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. ..... :	SHES190902342201
Date of issue ..... :	2019-10-25
Total number of pages..... :	37 Pages
Name of Testing Laboratory preparing the Report..... :	SGS-CSTC Standards Technical (Shanghai) Services Co., Ltd.
Applicant's name ..... :	DLG Power Battery (Ningbo Fenghua) Co., Ltd.
Address ..... :	No.3, Xinghai Road, Binhai New Area, Fenghua District, Ningbo, Zhejiang, P.R. China
Test specification:	
Standard ..... :	IEC 62133-2:2017
Test procedure..... :	CB Scheme
Non-standard test method ..... :	N/A
Test Report Form No..... :	IEC62133_2A
Test Report Form(s) Originator.... :	SGS-CSTC
Master TRF ..... :	Dated 2017-08-10

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

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The test results presented in this report relate only to the object tested.
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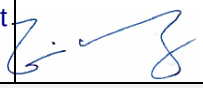
Test item description ..... :	Rechargeable Li-ion Cell
Trade Mark..... :	--
Manufacturer ..... :	Same as applicant
Model/Type reference ..... :	INR18650-320, INR18650-350, INR18650-3000, INR18650ET-350 NCM18650-260, NCM18650ET-260
Ratings ..... :	See page 6

Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):			
☒	**CB Testing Laboratory:**	National Center of Supervision & Inspection on Solar Photovoltaic Products Quality	
Testing location/ address.....:		Suite A-10F, Innovation & Creation Science Park, #5 Xinhua Road, WND, Wuxi, Jiangsu, P.R. China	
Tested by (name, function, signature).....:		Kiserrin Chen / Project Engineer	
Approved by (name, function, signature)...:		Eric Wang / Project Reviewer	
☐	**Testing procedure: CTF Stage 1:**	N/A	
Testing location/ address.....:			
Tested by (name, function, signature).....:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 2:**	N/A	
Testing location/ address.....:			
Tested by (name + signature).....:			
Witnessed by (name, function, signature)..:			
Approved by (name, function, signature)...:			
☐	**Testing procedure: CTF Stage 3:**	N/A	
☐	**Testing procedure: CTF Stage 4:**	N/A	
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: 3 pages of Photos;

Attachment 2: 1 page of Information for safety;

Attachment 3: 1 page of Packaging;

Attachment 4: 6 pages of Product specification;

Attachment 5: 1 page of ISO9001 certificate.

Summary of testing:

The sample(s) tested complies with the requirements of IEC 62133-2: 2017.

When determining the test conclusion, the Measurement Uncertainty of test has been considered.

Remark:

Model INR18650-320, INR18650-350, INR18650-3000, INR18650ET-350, NCM18650-260 and NCM18650ET-260 were subjected to full tests as far as applicable.

Tests performed (name of test and test clause):

☐ 5.2 Insulation resistance

☒ 7.2.1 Continuous charging at constant voltage (cells)

☐ 7.2.2 Case stress at high ambient temperature (battery)

☒ 7.3.1 External short circuit (cell)

☐ 7.3.2 External short circuit (battery)

☒ 7.3.3 Free fall

☒ 7.3.4 Thermal abuse (cells)

☒ 7.3.5 Crush (cells)

☐ 7.3.6 Over-charging of battery

☒ 7.3.7 Forced discharge (cells)

☐ 7.3.8. Mechanical tests (batteries)

☒ 7.3.9 Design evaluation – Forced internal short circuit (cells)

☐ Annex D Measurement of the internal AC resistance for coin cells

Testing location:

National Center of Supervision & Inspection on Solar Photovoltaic Products Quality

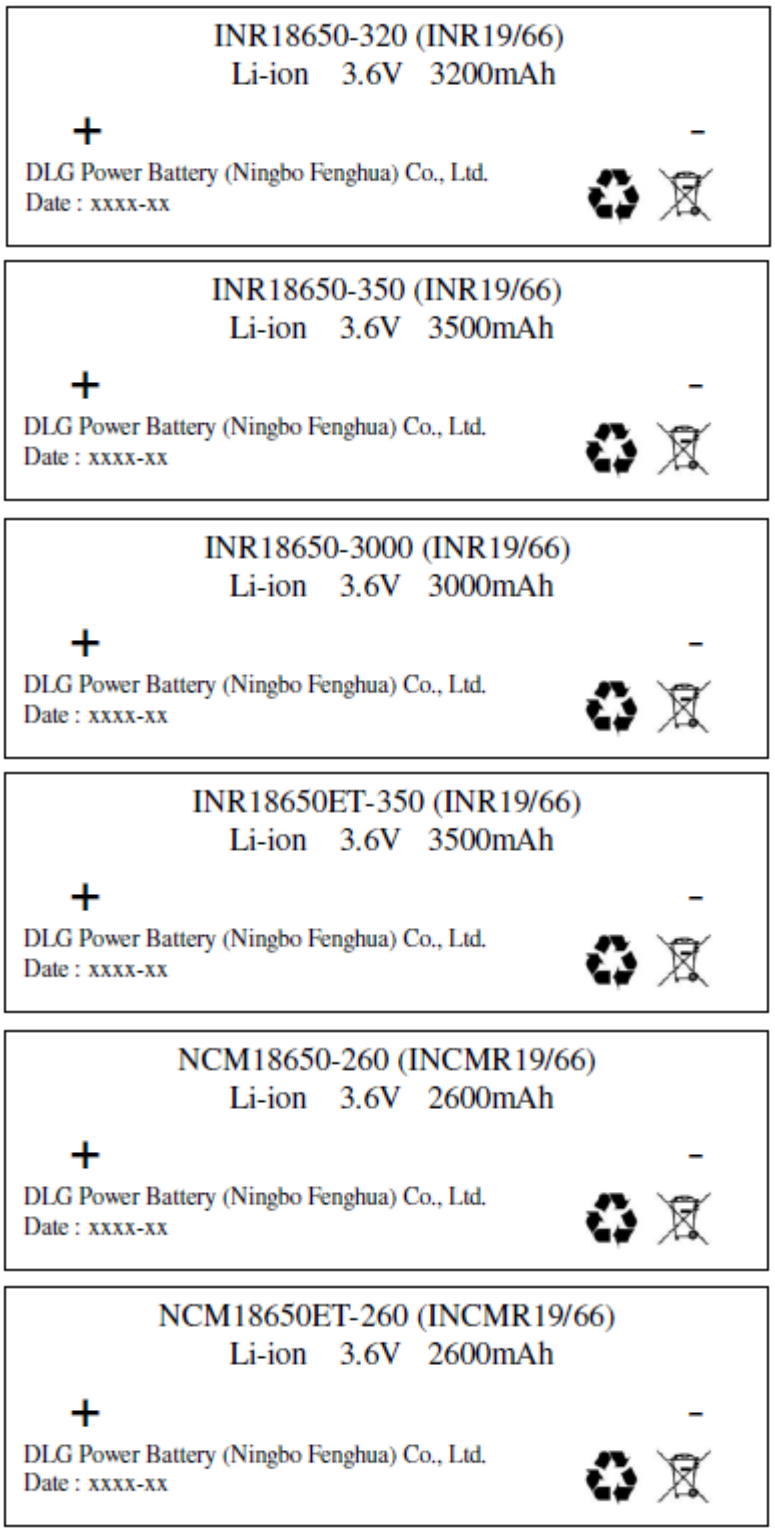
Suite A-10F, Innovation & Creation Science Park, #5 Xinhua Road, WND, Wuxi, Jiangsu, P.R. China

Summary of compliance with National Differences (List of countries addressed):

☒ The product fulfils the requirements of EN 62133-2:2017

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.



Note: The date code will be marked on the product after production.

