CMC TESTING 众检检验

中国认可 国际互认 检测 TESTING CNAS L13807

TEST REPORT
IEC 61960-3
Secondary cells and batteries containing alkaline or other non-acid electrolytes – Secondary lithium cells and batteries for portable applications –Part 3: Prismatic and cylindrical lithium secondary cells, and batteries made from them

Report Number. :	CMC250730005
Date of issue :	2025-08-26
Total number of pages :	10 Pages
Tested by (name, signature). :	Sago Su/Testing Engineer
Reviewed by (name, signature) :	Meiko Ma /Project Manager
Approved by (name, signature) :	Barry He/Technical Manager
Name of Testing Laboratory preparing the Report :	**CMC Testing International (Shenzhen) Co., Ltd.**
Address :	1-3/F., Building 7, He'er Hongben Industrial Zone, Dawangshan Community, Shajing Subdistrict, Baoan District, Shenzhen, Guangdong, China
Applicant's name :	**Henan Hengyi lithium energy technology Co., Ltd**
Address :	Building 3, Xinhua Industrial Park, Longmen Avenue, Xinhua District, Pingdingshan City, Henan, P.R. China
Manufacturer's name :	**Henan Hengyi lithium energy technology Co., Ltd**
Address :	Building 3, Xinhua Industrial Park, Longmen Avenue, Xinhua District, Pingdingshan City, Henan, P.R. China
Test specification:	
Standard :	IEC 61960-3: 2017 (Partial test, only cl.7.3.1, cl.7.3.3 evaluated as client requested)
Test procedure :	Type approved
Non-standard test method :	N/A
Test result :	Pass
Test item description :	Cylindrical Lithium-ion Rechargeable Cell
Trade Mark :	N/A
Model/Type reference :	HYLN IMR18650-1200mAh
Ratings :	3.7V, 1200mAh

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

List of Attachments (including a total number of pages in each attachment):

Attachment 1: Photo documentation (On page 9).

Summary of testing:

Tests performed (name of test and test clause):	**Testing location:**
7.2 Charging procedure for test purposes (cells) 7.3.1 Discharge performance at 20 °C (rated capacity) (cells) 7.3.3 High rate discharge performance at 20°C (cells) Remark: Parts of clauses were carried out test according to client's request.	**CMC Testing International (Shenzhen) Co., Ltd.** 1-3/F., Building 7, He'er Hongben Industrial Zone, Dawangshan Community, Shajing Subdistrict, Baoan District, Shenzhen, Guangdong, China

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

N/A

Copy of marking plate:

Cylindrical Lithium-ion Rechargeable Cell
HYLN IMR18650-1200mAh
\+ 3.7V 1200mAh IMR19/66 -
Henan Hengyi lithium energy technology Co., Ltd
Date: YYYYMMDD Made in China

Date Code: YYYYMMDD
YYYY=year, MM=month, DD=day

Test item particulars .....:	
Electronic protection devices .....:	Electrode plate
End-of-discharge voltage .....:	3.0V
Manufacturer's declared internal a.c. resistance.....:	N/A
Manufacturer's declared internal d.c. resistance.....:	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 ..... :	2025-07-30
Date (s) of performance of tests..... :	2025-08-05 to 2025-08-15
Test Environment Condition..... :	Ambient temperature: 23.0ºC~23.2ºC
Sample No..... :	SN250730005C001- SN250730005C025

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.
"(CXXX)" refers to sample number of cells, "X" is 0~9;
"(BXXX)" refers to sample number of batteries, "X" is 0~9;
"(See Enclosure)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

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

Name and address of factory (ies)..... : Same as applicant

General product information:

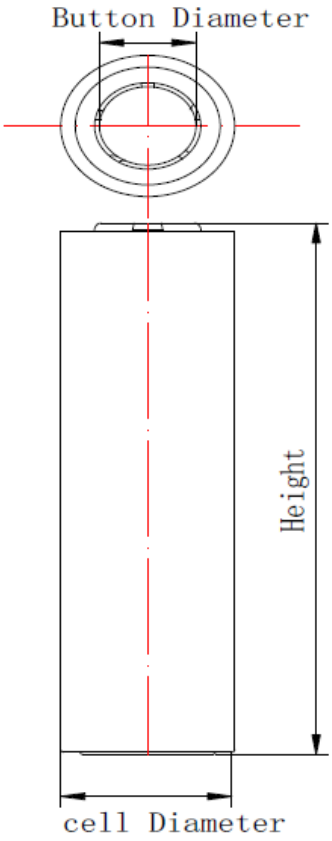
The cell consists of the positive electrode plate, negative electrode plate, separator, electrolyte and case. The positive and negative electrode plates are housed in the case in the state being separated by the separator.

Remark:
1. The product was also evaluated to fulfil the requirements of EN 61960-3: 2017 (cl.7.3.1, cl.7.3.3).
2. The charging temperature range for this battery is: 0ºC~45ºC.

