

Test report No. UN-11-020e

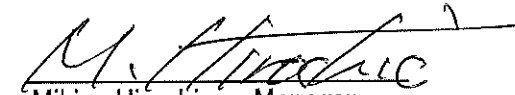
2020/7/8

Test summary of UN test for Lithium ion battery

TOCAD ENERGY CO.,LTD.

Quality Assurance Department

Customer Model	PA-BT-4000LI
Product Part Code	H4UR18650E-0829, 1027



Mikiya Hiroshima Manager

We declare that this battery passed UN test.

Manual of Tests and Criteria (38.3 Lithium batteries)		Test results	Note	Number of test samples	
No.	Test item				
T1	Altitude simulation	Pass		First cycle fully charged 4 batteries	After 50 cycles fully charged 4 batteries
T2	Thermal test	Pass			
T3	Vibration	Pass			
T4	Shock	Pass			
T5	External short circuit	Pass			
T6	Impact / Crush	Pass		First cycle 50% charged 5 cells	
T7	Overcharge	Pass		First cycle fully charged 4 batteries	After 50 cycles, fully charged 4 batteries
T8	Forced discharge	Pass		First cycle fully discharged 10 cells	After 50 cycles, fully discharged 10 cells

Lithium ion battery Specification

Item	Value/Description	Note
Weight	Max. 250 g	
Physical description	Prismatic battery	
Number of Cells	4	
Nominal Voltage	14.4 V	
Rated Capacity	1.8 Ah	
Watt-hour rating	26 Wh	
Aggregate Lithium Equivalent Content	2.16 g	

We declare that the above-mentioned test is the result of being checked according to UN test

(Manual of Tests and Criteria ST/SQ/AC. 10/11, Part III, sub-section 38.3, Rev. 5A1 for cell, Rev. 5A2 for battery)

Manufacturer (battery)

TOCAD ENERGY., Co.Ltd. 989-0225 4-1-14 Higashicho, Shiroishi City, Miyagi Japan
Tel: +81-224-25-0131, mail: info_green@tocad.co.jp, website: https://www.tocad.co.jp/

(component cell)

SANYO Electric Co., Ltd. 222-1 Kaminaizen, Sumoto City, Hyogo 656-8555, Japan

Tel: +81-799-23-3931, email: prb-bp-ta@ml.jp.panasonic.com

website: https://industrial.panasonic.com/ww/products/batteries/

Test Laboratory (battery)

Same as the manufacturer

(component cell)

Same as the manufacturer

Lithium ion battery Result of Package Drop Test

2020/7/8
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Customer Model	PA-BT-4000LI
Product Part Code	H4UR18650E-0829, 1027
Packing Drawing No.	P309866/P311721

TOCAD ENERGY CO.,LTD.
Quality Assurance Department


Mikiya Hiroshima Manager

We declare that this battery passed UN test.

Test item	Test results	Note
Package Drop Test	Pass	The package shall be dropped from 1.2meter high onto a concrete surface (flat and horizontal) with five orientations (1)flat on the bottom , (2)flat on the top, (3)flat on the long side, (4)flat on the short side, (5)on a corner

Lithium ion battery Specification

Item	Nominal Value	Note
Watt-hour rating	26 Wh	
Aggregate Lithium Equivalent Content	2.16 g	

We declare the above : The test result mentioned above was checked according to UN test (Model Regulations ST/SG/AC. 10/1/Rev. 21, Special Provision188)