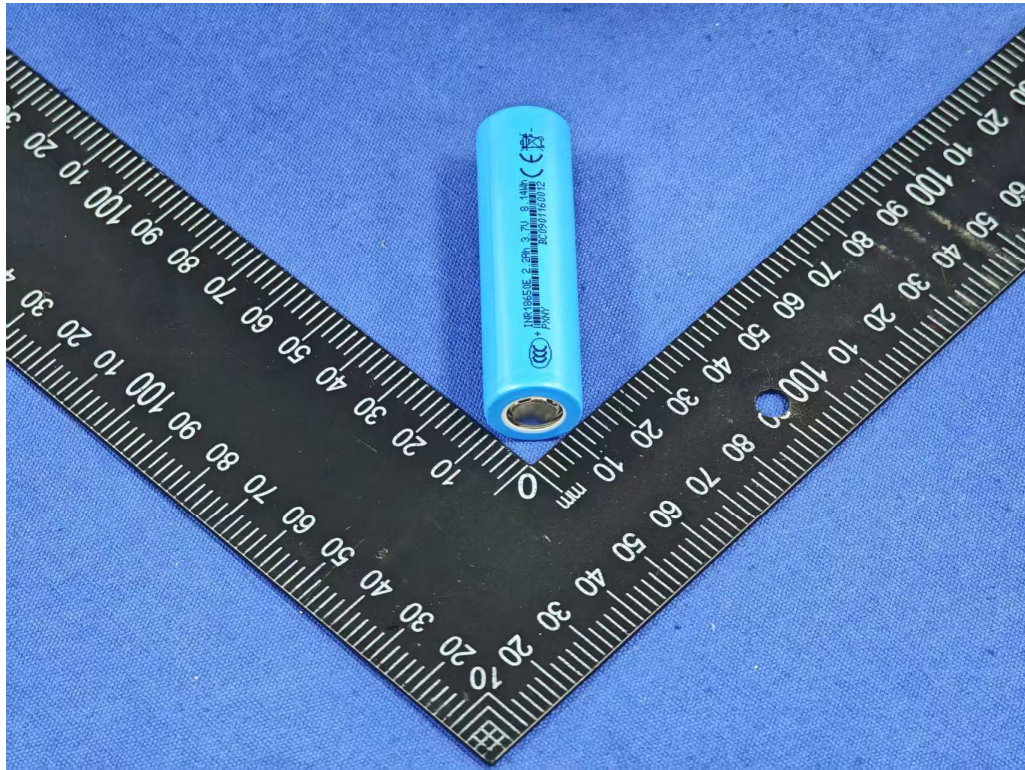
Picture 9 Front view of cell (Model: INR18650E)



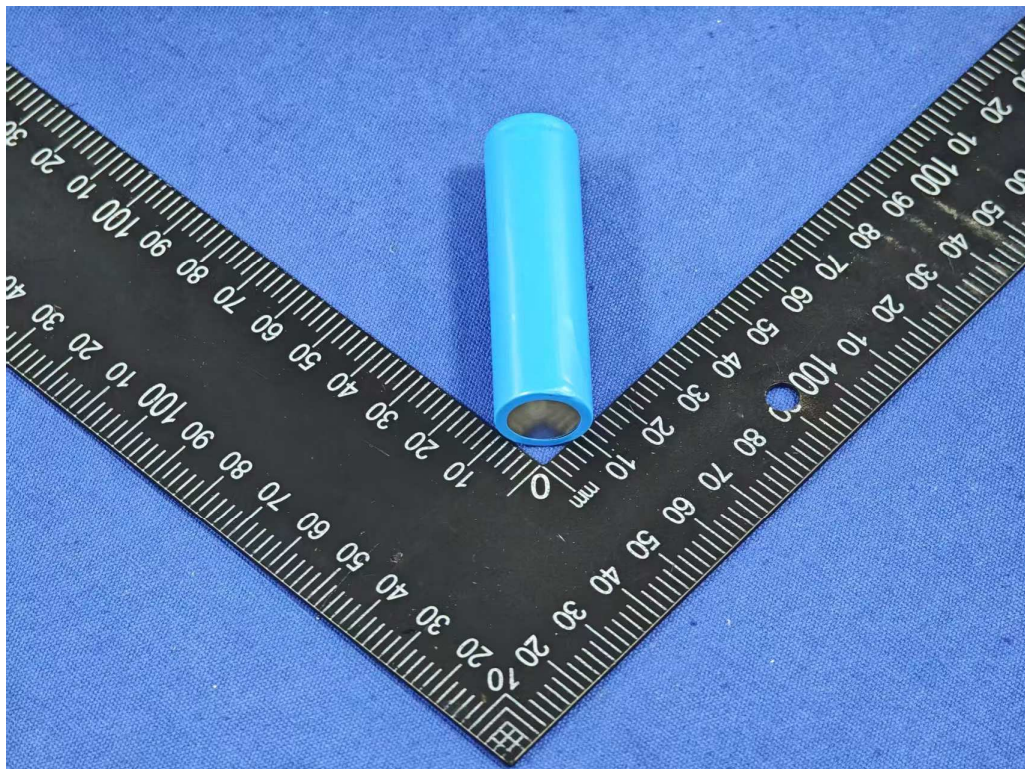
Picture 10 Back view of cell (Model: INR18650E)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



