

UN38.3 Test Summary Report

Lithium cell or battery test summary in accordance with section 2.9.4 UN Model Regulations and sub-section 38.3 of Manual of Tests and Criteria, Part III, subsection 38.3.5

<p>[a] <input type="checkbox"/> Cell <input checked="" type="checkbox"/> Battery <input type="checkbox"/> Produkt</p> <p><input checked="" type="checkbox"/> Tested Type Part #: PA-LNAH401.R001</p> <p><input checked="" type="checkbox"/> Same Type Part #: as listed below</p>	<p>[d] Unique report ID: UN.PA-LNAH401.R001, UN38.3, Rev.5.1</p> <p>[e] Date of test report: 2015-04-27</p>
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<p>[b] Manufacturer Fey Elektronik GmbH Storchenweg 3 21217 Seevetal Germany T. +49 40 703 8888-0</p> <p style="text-align: right; font-size: small;">info@feyelektronik.de www.feyelektronik.de</p>	<p>[c] Test Laboratory Fey Elektronik GmbH Storchenweg 3 21217 Seevetal Germany T. +49 40 703 8888-0</p> <p style="text-align: right; font-size: small;">info@feyelektronik.de www.feyelektronik.de</p>
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Same Type Part Numbers # (all): PA-LNBH401.R001, watt-hour rating: 12Wh
Nominal voltage: 3.6V, Nominal capacity: 3.35Ah typical
Used and UN38.3-tested cell type: Panasonic, NCR-18650B

[f] (i) Lithium-ion Lithium-metal Cell Battery

[f] (ii) Mass: approx. 51 g

[f] (iii) Watt-hour rating: 11 Wh or Lithium content: g

Note: The watt-hours of the same part numbers may vary by +/- 20 percent from the above value according to UN38.3.2.2 (b).

[f] (v) Model number(s): PA-LNAH401.R001

[f] (iv) Physical description: Secondary (rechargeable) Hardcase-Pack with one cell and protective device.
Nominal voltage: 3.6V, Nominal capacity: 3.1Ah typical
Used and UN38.3-tested cell type: Panasonic, NCR-18650A

Our batteries/products are manufactured according to a Quality-Management-System.
For further information visit our website.

[g] List of Tests Conducted	Result (Pass / Fail / N.A.)	Remark
38.3.4.1 Test T.1: Altitude simulation	Pass	
38.3.4.2 Test T.2: Thermal test	Pass	
38.3.4.3 Test T.3: Vibration	Pass	
38.3.4.4 Test T.4: Shock	Pass	
38.3.4.5 Test T.5: External short circuit	Pass	
38.3.4.6 Test T.6: Impact/Crush	N.A.	for cell testing only
38.3.4.7 Test T.7: Overcharge	Pass	
38.3.4.8 Test T.8: Forced discharge	N.A.	for cell testing only
[h] Battery assembly: <input checked="" type="checkbox"/> Not Applicable. <input type="checkbox"/> UN38.3.3 (f) <input type="checkbox"/> UN38.3.3 (g)		
[i] Test Reference: UN Manual of Tests and Criteria, Part III, sub-section 38.3, ST/SG/AC.10/11/Rev.5/Amend. 1		

Important! The stated signatory affirms, that this document is a true and correct summary of the original individual tests and test data. The original test data is confidential information available to competent State Authorities with valid identification and only upon their formal request. Disclosure of the original test data to any other entity upon its request will be considered by Fey Elektronik and, should Fey Elektronik consider this request is with merit, may be subject to the prior execution of a nondisclosure agreement.



[j] Signatory	Date: 2020-12-08
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Title: General Manager	
Signature:	

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PHYSICS 439
LECTURE 10
THERMODYNAMICS
AND STATISTICAL MECHANICS
PART 1

LECTURE 10

1. Introduction
2. Thermodynamic Potentials
3. Legendre Transforms
4. Maxwell Relations
5. Stability Criteria

6. Phase Transitions
7. Critical and Tricritical Points



8. Summary
9. Homework
10. References