

Test summary of UN test for Lithium ion cell

Customer Model : UF553450Z

Product Name : UF553450Z

Manufacturer : Panasonic Energy Co., Ltd. 222-1 Kaminaizen, Sumoto City, Hyogo 656-8555, Japan  
Tel +81-799-24-4111, email un\_38\_lib@ml.jp.panasonic.com  
<https://industrial.panasonic.com/ww/products/batteries/>

Test Laboratory : Same as the manufacturer

M. Fujikawa General Manager  
Department of Engineering  
Cell Development Division  
Panasonic Energy Co., Ltd.

We declare that this cell passed UN test.

| Manual of Tests and Criteria<br>(38.3 Lithium batteries) |                        | Test<br>results | Note             | Number of test cells                     |                                            |
|----------------------------------------------------------|------------------------|-----------------|------------------|------------------------------------------|--------------------------------------------|
| No.                                                      | Test item              |                 |                  |                                          |                                            |
| T 1                                                      | Altitude simulation    | Pass            |                  | First cycle<br>fully charged<br>10 cells |                                            |
| T 2                                                      | Thermal test           | Pass            |                  |                                          |                                            |
| T 3                                                      | Vibration              | Pass            |                  |                                          |                                            |
| T 4                                                      | Shock                  | Pass            |                  |                                          |                                            |
| T 5                                                      | External short circuit | Pass            |                  |                                          |                                            |
| T 6                                                      | Crush                  | Pass            |                  | First cycle 50% charged<br>5 cells       |                                            |
| T 7                                                      | Overcharge             | -               | For battery only | For battery only                         |                                            |
| T 8                                                      | Forced discharge       | Pass            |                  | First cycle, fully discharged 10 cells   | After 50 cycles, fully discharged 10 cells |

\*1 The test data may contain additional test result other than above table.

Lithium ion cell Specification

| Item                              | Value/Description | Note               |
|-----------------------------------|-------------------|--------------------|
| Watt-hour rating / Rated capacity | 4.3 Wh / 1.15 Ah  | Number of cells: 1 |
| Nominal voltage                   | 3.7 V             |                    |
| Weight                            | max. 18.8 g       |                    |
| Physical description              | Prismatic cell    |                    |
|                                   |                   |                    |

Above test procedures are compliant to the following manual.  
(Manual of Tests and Criteria ST/SG/AC.10/11/Rev.5A1, PartIII, sub-section 38.3)  
Judgment for necessity of test items is carried out based on the latest rules, and it is not linked with the version actually tested.

Certificate of Package Test for Lithium ion Cell

Customer Model : UF553450ZP

Product Name : UF553450Z

Manufacturer : Panasonic Energy Co., Ltd. 222-1 Kaminaizen, Sumoto City, Hyogo 656-8555, Japan  
Tel +81-799-24-4111, email un\_38\_lib@ml.jp.panasonic.com  
<https://industrial.panasonic.com/ww/products/batteries/>

H. Kuroda Senior Manager  
Development Promotion Department  
System Development Division  
Panasonic Energy Co., Ltd.

Test Laboratory : Same as the manufacturer

We declare that this cell passed UN test.

| Test item | Test results | Note                                                                                                                                                                                                                                                                      |
|-----------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Drop Test | Pass         | The package shall be dropped from 1.2m high<br>on to a concrete surface ( flat and horizontal )<br>with five orientations ( drop once a sample ) ;<br>(1)flat on the bottom, (2)flat on the top, (3)flat on the long<br>side, (4)flat on the short side, (5)on the corner |
|           |              |                                                                                                                                                                                                                                                                           |

Lithium ion cell Specification

| Item                              | Nominal value    | Note |
|-----------------------------------|------------------|------|
| Watt-hour rating / Rated capacity | 4.3 Wh / 1.15 Ah |      |
| Nominal voltage                   | 3.7 V            |      |
|                                   |                  |      |

Above test procedures are compliant to the following regulation.  
(Model Regulations ST/SG/AC.10/1/Rev.22, Special Provision188)