Test item particulars..... :	--
Classification of installation and use ..... :	--
Supply Connection..... :	--
Recommend charging method declared by the manufacturer ..... :	Used 0,5C CC charge to 4,2 V, then CV charge till charge current decline to ⩽0,01C
Discharge current (0,2 It A)..... :	2600 mAh: 520 mA; 3000 mAh: 600 mA 3200 mAh: 640 mA; 3500 mAh: 700 mA
Specified final voltage ..... :	See page 6 for details
Upper limit charging voltage per cell..... :	4,2 V
Maximum charging current ..... :	See page 6 for details
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.....:	2019-09-11
Date (s) of performance of tests .....:	2019-09-11 to 2019-09-24

General remarks:

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

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

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

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:

Model	Rated voltage	Rated capacity	Designation	Maximum charge current	Maximum discharge current	Cut-off voltage
INR18650-320	3,6 V	3200 mAh	INR19/66	3200 mA	9600 mA	2,5 V
INR18650-350	3,6 V	3500 mAh	INR19/66	3500 mA	10500 mA	2,5 V
INR18650-3000	3,6 V	3000 mAh	INR19/66	3000 mA	9000 mA	2,5 V
INR18650ET-350	3,6 V	3500 mAh	INR19/66	3500 mA	7000 mA	2,5 V
NCM18650-260	3,6 V	2600 mAh	INCMR19/66	2600 mA	7800 mA	2,75 V
NCM18650ET-260	3,6 V	2600 mAh	INCMR19/66	2600 mA	5200 mA	2,75 V

Remark: See Attachment 4 for more details.

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		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 clearance 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	A pressure relief mechanism used to relieve excessive internal pressure.	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**		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-circuit		P
5.6	**Assembly of cells into batteries**		N/A
5.6.1	General		N/A
	Each battery have 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 have 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 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

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 not be 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 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 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 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 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 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	ISO 9001 certificate was submitted. See Attachment 5 for detail	P
5.8	**Battery safety components**		P
	According annex F		P
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	Test are performed according to test items specified in table 1 of the standard.	P
	Coin cells with resistance ≤ 3 Ω (measured according annex D) are tested according table 1		N/A
	Unless otherwise specified, tests are carried out in an ambient temperature of 20 °C ± 5 °C	The tests are conducted in an ambient of 20°C ± 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 overdischarge protection		P
	When conducting the short-circuit test, consideration 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		P
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 ± 5 °C, using the method declared by the manufacturer		P
	Prior to charging, the battery have been discharged at 20 °C ± 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 and 4 h, respectively, at ambient temperature of highest test temperature and lowest test temperature, 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 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..... :		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..... :		P
7.3.2	External short-circuit (battery)		N/A
	The batteries were tested until one of the following occurred:		—
	- 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 conducted on one to four (depending upon the protection circuit) of the five samples before conducting the short-circuit test		N/A
	A single fault applies to protective component parts such as MOSFET, fuse, thermostat or positive temperature coefficient (PTC) thermistor		N/A
	Results: No fire. No explosion..... :	(See appended table 7.3.2)	N/A

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
7.3.3	Free fall		P
	Results: No fire. No explosion		P
7.3.4	Thermal abuse (cells)		P
	Oven temperature (°C) ..... :	130	—
	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..... :		P
7.3.6	Over-charging of battery		N/A
	The 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		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..... :	(See appended table 7.3.6)	N/A
7.3.7	Forced discharge (cells)		P
	If 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
	If 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..... :		P
7.3.8	Mechanical tests (batteries)		N/A
7.3.8.1	Vibration		N/A

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
	Results: No fire, no explosion, no rupture, no leakage or venting. .....:	(See appended table 7.3.8.1)	N/A
7.3.8.2	Mechanical shock		N/A
	Results: No leakage, no venting, no rupture, no explosion and no fire .....:	(See appended table 7.3.8.2)	N/A
7.3.9	Design evaluation – Forced internal short-circuit (cells)		P
	The cells complied with national requirement for ..... :	France, Japan, Korea and Switzerland.	—
	The pressing was stopped upon:		—
	- 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	Cylindrical cells, 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 ensure that information is provided about current, voltage and temperature limits of their products	See Attachment 4 for detail	P
	Manufacturers of batteries ensure that equipment manufacturers and, in the case of direct sales, end-users are provided with information to minimize and mitigate hazards		N/A
	Systems analyses 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 provided to the end user	Not for end user	N/A
	Do not allow children to replace batteries without adult supervision		N/A
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

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
9	**MARKING**		P
9.1	**Cell marking**		P
	Cells marked as specified in IEC 61960, except coin cells	See page 4	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 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. Batteries also marked with an appropriate caution statement		N/A
	Terminals have clear polarity marking on the external surface of the battery		N/A
	Batteries with keyed external connectors designed for connection to specific end products need 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 according to 8.2 include a caution statement regarding the hazards of ingestion in accordance with 8.2		N/A
	When small cells and batteries are intended for direct sale in consumer-replaceable applications, caution for ingestion given on the immediate package		N/A
9.4	**Other information**		P
	Storage and disposal instructions	See attachment 2 for detail.	P
	Recommended charging instructions	See attachment 4 for detail.	P
10	**PACKAGING AND TRANSPORT**		P
	Packaging for coin cells not small enough to fit within the limits of the ingestion gauge of Figure 3		N/A

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
	The materials and packaging design are chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of environmental contaminants	See Attachment 3 for detail	P
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		N/A
A.3.2.1	General		N/A
A.3.2.2	Explanation of safety viewpoint		N/A
A.3.2.3	Safety requirements, when different upper limit charging voltage is applied	The upper limit charging voltage is 4,2 V during test.	N/A
A.4	**Consideration of temperature and charging current**		P
A.4.1	General		P
A.4.2	Recommended temperature range		—
A.4.2.1	General		P
A.4.2.2	Safety consideration when a different recommended temperature range is applied	The recommended temperature range: 0 °C to 45 °C in specification.	P
A.4.3	High temperature range	The upper charging temperature is 45 °C during test.	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
A.4.4	Low temperature range	The lowest charging temperature is 0 °C in specification.	P
A.4.4.1	General		P
A.4.4.2	Explanation of safety viewpoint		P
A.4.4.3	Safety considerations, when specifying charging conditions in the low temperature range		N/A

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
A.4.4.4	Safety considerations when specifying a new lower limit in the low temperature range	The samples charged at 0 °C by the methods specified in 8.2 to 8.3.	P
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		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
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**

IEC 62133-2			
Clause	Requirement + Test	Result - Remark	Verdict
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.....:	(See appended table D.2)	N/A
	Coin cells with an internal resistance of less than or equal to 3 Ω are subjected to the testing according to Clause 6 and Table 1		N/A
	Coin cells with an internal resistance greater than 3 Ω require no further testing		N/A
ANNEX E	**PACKAGING AND TRANSPORT**		**P**
ANNEX F	**COMPONENT STANDARDS REFERENCES**		**N/A**

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)]**
Cell 1	DLG Power Battery (Ningbo Fenghua) Co., Ltd.	INR18650-320	3,6V, 3200mAh	IEC 62133-2: 2017 EN 62133-2:2017	Tested with appliance
-Electrolyte	--	--	LiPF6/EC/EMC/DMC H2O≤20ppm HF≤50ppm	--	--
-Separator	--	61*0,015mm (12um+3um)	PE/r-AlOOH Thickness: 15± 1,5um H2O≤800ppm	--	--
-Positive electrode	--	--	SiO and graphite composite material D50=17±2um	--	--
-Negative electrode	--	--	NCM D50=11±2um	--	--
Cell 2	DLG Power Battery (Ningbo Fenghua) Co., Ltd.	INR18650-350	3,6V, 3500mAh	IEC 62133-2: 2017 EN 62133-2:2017	Tested with appliance
-Electrolyte	--	--	LiPF6/EC/EMC/DMC H2O≤20ppm HF≤50ppm	--	--
-Separator	--	61*0,014mm (11um+3um)	PE/r-AlOOH Thickness: 14±2um H2O≤1000ppm	--	--
-Positive electrode	--	--	Si and C composite material D50=16±2um	--	--
-Negative electrode	--	--	NCA D50=11,5±2um	--	--
Cell 3	DLG Power Battery (Ningbo Fenghua) Co., Ltd.	INR18650-3000	3,6V, 3000mAh	IEC 62133-2: 2017 EN 62133-2:2017	Tested with appliance
-Electrolyte	--	--	LiPF6/EC/EMC/DMC H2O≤20ppm HF≤50ppm	--	--
-Separator	--	61*0,015mm (12um+3um)	PE/r-AlOOH Thickness: 15± 1,5um H2O≤800ppm	--	--
-Positive electrode	--	--	SiO and graphite composite material D50=17±2um	--	--
-Negative electrode	--	--	NCM D50=11±2um	--	--