The main features of the cell are shown as below:

Model (Cell)	Rated capacity	Nominal voltage	Nominal Charge Current	Nominal Discharge Current	Maximum Charge Current	Maximum Discharge Current	Maximum Charge Voltage	End Discharge Voltage
HYLN IMR18650-1200mAh	1200mAh	3.7V	240mA	240mA	600mA	600mA	4.2V	3.0V

Construction



cell Diameter: 18.3mm max, Height: 65.5mm max.
Cell

IEC 61960-3			
Clause	Requirement + Test	Result - Remark	Verdict
7	**ELECTRICAL TESTS**		P
7.1	**General**		P
	The cell or battery samples used for tests are less than two months from the date of manufacture		P
	Charge and discharge currents for tests were based on the rated capacity (C5 Ah)		P
	Minimum values required for each electrical test were based on Table 5		P
	Sample sizes and sequence of tests were in accordance with Figure 1		P
7.2	**Charging procedure for test purposes**		P
	The cell or battery discharged at 20 °C ± 5 °C at a constant current of 0,2 It A down to a specified end-of-discharge voltage prior to charging		P
	Cell or battery charged in an ambient temperature of 20°C ± 5 °C using the method declared by the manufacturer, except as stated in this standard:		P
7.3	**Discharge performance**		P
7.3.1	Discharge performance at 20 °C (rated capacity)	Tested complied.	P
	Cell or battery charged in accordance with 7.2, and stored in an ambient of 20 °C ± 5 °C for 1 h to 4 h (h) ..... :		P
	Cell or battery discharged in an ambient of 20 °C ± 5 °C, at a constant current of 0,2 I_t A until its voltage was equal to specified end-of-discharge voltage (A) (V) ..... :		P
	The capacity (Ah) delivered above was not less than 100 % of the rated capacity declared by the manufacturer (Ah) ..... :	(See appended table 7.3.1)	P
	The above two steps repeated up to four additional times, as necessary to meet this requirement (No. of tests) ..... :		P
7.3.3	High rate discharge performance at 20 °C	Tested complied.	P
	Cell or battery charged in accordance with 7.2, and stored in an ambient of 20 °C ± 5 °C for 1 h to 4 h (h)		P
	Cell or battery discharged in an ambient of 20 °C ± 5 °C, at a constant current of 1,0 It A until its voltage was equal to specified end-of-discharge voltage (A) (V)		P
	Capacity (Ah) delivered during high rate discharge performance at 20 °C ± 5 °C (Ah)	(See appended table 7.3.3)	P

	TABLE: Critical components information				P
Object / part No.	**Manufacturer / trademark**	**Type / model**	**Technical data**	**Standard**	**Mark(s) of conformity[1)]**
Cell	Henan Hengyi lithium energy technology Co., Ltd	HYLN IMR18650-1200mAh	3.7V, 1200mAh	IEC 61960-3: 2017	Tested with appliance
-Positive electrode	Shanxi Hongma Technology Co., LTD	HP5-A02E	Lithium nickel cobalt manganese oxide, max. metal content: Mn	--	--
-Negative electrode	Shenzhen Xinmao New Energy Technology Co., Ltd.	K6	Graphite	--	--
-Electrolyte	Hunan Dajing New Material Co., LTD	HY-PB-10C	$LiPF_6$+DMC+EMC+EC	--	--
-Separator	Jinxuan New Energy Materials Co., Ltd	9+3um*61.5mm	PP+PE, Shutdown temperature:130°C	--	--
Supplementary information: [1)] Provided evidence ensures the agreed level of compliance. See OD-CB2039.					