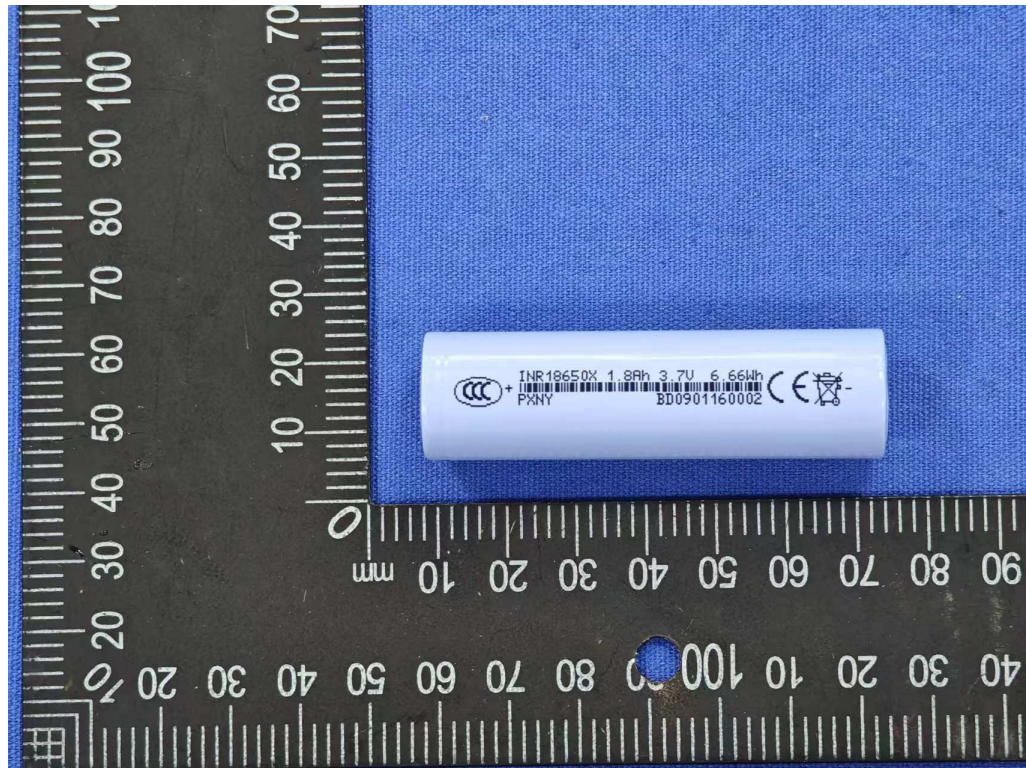
Picture 11 Top view of cell (Model: INR18650E)