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

Cell 4	DLG Power Battery (Ningbo Fenghua) Co., Ltd.	INR18650E T-350	3,6V, 3500mAh	IEC 62133-2: 2017 EN 62133-2:2017	Tested with appliance
-Electrolyte	--	--	LiPF6/EC/EMC/DMC H2O≤20ppm HF≤50ppm	--	--
-Separator	--	61*0,014mm (11um+3um)	PE/r-AlOOH Thickness: 14±2um H2O≤1000ppm	--	--
-Positive electrode	--	--	Si and C composite material D50=16±2um	--	--
-Negative electrode	--	--	NCA D50=11,5±2um	--	--
Cell 5	DLG Power Battery (Ningbo Fenghua) Co., Ltd.	NCM18650-260	3,6V, 2600mAh	IEC 62133-2: 2017 EN 62133-2:2017	Tested with appliance
-Electrolyte	--	--	LiPF6/EC/EMC/DMC H2O≤20ppm HF≤50ppm	--	--
-Separator	--	61*0,015mm (12um+3um)	PE/r-AlOOH Thickness: 15± 1,5um H2O≤800ppm	--	--
-Positive electrode	--	--	Graphite D50=14±2um	--	--
-Negative electrode	--	--	NCM D50=11±2um	--	--
Cell 6	DLG Power Battery (Ningbo Fenghua) Co., Ltd.	NCM18650 ET-260	3,6V, 2600mAh	IEC 62133-2: 2017 EN 62133-2:2017	Tested with appliance
-Electrolyte	--	--	LiPF6/EC/EMC/DMC H2O≤20ppm HF≤50ppm	--	--
-Separator	--	61*0,015mm (12um+3um)	PE/r-AlOOH Thickness: 15± 1,5um H2O≤800ppm	--	--
-Positive electrode	--	--	Graphite D50=14±2um	--	--
-Negative electrode	--	--	NCM D50=11±2um	--	--

Supplementary information:
[1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.

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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**
INR18650-320 (#1)	4,2	1,6	4,16	Pass
INR18650-320 (#2)	4,2	1,6	4,16	Pass
INR18650-320 (#3)	4,2	1,6	4,15	Pass
INR18650-320 (#4)	4,2	1,6	4,16	Pass
INR18650-320 (#5)	4,2	1,6	4,16	Pass
Supplementary information: - No fire or explosion - No leakage				

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**
INR18650-350 (#1)	4,2	1,75	4,16	Pass
INR18650-350 (#2)	4,2	1,75	4,16	Pass
INR18650-350 (#3)	4,2	1,75	4,15	Pass
INR18650-350 (#4)	4,2	1,75	4,16	Pass
INR18650-350 (#5)	4,2	1,75	4,15	Pass
Supplementary information: - No fire or explosion - No leakage				

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**
INR18650-3000 (#1)	4,2	1,5	4,16	Pass
INR18650-3000 (#2)	4,2	1,5	4,15	Pass
INR18650-3000 (#3)	4,2	1,5	4,16	Pass
INR18650-3000 (#4)	4,2	1,5	4,15	Pass
INR18650-3000 (#5)	4,2	1,5	4,15	Pass
Supplementary information: - No fire or explosion - No leakage				

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**
INR18650ET-350 (#1)	4,2	1,75	4,15	Pass
INR18650ET-350 (#2)	4,2	1,75	4,16	Pass
INR18650ET-350 (#3)	4,2	1,75	4,16	Pass
INR18650ET-350 (#4)	4,2	1,75	4,15	Pass
INR18650ET-350 (#5)	4,2	1,75	4,16	Pass
Supplementary information: - No fire or explosion - No leakage				

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**
NCM18650-260 (#1)	4,2	1,3	4,16	Pass
NCM18650-260 (#2)	4,2	1,3	4,16	Pass
NCM18650-260 (#3)	4,2	1,3	4,15	Pass
NCM18650-260 (#4)	4,2	1,3	4,15	Pass
NCM18650-260 (#5)	4,2	1,3	4,16	Pass
Supplementary information: - No fire or explosion - No leakage				

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**
NCM18650ET-260 (#1)	4,2	1,3	4,16	Pass
NCM18650ET-260 (#2)	4,2	1,3	4,16	Pass
NCM18650ET-260 (#3)	4,2	1,3	4,15	Pass
NCM18650ET-260 (#4)	4,2	1,3	4,15	Pass
NCM18650ET-260 (#5)	4,2	1,3	4,16	Pass
Supplementary information: - No fire or explosion - No leakage				

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Clause	Requirement + Test	Result - Remark	Verdict

7.2.2	TABLE: Case stress at high ambient temperature		N/A
Sample no.	**OCV at start of test (Vdc)**		**Results**
--	--		--
Supplementary information: None			

7.3.1	TABLE: External short-circuit (cell)				P
Sample no.	**Ambient T (°C)**	**OCV before test (Vdc)**	**Resistance of circuit (mΩ)**	**Maximum case temperature rise ΔT (K)**	**Results**
Samples charged at charging temperature upper limit [1)]					
INR18650-320 (#6)	55	4,16	85	33	Pass
INR18650-320 (#7)	55	4,16	85	31	Pass
INR18650-320 (#8)	55	4,15	85	30	Pass
INR18650-320 (#9)	55	4,16	86	34	Pass
INR18650-320 (#10)	55	4,16	85	33	Pass
Samples charged at charging temperature lower limit [2)]					
INR18650-320 (#11)	55	4,08	85	53	Pass
INR18650-320 (#12)	55	4,08	85	50	Pass
INR18650-320 (#13)	55	4,08	85	49	Pass
INR18650-320 (#14)	55	4,08	85	52	Pass
INR18650-320 (#15)	55	4,09	85	54	Pass
Supplementary information: - No fire or explosion					

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

7.3.1	TABLE: External short-circuit (cell)				P
Sample no.	**Ambient T (°C)**	**OCV before test (Vdc)**	**Resistance of circuit (mΩ)**	**Maximum case temperature rise ΔT (K)**	**Results**
Samples charged at charging temperature upper limit [1)]					
INR18650-350 (#6)	55	4,15	85	37	Pass
INR18650-350 (#7)	55	4,16	84	35	Pass
INR18650-350 (#8)	55	4,15	85	34	Pass
INR18650-350 (#9)	55	4,15	86	39	Pass
INR18650-350 (#10)	55	4,16	84	37	Pass
Samples charged at charging temperature lower limit [2)]					
INR18650-350 (#11)	55	4,08	85	45	Pass
INR18650-350 (#12)	55	4,08	85	43	Pass
INR18650-350 (#13)	55	4,07	85	40	Pass
INR18650-350 (#14)	55	4,08	85	49	Pass
INR18650-350 (#15)	55	4,08	85	41	Pass
Supplementary information: - No fire or explosion					

7.3.1	TABLE: External short-circuit (cell)				P
Sample no.	**Ambient T (°C)**	**OCV before test (Vdc)**	**Resistance of circuit (mΩ)**	**Maximum case temperature rise ΔT (K)**	**Results**
Samples charged at charging temperature upper limit [1)]					
INR18650-3000 (#6)	55	4,16	85	49	Pass
INR18650-3000 (#7)	55	4,16	85	47	Pass
INR18650-3000 (#8)	55	4,16	86	51	Pass
INR18650-3000 (#9)	55	4,15	84	50	Pass
INR18650-3000 (#10)	55	4,15	85	46	Pass
Samples charged at charging temperature lower limit [2)]					
INR18650-3000 (#11)	55	4,07	85	56	Pass
INR18650-3000 (#12)	55	4,08	85	58	Pass
INR18650-3000 (#13)	55	4,08	85	50	Pass
INR18650-3000 (#14)	55	4,07	85	57	Pass
INR18650-3000 (#15)	55	4,08	85	53	Pass
Supplementary information: - No fire or explosion					