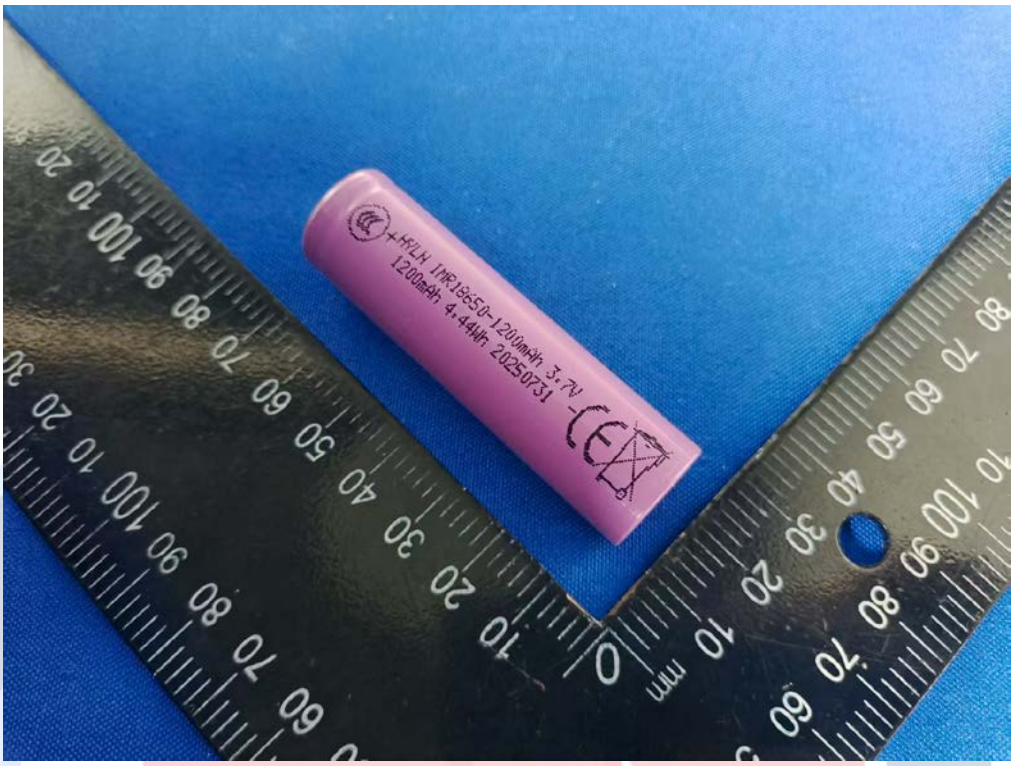
7.3.1	TABLE: Discharge performance at 20 °C (rated capacity) (Cells)			P
No.	Stored times (hour)	Discharge current (0.2 It A)(mA)	Discharge capacity (mAh)	Test-Result
SN250730005C001	1	240	1251.9	P
SN250730005C002	1	240	1261.1	P
SN250730005C003	1	240	1265.7	P
SN250730005C004	1	240	1265.3	P
SN250730005C005	1	240	1264.3	P
SN250730005C006	1	240	1268.6	P
SN250730005C007	1	240	1258.1	P
SN250730005C008	1	240	1268.9	P
SN250730005C009	1	240	1268.4	P
SN250730005C010	1	240	1262.6	P
SN250730005C011	1	240	1257.0	P
SN250730005C012	1	240	1252.4	P
SN250730005C013	1	240	1269.4	P
SN250730005C014	1	240	1257.7	P
SN250730005C015	1	240	1264.3	P
SN250730005C016	1	240	1251.9	P
SN250730005C017	1	240	1252.9	P
SN250730005C018	1	240	1255.4	P
SN250730005C019	1	240	1252.5	P
SN250730005C020	1	240	1263.2	P
SN250730005C021	1	240	1253.5	P
SN250730005C022	1	240	1254.0	P
SN250730005C023	1	240	1250.7	P
SN250730005C024	1	240	1261.1	P
SN250730005C025	1	240	1262.0	P

Supplementary information:

Discharge capacity should at least >= 100% rated capacity of cell.

7.3.3	TABLE: High rate discharge performance at 20 °C (Cells)			P
No.	Stored times (hour)	Discharge current (1.0 It A)(mA)	Discharge capacity (mAh)	Test-Result
SN250730005 C001	1	1200	1249.4	P
SN250730005 C002	1	1200	1229.5	P
SN250730005 C003	1	1200	1249.1	P
SN250730005 C004	1	1200	1236.5	P
SN250730005 C005	1	1200	1241.9	P
Supplementary information: Discharge capacity should at least >= 70% rated capacity of cell.				

Attachment 1: Photo documentation



Picture 1. Side view-1 of Cell (Final label see main report)



Picture 2. Side view-2 of Cell

Important

1. The test report is invalid if it is not affixed the official seal of the laboratory to it.
2. Copies of the test report without the official seal of the laboratory are invalid.
3. It is forbidden to copy the test report partially without the written approval of the laboratory.
4. The test report is invalid without the signatures of Approver, Reviewer and Testing engineer.
5. The test report is invalid if it is blotted out.
6. Objections to the test report must be submitted to CMC within 15 days.
7. The test report is valid for the tested samples only.
8. As for the Verdict, “--” means “no need for judgement”, “P” means “pass”， “F” means “fail” and “N/A” means “not applicable”.
9. This report is only responsible for the test results of the tested samples, and the test results and related judgment conclusions only reflect the evaluation of the tested samples. For the report and the content can not be used for commercial advertising, the use of direct or indirect losses and all legal consequences, the company does not assume any economic and legal responsibility.

Testing laboratory: CMC Testing International (Shenzhen) Co., Ltd.

Address: 1-3/F., Building 7, He'er Hongben Industrial Zone, Dawangshan Community, Shajing Subdistrict, Baoan District, Shenzhen, Guangdong, China

Tel: 400-1668-320

E-mail: info@cmczj-lab.com

http://www.cmczj-lab.com

-- End of Report –