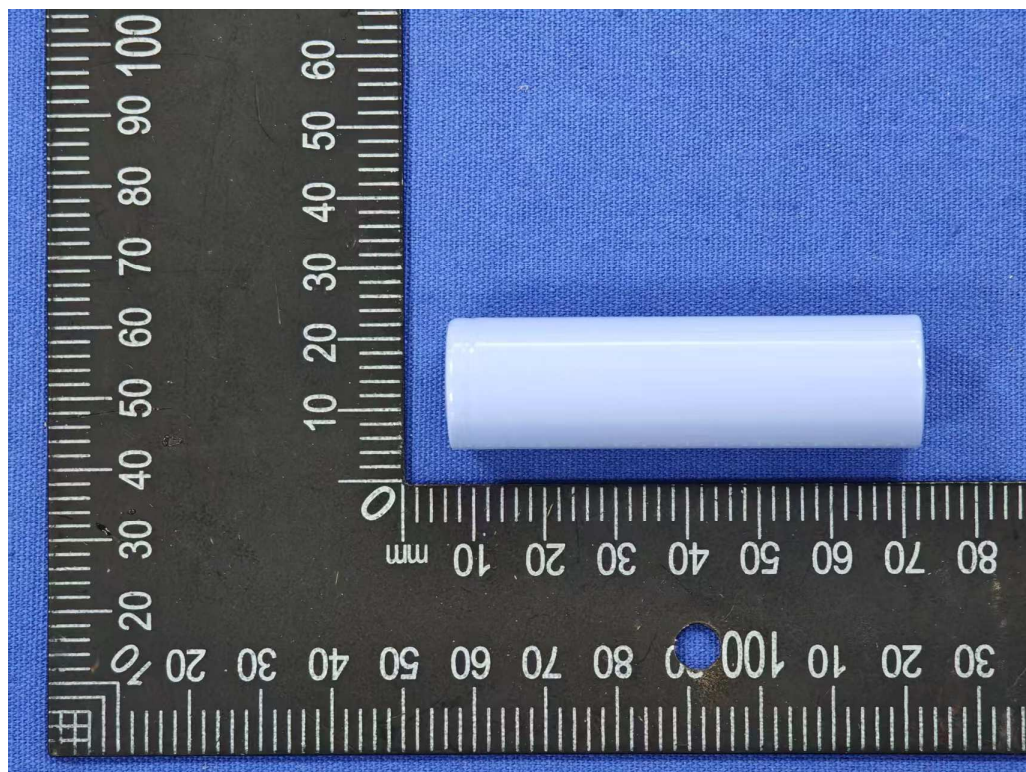
Picture 12 Bottom view of cell (Model: INR18650E)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



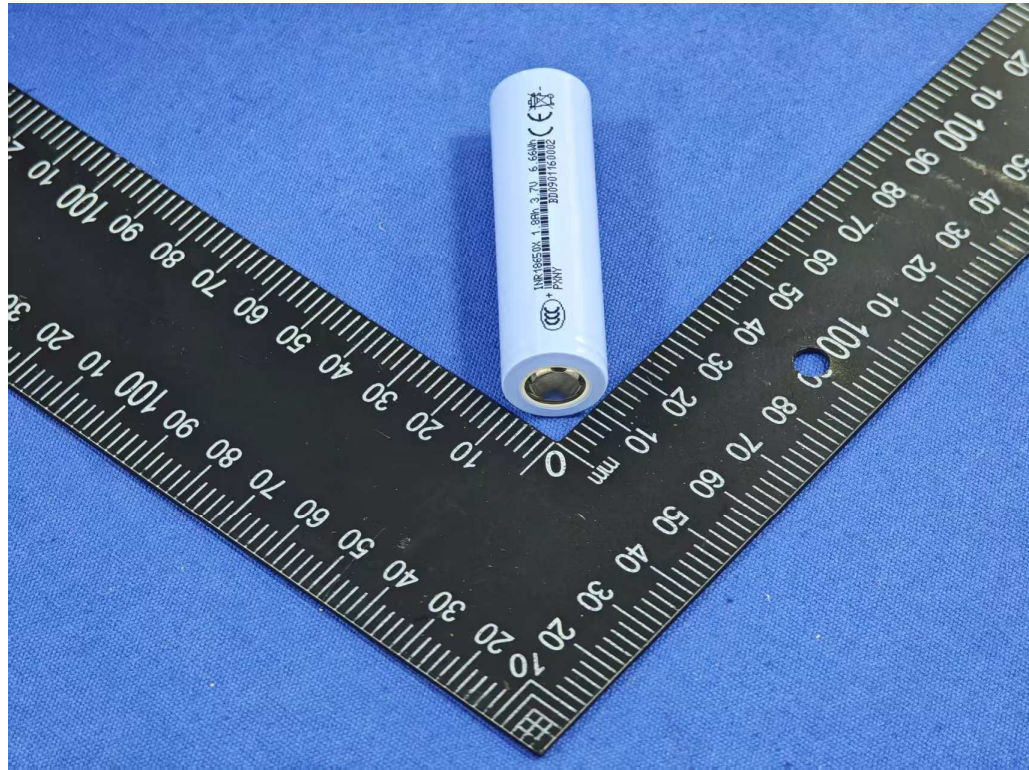
Picture 13 Front view of cell (Model: INR18650X)