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

7.3.1	TABLE: External short-circuit (cell)				P
Sample no.	**Ambient T (°C)**	**OCV before test (Vdc)**	**Resistance of circuit (mΩ)**	**Maximum case temperature rise ΔT (K)**	**Results**
Samples charged at charging temperature upper limit [1)]					
INR18650ET-350 (#6)	55	4,16	85	19	Pass
INR18650ET-350 (#7)	55	4,16	85	20	Pass
INR18650ET-350 (#8)	55	4,16	84	24	Pass
INR18650ET-350 (#9)	55	4,15	85	20	Pass
INR18650ET-350 (#10)	55	4,16	85	25	Pass
Samples charged at charging temperature lower limit [2)]					
INR18650ET-350 (#11)	55	4,08	85	16	Pass
INR18650ET-350 (#12)	55	4,08	84	19	Pass
INR18650ET-350 (#13)	55	4,07	85	16	Pass
INR18650ET-350 (#14)	55	4,08	85	20	Pass
INR18650ET-350 (#15)	55	4,08	85	17	Pass
Supplementary information: - No fire or explosion					

7.3.1	TABLE: External short-circuit (cell)				P
Sample no.	**Ambient T (°C)**	**OCV before test (Vdc)**	**Resistance of circuit (mΩ)**	**Maximum case temperature rise ΔT (K)**	**Results**
Samples charged at charging temperature upper limit [1)]					
NCM18650-260 (#6)	55	4,16	86	30	Pass
NCM18650-260 (#7)	55	4,16	85	28	Pass
NCM18650-260 (#8)	55	4,15	85	29	Pass
NCM18650-260 (#9)	55	4,16	87	32	Pass
NCM18650-260 (#10)	55	4,15	85	25	Pass
Samples charged at charging temperature lower limit [2)]					
NCM18650-260 (#11)	55	4,08	85	27	Pass
NCM18650-260 (#12)	55	4,09	85	25	Pass
NCM18650-260 (#13)	55	4,08	85	29	Pass
NCM18650-260 (#14)	55	4,08	85	32	Pass
NCM18650-260 (#15)	55	4,08	85	29	Pass
Supplementary information: - No fire or explosion					

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

7.3.1	TABLE: External short-circuit (cell)				P
Sample no.	**Ambient T (°C)**	**OCV before test (Vdc)**	**Resistance of circuit (mΩ)**	**Maximum case temperature rise ΔT (K)**	**Results**
Samples charged at charging temperature upper limit [1)]					
NCM18650ET-260 (#6)	55	4,16	85	16	Pass
NCM18650ET-260 (#7)	55	4,16	85	17	Pass
NCM18650ET-260 (#8)	55	4,15	85	16	Pass
NCM18650ET-260 (#9)	55	4,15	85	18	Pass
NCM18650ET-260 (#10)	55	4,16	85	18	Pass
Samples charged at charging temperature lower limit [2)]					
NCM18650ET-260 (#11)	55	4,08	85	19	Pass
NCM18650ET-260 (#12)	55	4,08	85	19	Pass
NCM18650ET-260 (#13)	55	4,08	85	19	Pass
NCM18650ET-260 (#14)	55	4,08	85	18	Pass
NCM18650ET-260 (#15)	55	4,09	85	20	Pass
Supplementary information: - No fire or explosion					

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)**	**Component single fault condition**	**Results**
--	--	--	--	--	--	--
Supplementary information: None						

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Clause	Requirement + Test	Result - Remark	Verdict

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)]				
INR18650-320 (#29)	4,16	4,15	13,1	Pass
INR18650-320 (#30)	4,16	4,14	13,1	Pass
INR18650-320 (#31)	4,15	4,14	13,1	Pass
INR18650-320 (#32)	4,16	4,14	13,1	Pass
INR18650-320 (#33)	4,16	4,13	13,1	Pass
Samples charged at charging temperature lower limit [2)]				
INR18650-320 (#34)	4,09	4,09	13,1	Pass
INR18650-320 (#35)	4,08	4,08	13,1	Pass
INR18650-320 (#36)	4,08	4,06	13,1	Pass
INR18650-320 (#37)	4,09	4,09	13,1	Pass
INR18650-320 (#38)	4,09	4,08	13,1	Pass
Supplementary information: - No fire or explosion				

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)]				
INR18650-350 (#29)	4,16	3,80	13,1	Pass
INR18650-350 (#30)	4,15	3,81	13,1	Pass
INR18650-350 (#31)	4,16	3,85	13,1	Pass
INR18650-350 (#32)	4,16	3,81	13,1	Pass
INR18650-350 (#33)	4,15	3,80	13,1	Pass
Samples charged at charging temperature lower limit [2)]				
INR18650-350 (#34)	4,08	4,04	13,1	Pass
INR18650-350 (#35)	4,07	4,03	13,1	Pass
INR18650-350 (#36)	4,08	4,03	13,1	Pass
INR18650-350 (#37)	4,08	4,04	13,1	Pass
INR18650-350 (#38)	4,08	4,03	13,1	Pass
Supplementary information: - No fire or explosion				

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

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)]				
INR18650-3000 (#29)	4,16	4,13	13,1	Pass
INR18650-3000 (#30)	4,16	4,14	13,1	Pass
INR18650-3000 (#31)	4,16	4,14	13,1	Pass
INR18650-3000 (#32)	4,15	4,13	13,1	Pass
INR18650-3000 (#33)	4,16	4,14	13,1	Pass
Samples charged at charging temperature lower limit [2)]				
INR18650-3000 (#34)	4,08	4,08	13,1	Pass
INR18650-3000 (#35)	4,08	4,07	13,1	Pass
INR18650-3000 (#36)	4,08	4,08	13,1	Pass
INR18650-3000 (#37)	4,08	4,08	13,1	Pass
INR18650-3000 (#38)	4,08	4,08	13,1	Pass
Supplementary information: - No fire or explosion				

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)]				
INR18650ET-350 (#29)	4,16	3,93	13,1	Pass
INR18650ET-350 (#30)	4,16	3,92	13,1	Pass
INR18650ET-350 (#31)	4,15	3,93	13,1	Pass
INR18650ET-350 (#32)	4,16	3,93	13,1	Pass
INR18650ET-350 (#33)	4,16	3,93	13,1	Pass
Samples charged at charging temperature lower limit [2)]				
INR18650ET-350 (#34)	4,08	3,88	13,1	Pass
INR18650ET-350 (#35)	4,09	3,89	13,1	Pass
INR18650ET-350 (#36)	4,09	3,89	13,1	Pass
INR18650ET-350 (#37)	4,09	3,88	13,1	Pass
INR18650ET-350 (#38)	4,08	3,89	13,1	Pass
Supplementary information: - No fire or explosion				

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

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)]				
NCM18650-260 (#29)	4,16	4,14	13,1	Pass
NCM18650-260 (#30)	4,15	4,13	13,1	Pass
NCM18650-260 (#31)	4,16	4,14	13,1	Pass
NCM18650-260 (#32)	4,15	4,14	13,1	Pass
NCM18650-260 (#33)	4,16	4,13	13,1	Pass
Samples charged at charging temperature lower limit [2)]				
NCM18650-260 (#34)	4,08	4,06	13,1	Pass
NCM18650-260 (#35)	4,09	4,07	13,1	Pass
NCM18650-260 (#36)	4,09	4,07	13,1	Pass
NCM18650-260 (#37)	4,08	4,07	13,1	Pass
NCM18650-260 (#38)	4,08	4,06	13,1	Pass
Supplementary information: - No fire or explosion				

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)]				
NCM18650ET-260 (#29)	4,16	4,15	13,1	Pass
NCM18650ET-260 (#30)	4,16	4,15	13,1	Pass
NCM18650ET-260 (#31)	4,16	4,14	13,1	Pass
NCM18650ET-260 (#32)	4,15	4,14	13,1	Pass
NCM18650ET-260 (#33)	4,16	4,15	13,1	Pass
Samples charged at charging temperature lower limit [2)]				
NCM18650ET-260 (#34)	4,08	4,07	13,1	Pass
NCM18650ET-260 (#35)	4,08	4,07	13,1	Pass
NCM18650ET-260 (#36)	4,08	4,07	13,1	Pass
NCM18650ET-260 (#37)	4,08	4,06	13,1	Pass
NCM18650ET-260 (#38)	4,08	4,06	13,1	Pass
Supplementary information: - No fire or explosion				

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

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
--	--	--	--	--

Supplementary information: None

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
INR18650-320 (#39)	3,16	3,2	4,2	Pass
INR18650-320 (#40)	3,16	3,2	4,2	Pass
INR18650-320 (#41)	3,15	3,2	4,2	Pass
INR18650-320 (#42)	3,16	3,2	4,2	Pass
INR18650-320 (#43)	3,16	3,2	4,2	Pass

Supplementary information:
- No fire or explosion

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
INR18650-350 (#39)	2,98	3,5	4,2	Pass
INR18650-350 (#40)	2,98	3,5	4,2	Pass
INR18650-350 (#41)	2,97	3,5	4,2	Pass
INR18650-350 (#42)	2,98	3,5	4,2	Pass
INR18650-350 (#43)	2,97	3,5	4,2	Pass

Supplementary information:
- No fire or explosion

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

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**
INR18650-3000 (#39)	3,18	3,0	4,2	Pass
INR18650-3000 (#40)	3,18	3,0	4,2	Pass
INR18650-3000 (#41)	3,20	3,0	4,2	Pass
INR18650-3000 (#42)	3,18	3,0	4,2	Pass
INR18650-3000 (#43)	3,18	3,0	4,2	Pass
Supplementary information: - No fire or explosion				

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**
INR18650ET-350 (#39)	2,93	3,5	4,2	Pass
INR18650ET-350 (#40)	2,95	3,5	4,2	Pass
INR18650ET-350 (#41)	2,93	3,5	4,2	Pass
INR18650ET-350 (#42)	2,93	3,5	4,2	Pass
INR18650ET-350 (#43)	2,93	3,5	4,2	Pass
Supplementary information: - No fire or explosion				

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**
NCM18650-260 (#39)	3,27	2,6	4,2	Pass
NCM18650-260 (#40)	3,26	2,6	4,2	Pass
NCM18650-260 (#41)	3,27	2,6	4,2	Pass
NCM18650-260 (#42)	3,26	2,6	4,2	Pass
NCM18650-260 (#43)	3,26	2,6	4,2	Pass
Supplementary information: - No fire or explosion				

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

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**
NCM18650ET-260 (#39)	3,25	2,6	4,2	Pass
NCM18650ET-260 (#40)	3,23	2,6	4,2	Pass
NCM18650ET-260 (#41)	3,24	2,6	4,2	Pass
NCM18650ET-260 (#42)	3,25	2,6	4,2	Pass
NCM18650ET-260 (#43)	3,24	2,6	4,2	Pass
Supplementary information: - 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**
--	--	--	--	--	--
Supplementary information: None					

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**
--	--	--	--	--	--
Supplementary information: None					

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 [2)]					
INR18650-320 (#44)	45	4,16	1	800	Pass
INR18650-320 (#45)	45	4,16	1	800	Pass
INR18650-320 (#46)	45	4,16	1	800	Pass
INR18650-320 (#47)	45	4,16	1	800	Pass
INR18650-320 (#48)	45	4,15	1	800	Pass
Samples charged at charging temperature lower limit [3)]					
INR18650-320 (#49)	0	4,16	1	800	Pass
INR18650-320 (#50)	0	4,15	1	800	Pass
INR18650-320 (#51)	0	4,16	1	800	Pass
INR18650-320 (#52)	0	4,16	1	800	Pass
INR18650-320 (#53)	0	4,16	1	800	Pass

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.

- No fire or explosion

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 [2)]					
INR18650-350 (#44)	45	4,15	1	800	Pass
INR18650-350 (#45)	45	4,15	1	800	Pass
INR18650-350 (#46)	45	4,16	1	800	Pass
INR18650-350 (#47)	45	4,16	1	800	Pass
INR18650-350 (#48)	45	4,15	1	800	Pass
Samples charged at charging temperature lower limit [3)]					
INR18650-350 (#49)	0	4,16	1	800	Pass
INR18650-350 (#50)	0	4,15	1	800	Pass
INR18650-350 (#51)	0	4,15	1	800	Pass
INR18650-350 (#52)	0	4,15	1	800	Pass
INR18650-350 (#53)	0	4,16	1	800	Pass

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.

- No fire or explosion

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 [2)]					
INR18650-3000 (#44)	45	4,15	1	800	Pass
INR18650-3000 (#45)	45	4,15	1	800	Pass
INR18650-3000 (#46)	45	4,16	1	800	Pass
INR18650-3000 (#47)	45	4,16	1	800	Pass
INR18650-3000 (#48)	45	4,15	1	800	Pass
Samples charged at charging temperature lower limit [3)]					
INR18650-3000 (#49)	0	4,16	1	800	Pass
INR18650-3000 (#50)	0	4,15	1	800	Pass
INR18650-3000 (#51)	0	4,15	1	800	Pass
INR18650-3000 (#52)	0	4,15	1	800	Pass
INR18650-3000 (#53)	0	4,16	1	800	Pass

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.

- No fire or explosion

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 [2)]					
INR18650ET-350 (#44)	45	4,15	1	800	Pass
INR18650ET-350 (#45)	45	4,16	1	800	Pass
INR18650ET-350 (#46)	45	4,15	1	800	Pass
INR18650ET-350 (#47)	45	4,15	1	800	Pass
INR18650ET-350 (#48)	45	4,16	1	800	Pass
Samples charged at charging temperature lower limit [3)]					
INR18650ET-350 (#49)	0	4,16	1	800	Pass
INR18650ET-350 (#50)	0	4,16	1	800	Pass
INR18650ET-350 (#51)	0	4,15	1	800	Pass
INR18650ET-350 (#52)	0	4,15	1	800	Pass
INR18650ET-350 (#53)	0	4,16	1	800	Pass

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.

- No fire or explosion

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 [2)]					
NCM18650-260 (#44)	45	4,15	1	800	Pass
NCM18650-260 (#45)	45	4,15	1	800	Pass
NCM18650-260 (#46)	45	4,16	1	800	Pass
NCM18650-260 (#47)	45	4,15	1	800	Pass
NCM18650-260 (#48)	45	4,15	1	800	Pass
Samples charged at charging temperature lower limit [3)]					
NCM18650-260 (#49)	0	4,16	1	800	Pass
NCM18650-260 (#50)	0	4,15	1	800	Pass
NCM18650-260 (#51)	0	4,15	1	800	Pass
NCM18650-260 (#52)	0	4,16	1	800	Pass
NCM18650-260 (#53)	0	4,15	1	800	Pass

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.