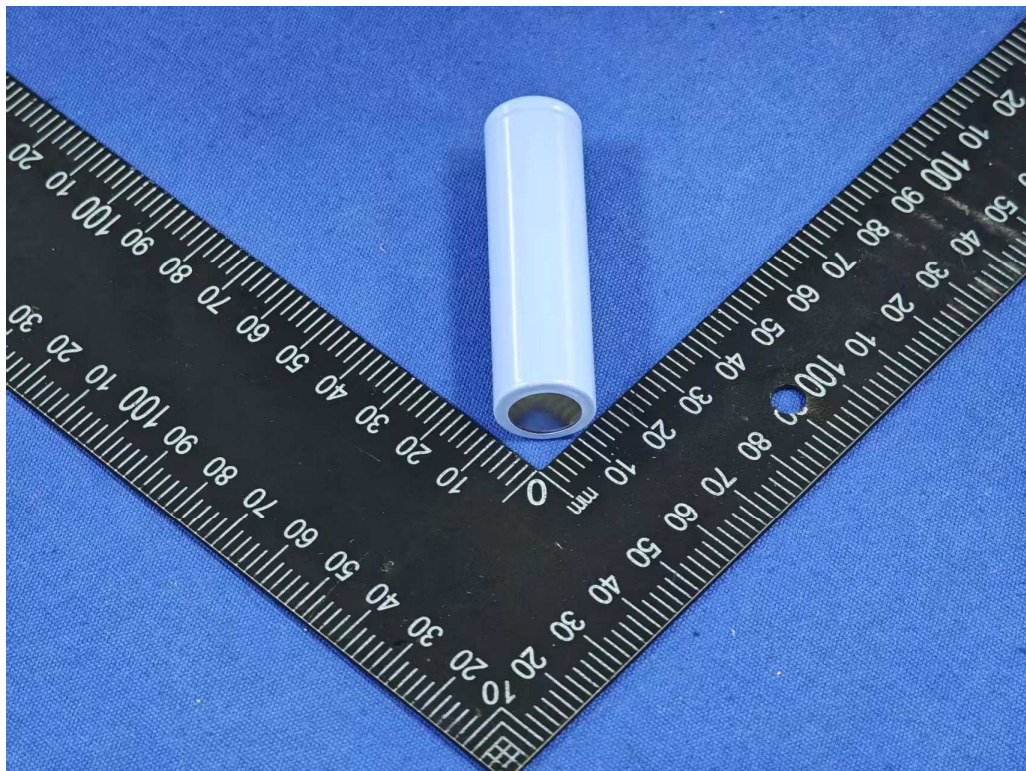
Picture 14 Back view of cell (Model: INR18650X)

Product: Li-ion Cell

Type Designation: INR18650V, INR18650N, INR18650E, INR18650X



Picture 15 Top view of cell (Model: INR18650X)



Picture 16 Bottom view of cell (Model: INR18650X)