- No fire or explosion

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 [2)]						
NCM18650ET-260 (#44)		45	4,15	1	800	Pass
NCM18650ET-260 (#45)		45	4,15	1	800	Pass
NCM18650ET-260 (#46)		45	4,16	1	800	Pass
NCM18650ET-260 (#47)		45	4,15	1	800	Pass
NCM18650ET-260 (#48)		45	4,16	1	800	Pass
Samples charged at charging temperature lower limit [3)]						
NCM18650ET-260 (#49)		0	4,15	1	800	Pass
NCM18650ET-260 (#50)		0	4,15	1	800	Pass
NCM18650ET-260 (#51)		0	4,15	1	800	Pass
NCM18650ET-260 (#52)		0	4,16	1	800	Pass
NCM18650ET-260 (#53)		0	4,16	1	800	Pass
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. - No fire or explosion						

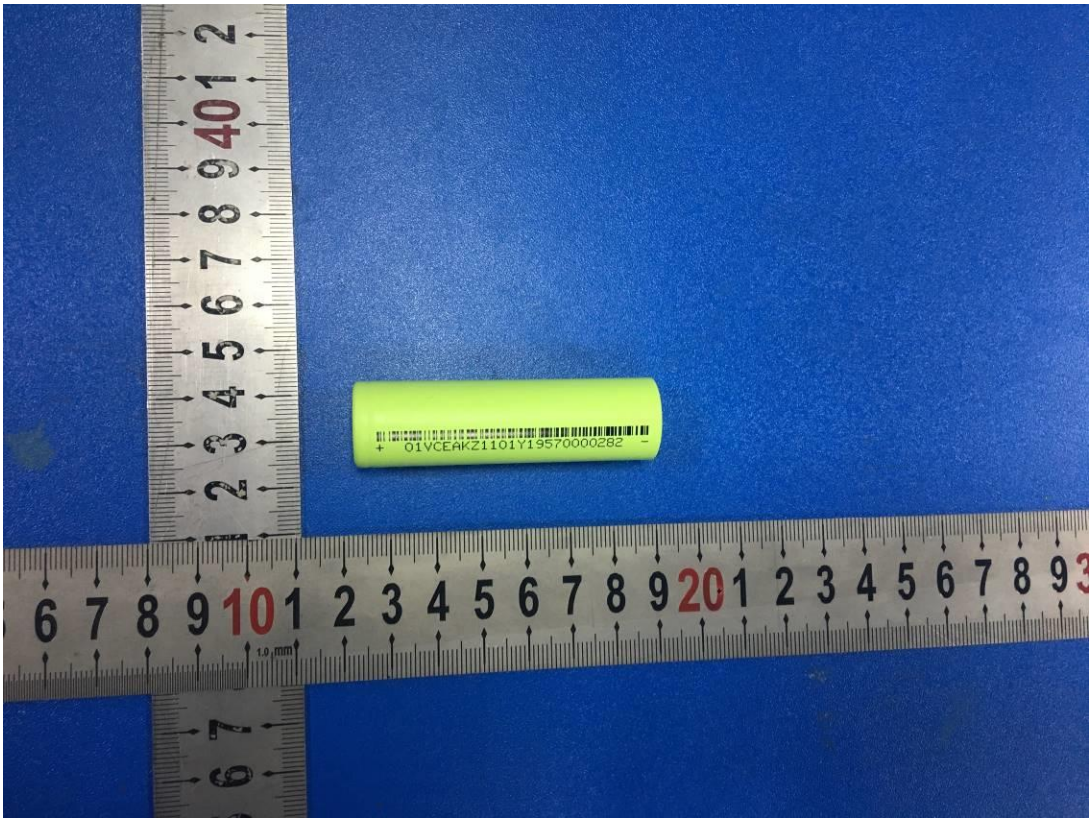
D.2	TABLE: Internal AC resistance for coin cells			N/A
Sample no.	**Ambient T (°C)**	**Store time (h)**	**Resistance Rac (Ω)**	**Results [1)]**
--	--	--	--	--
Supplementary information: None				

---End report---

Attachment 1 Photo documentation

INR18650-320

INR18650-350



Attachment 1 Photo documentation

INR18650-3000

INR18650ET-350

Attachment 1 Photo documentation

NCM18650-260

NCM18650ET-260

- - - End of Attachment 1 - - -

Attachment 2 Information for safety

Recommendations to equipment manufacturers and battery assemblers

The following represents a typical, but non-exhaustive, list of good advice to be provided by the manufacturer of secondary cells and batteries to equipment manufacturers and battery assemblers.

a) Do not dismantle, open or shred cells. Batteries should be dismantled only by trained personnel. Multi-cell battery cases should be designed so that they can be opened only with the aid of a tool.

b) Compartments should be designed to prevent easy access to the batteries by young children.

c) Do not short-circuit a cell or battery. Do not store cells or batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by conductive materials.

d) Do not remove a cell or battery from its original packaging until required for use.

e) Do not expose cells or batteries to heat or fire. Avoid storage in direct sunlight.

f) Do not subject cells or batteries to mechanical shock.

g) In the event of a cell leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.

h) Equipment should be designed to prohibit the incorrect insertion of cells or batteries and should have clear polarity marks. Always observe the polarity marks on the cell, battery and equipment and ensure correct use.

i) Do not mix cells of different manufacture, capacity, size or type within a battery.

j) Seek medical advice immediately if a cell or battery has been swallowed.

k) Consult the cell or battery manufacturer on the maximum number of cells which may be assembled in a battery and on the safest way in which cells may be connected.

l) A dedicated charger should be provided for each equipment. Complete charging instructions should be provided for all secondary cells and batteries offered for sale.

m) Keep cells and batteries clean and dry.

n) Wipe the cell or battery terminals with a clean dry cloth if they become dirty.

o) Secondary cells and batteries need to be charged before use. Always refer to the cell or battery manufacturer's instructions and use the correct charging procedure.

p) Do not maintain secondary cells and batteries on charge when not in use.

q) After extended periods of storage, it may be necessary to charge and discharge the cells or batteries several times to obtain maximum performance.

r) Retain the original cell and battery literature for future reference.

s) When disposing of secondary cells or batteries, keep cells or batteries of different electrochemical systems separate from each other.

- Keep small cells and batteries which are considered swallowable out of the reach of children.
- Swallowing may lead to burns, perforation of soft tissue, and death. Severe burns can occur within 2 h of ingestion.
- In case of ingestion of a cell or battery, seek medical assistance promptly.

- - - End of Attachment 2 - - -

Attachment 3 Packaging

- - - End of Attachment 3 - - -

Attachment 4 Product specification

Specification of INR18650-320

技术参数 Technical Parameters	规格 Specification	
2.1 标称容量 Nominal Capacity	3200mAh（0.2C，2.50V 放电） 3200mAh（0.2C，2.50V discharge）	
2.2 最小容量 Minimum Capacity	3100mAh（0.2C，2.50V 放电） 3100mAh（0.2C，2.50V discharge）	
2.3 倍率容量 Rated Capacity	1.0C，2.50V 放电 1.0C，2.50Vdischarge	≥3000mAh
	2.0C，2.50V 放电 2.0C，2.50Vdischarge	≥2790mAh (90%Capacity of 2.2)
	3.0C，2.50V 放电 3.0C，2.50Vdischarge	≥2790mAh (90%Capacity of 2.2)
2.4 标称能量 Nominal Energy	11.52Wh（0.2C，2.50V 放电） 11.52Wh（0.2C，2.50V discharge）	
2.5 标称电压 Nominal Voltage	3.60V（0.2C，2.50V 放电） 3.60V（0.2C，2.50V discharge）	
2.6 标准充电	方法：恒流恒压 Method：CC-CV	
Standard Charge	充电电压：4.20V Charging Voltage：4.20V	
	充电电流：0.5C（1600mA） Charging Current：0.5C（1600mA）	
	截止电流：0.01C（32mA） Cut-off Current：0.01C（32mA）	
2.7 最大充电电流 Maximum Charge Current	1.0C（3200mA），不能用作循环寿命 1.0C（3200mA），not for cycle life	
2.8 标准放电 Standard Discharge	方法：恒流 Method：CC	
	放电终止电压：2.50V Discharge Cut-off Voltage：2.50V	
	放电电流：0.2C（640mA） Discharging Current：0.2C（640mA）	
2.9 最大放电电流 Maximum Discharge Current	3.0C（9600mA），可用于持续放电 3.0C（9600mA），for continuous discharge	
2.10 重量 Weight	45.5±2.0g	
2.11 使用温度，充电 Operating Temperature，Charge	0~45℃	

Attachment 4 Product specification

Specification of INR18650-350

技术参数Technical Parameters	规格 Specification	
2.1 标称容量 Nominal Capacity	3500mAh（0.2C，2.50V 放电） 3500mAh（0.2C，2.50V discharge）	
2.2 最小容量 Minimum Capacity	3350mAh（0.2C，2.50V 放电） 3350mAh（0.2C，2.50V discharge）	
2.3 倍率容量 Rated Capacity	1.0C，2.50V放电 1.0C，2.50Vdischarge	≥3180mAh (95%Capacity of 2.2)
	2.0C，2.50V放电 2.0C，2.50Vdischarge	≥3015mAh (90%Capacity of 2.2)
	3.0C，2.50V放电 3.0C，2.50Vdischarge	≥3015mAh (90%Capacity of 2.2)
2.4 标称能量 Nominal Energy	12.6Wh（0.2C，2.50V 放电） 12.6Wh（0.2C，2.50V discharge）	
2.5 标称电压 Nominal Voltage	3.60V（0.2C，2.50V 放电） 3.60V（0.2C，2.50V discharge）	
2.6 标准充电 Standard Charge	方法：恒流恒压 Method：CC-CV	
	充电电压：4.20V Charging Voltage：4.20V	
	充电电流：0.5C（1750mA） Charging Current：0.5C（1750mA）	
	截止电流：0.01C（35mA） Cut-off Current：0.01C（35mA）	
2.7 最大充电电流 Maximum Charge Current	1.0C（3500mA），不能用作循环寿命 1.0C（3500mA），not for cycle life	
2.8 标准放电 Standard Discharge	方法：恒流 Method：CC	
	放电终止电压：2.50V Discharge Cut-off Voltage：2.50V	
	放电电流：0.2C（700mA） Discharging Current：0.2C（700mA）	
2.9 最大放电电流 Maximum Discharge Current	3.0C（10500mA），可用于持续放电 3.0C（10500mA），for continuous discharge	
2.10 重量 Weight	46.0±2.0g	
2.11 使用温度，充电 Operating Temperature，Charge	0~45℃	

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Attachment 4 Product specification

Specification of INR18650-3000

技术参数Technical Parameters	规格 Specification	
2.1 标称容量 Nominal Capacity	3000mAh（1.0C，2.50V 放电） 3000mAh（1.0C，2.50V discharge）	
2.2 最小容量 Minimum Capacity	≥3000mAh （1.0C，2.50V 放电） ≥3000mAh （1.0C，2.50Vdischarge）	
2.3 倍率容量 Rated Capacity	2.0C，2.50V 放电 2.0C，2.50Vdischarge	≥2700mAh （90% of 2.2）
	3.0C，2.50V 放电 3.0C，2.50Vdischarge	≥2700mAh （90% of 2.2）
2.3 标称能量 Nominal Energy	10.80Wh（1.0C，2.50V 放电） 10.80Wh（1.0C，2.50V discharge）	
2.4 标称电压 Nominal Voltage	3.60V（1.0C，2.50V 放电） 3.60V（1.0C，2.50V discharge）	
2.5 标准充电 Standard Charge	方法：恒流恒压 Method：CC-CV	
	充电电压：4.20V Charging Voltage：4.20V	
	充电电流：0.5C（1500mA） Charging Current：0.5C（1500mA）	
	截止电流：0.01C（30mA） Cut-off Current：0.01C（30mA）	
2.6 最大充电电流 Maximum Charge Current	1.0C（3000mA），不能用作循环寿命 1.0C（3000mA），not for cycle life	
2.7 标准放电 Standard Discharge	方法：恒流 Method：CC	
	放电终止电压：2.50V Discharge Cut-off Voltage：2.50V	
	放电电流：1.0C（3000mA） Discharging Current：1.0C（3000mA）	
2.8 最大放电电流 Maximum Discharge Current	2.0C（6000mA），可用于持续放电 2.0C（6000mA），for continuous discharge	
	3C（9000mA），可用于持续放电，不可用于循环 3C（9000mA），for continuous discharge，not for cycle life	
2.9 重量 Weight	45.5±2.0g	
2.10 使用温度，充电 Operating Temperature，Charge	0~45℃	

Attachment 4 Product specification

Specification of INR18650ET-350

技术参数Technical Parameters	规格 Specification	
2.1 标称容量 Nominal Capacity	3500mAh（0.2C，2.50V 放电） 3500mAh（0.2C，2.50V discharge）	
2.2 最小容量 Minimum Capacity	3350mAh（0.2C，2.50V 放电） 3350mAh（0.2C，2.50V discharge）	
2.3 倍率容量 Rated Capacity	1.0C，2.50V放电 1.0C，2.50Vdischarge	≥3180mAh (95%Capacity of 2.2)
	2.0C，2.50V放电 2.0C，2.50Vdischarge	≥3015mAh (90%Capacity of 2.2)
2.4 标称能量 Nominal Energy	12.6Wh（0.2C，2.50V 放电） 12.6Wh（0.2C，2.50V discharge）	
2.5 标称电压 Nominal Voltage	3.60V（0.2C，2.50V 放电） 3.60V（0.2C，2.50V discharge）	

2.6 标准充电 Standard Charge	方法：恒流恒压 Method：CC-CV
	充电电压：4.20V Charging Voltage：4.20V
	充电电流：0.5C（1750mA） Charging Current：0.5C（1750mA）
	截止电流：0.01C（35mA） Cut-off Current：0.01C（35mA）
2.7 最大充电电流 Maximum Charge Current	1.0C（3500mA），不能用作循环寿命 1.0C（3500mA），not for cycle life
2.8 标准放电 Standard Discharge	方法：恒流 Method：CC
	放电终止电压：2.50V Discharge Cut-off Voltage：2.50V
	放电电流：0.2C（700mA） Discharging Current：0.2C（700mA）
2.9 最大放电电流 Maximum Discharge Current	2.0C（7000mA），可用于持续放电 2.0C（7000mA），for continuous discharge
2.10 重量 Weight	46.0±2.0g
2.11 使用温度，充电 Operating Temperature，Charge	0~45℃

Attachment 4 Product specification

Specification of NCM18650-260

技术参数 Technical Parameters	规格 Specification	
2.1 标称容量 Nominal Capacity	2600mAh（0.2C，2.75V 放电） 2600mAh（0.2C，2.75V discharge）	
2.2 最小容量 Minimum Capacity	2550mAh（0.2C，2.75V 放电） 2550mAh（0.2C，2.75V discharge）	
2.3 倍率容量 Rated Capacity	0.5C,2.75V 放电 0.5C,2.75V discharge	≥2500mAh 98%Capacity of2.2
	1C,2.75V 放电 1C,2.75V discharge	≥2422mAh 95%Capacity of2.2
	2C,2.75V 放电 2C,2.75V discharge	≥2295mAh 90%Capacity of2.2
	3C,2.75V 放电 3C,2.75V discharge	≥2167mAh 85%Capacity of2.2
2.4 标称能量 Nominal Energy	9.36Wh（0.2C，2.75V 放电） 9.36Wh（0.2C，2.75V discharge）	
2.5 标称电压 Nominal Voltage	3.60V（0.2C，2.75V 放电） 3.60V（0.2C，2.75V discharge）	
2.6 标准充电 Standard Charge	方法：恒流恒压 Method：CC-CV	
	充电电压：4.20V Charging Voltage：4.20V	
	充电电流：0.5C（1300mA） Charging Current：0.5C（1300mA）	
	截止电流：0.01C（26mA） Cut-off Current：0.01C（26mA）	
2.7 最大充电电流 Maximum Charge Current	1.0C（2600mA），不能用作循环寿命 1.0C（2600mA），not for cycle life	
2.8 标准放电 Standard Discharge	方法：恒流 Method：CC	
	放电终止电压：2.75V Discharge Cut-off Voltage：2.75V	
	放电电流：0.2C（520mA） Discharging Current：0.2C（520mA）	
2.9 最大放电电流 Maximum Discharge Current	3.0C（7800mA），可用于持续放电 3.0C（7800mA），for continuous discharge	
2.10 重量 Weight	45.0±2.0g	
2.11 使用温度，充电 Operating Temperature，Charge	0~45℃	

Attachment 4 Product specification

Specification of NCM18650ET-260

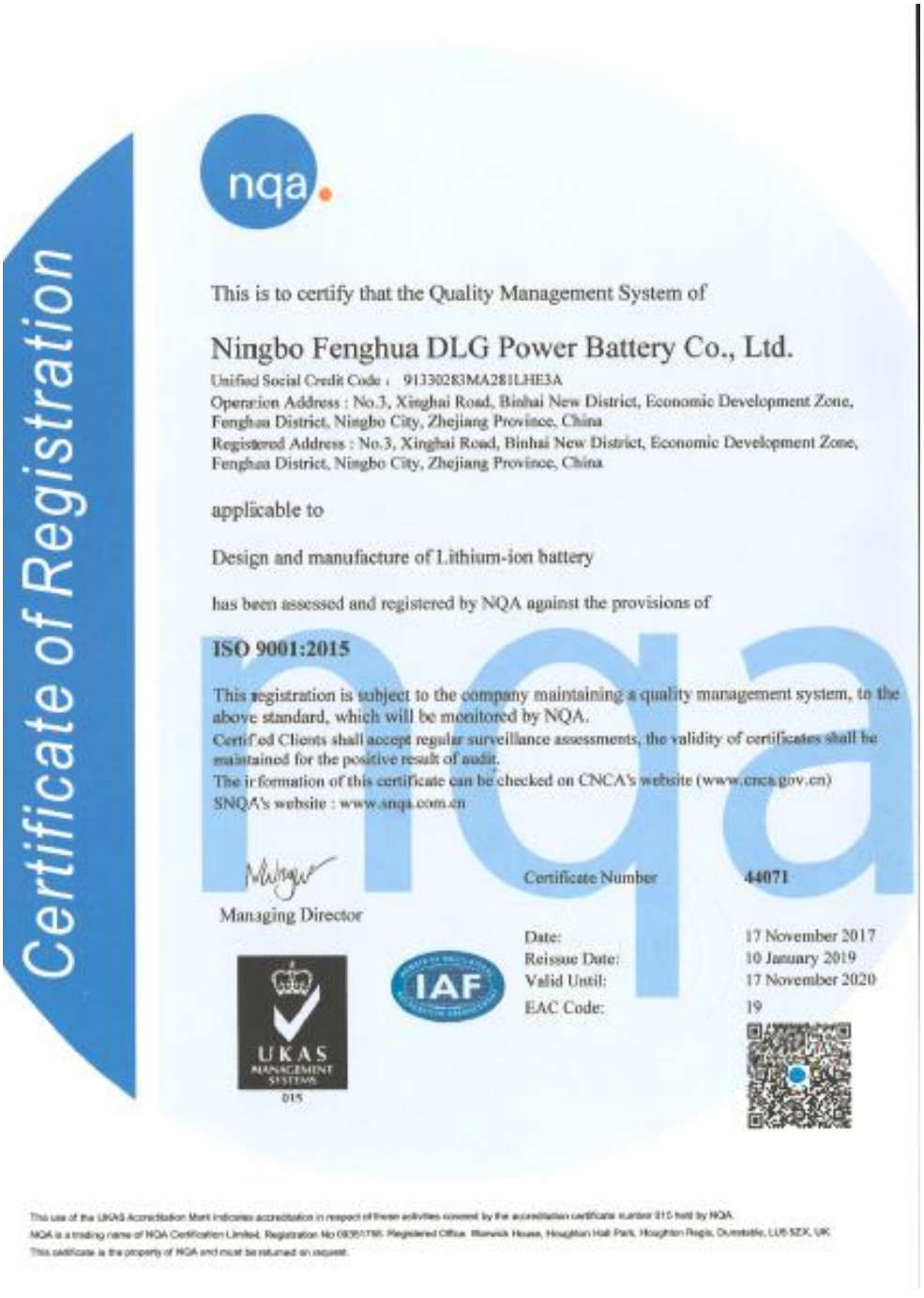
技术参数 Technical Parameters	规格 Specification	
2.1 标称容量 Nominal Capacity	2600mAh（0.2C，2.75V 放电） 2600mAh（0.2C，2.75V discharge）	
2.2 最小容量 Minimum Capacity	2550mAh（0.2C，2.75V 放电） 2550mAh（0.2C，2.75V discharge）	
2.3 倍率容量 Rated Capacity	0.5C,2.75V 放电 0.5C,2.75V discharge	≥2500mAh 98%Capacity of2.2
	1C,2.75V 放电 1C,2.75V discharge	≥2422mAh 95%Capacity of2.2
	2C,2.75V 放电 2C,2.75V discharge	≥2295mAh 90%Capacity of 2.2
2.4 标称能量 Nominal Energy	9.36Wh（0.2C，2.75V 放电） 9.36Wh（0.2C，2.75V discharge）	
2.5 标称电压 Nominal Voltage	3.60V（0.2C，2.75V 放电） 3.60V（0.2C，2.75V discharge）	
2.6 标准充电	方法：恒流恒压 Method：CC-CV	
Standard Charge	充电电压：4.20V Charging Voltage：4.20V	
	充电电流：0.5C（1300mA） Charging Current：0.5C（1300mA）	
	截止电流：0.01C（26mA） Cut-off Current：0.01C（26mA）	
2.7 最大充电电流 Maximum Charge Current	1.0C（2600mA），不能用作循环寿命 1.0C（2600mA），not for cycle life	
2.8 标准放电 Standard Discharge	方法：恒流 Method：CC	
	放电终止电压：2.75V Discharge Cut-off Voltage：2.75V	
	放电电流：0.2C（520mA） Discharging Current：0.2C（520mA）	
2.9 最大放电电流 Maximum Discharge Current	2.0C（5200mA），可用于持续放电 2.0C（5200mA），for continuous discharge	
2.10 重量 Weight	45.0±2.0g	
2.11 使用温度，充电 Operating Temperature，Charge	0~45℃	

D L G (H) 2019-09-31 受控证本

D L G (H) 机 密

- - - End of Attachment 4 - - -

Attachment 5 ISO 9001 certificate



Certificate of Registration

nqa.

This is to certify that the Quality Management System of

Ningbo Fenghua DLG Power Battery Co., Ltd.

Unified Social Credit Code： 91330283MA281LHE3A
Operation Address : No.3, Xinghai Road, Binhai New District, Economic Development Zone, Fenghua District, Ningbo City, Zhejiang Province, China
Registered Address : No.3, Xinghai Road, Binhai New District, Economic Development Zone, Fenghua District, Ningbo City, Zhejiang Province, China

applicable to

Design and manufacture of Lithium-ion battery

has been assessed and registered by NQA against the provisions of

ISO 9001:2015

This registration is subject to the company maintaining a quality management system, to the above standard, which will be monitored by NQA.
Certified Clients shall accept regular surveillance assessments, the validity of certificates shall be maintained for the positive result of audit.
The information of this certificate can be checked on CNCA's website (www.cnca.gov.cn)
SNQA's website : www.snqa.com.cn

Managing Director

Certificate Number 44071

Date: 17 November 2017
Reissue Date: 10 January 2019
Valid Until: 17 November 2020
EAC Code: 19

UKAS MANAGEMENT SYSTEMS 015

IAF

This use of the UKAS Accreditation Mark indicates accreditation in respect of those activities covered by the accreditation certificate number 015 held by NQA.
NQA is a trading name of NQA Certification Limited, Registration No 03571781. Registered Office: Warwick House, Houghton Hall Park, Houghton Regis, Dunstable, LU5 5ZX, UK.
This certificate is the property of NQA and must be returned on request.

- - - End of Attachment 5 - - -