



Date:September 20,2011

### Sanyo Test Report

Name of Sample	Lithium Ion Battery 3UR18650-2-T0782
Consignor	SANYO Energy(Suzhou) CO.,LTD
Manufacturer	SANYO Energy(Suzhou) CO.,LTD
Test Method	United Nations "Recomenndations on the TRANSPORT OF DANGEROUS GOODS"
Criterion	United Nations "Recomenndations on the TRANSPORT OF DANGEROUS GOODS"
Appearance	Black rectangular parallelepipid
Test Date	2007/10/11 - 2007/10/25
Sample Number	24
Test Items	Altitude simulation, Thermal test, Vibration test, Shock test, External short circuit, Overcharged
Conclusion	The sample has passed the items of UN38.3.
Remark	Certification by Similar Model: 3UR18650A-2-FT-xx Ratio of (3UR18650-2-T0782)/(3UR18650A-2-FT-xx) [+]=100%, [-]=100%, [Electrolyte]=100%
Consignor Address	No.86 Sunwu Road, Xukou, Wuzhong District, Suzhou City, Jiangsu Province 215164, China

Sanyo Electric Co., LTD.

Sanyo Energy(Suzou) Co.,Ltd.

Approval

Check

Writing

**CONFIDENTIAL**

Date:September 20,2011

A: Checklist for Judging New Type Cell or not

Confirmation of presence of change in “The element which is given influence”

(Change ⇒ ○、No change ⇒ -)

When there is no change in all items, it is NOT considered to be a New Type Cell.

Model which UN regulation test has completed	UR18650A
Target model which is not a new type	UR18650AY

Check Item	The element which is given influence	Presence of change
Cell dimensions	Are the dimensions of this cell the same as those of the test completion cell?	-
Safety parts and mechanical components	Are the safety parts and mechanical components of this cell the same as those of the test completion cell?	-
Cathode material system	Is cathode material system of this cell the same as that of the test completion cell?	-
Anode material system	Is anode material system of this cell the same as that of the test completion cell?	-
Electrolyte material system	Is electrolyte material system of this cell the same as that of the test completion cell?	-
Mass of cathode material	Is mass difference of the design center of each cell concerning cathode less than 0.1 g or 20% ?	-
Mass of anode material	Is mass difference of the design center of each cell concerning anode less than 0.1 g or 20% ?	-
Mass of electrolyte	Is mass difference of the design center of each cell concerning electrolyte less than 0.1 g or 20% ?	-
Judgment result	New Type or not	New <del>Not new</del>

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Sanyo Energy(Suzou) Co.,Ltd.

*K. Morina*

approval

*A. Tsutsumi*

Check

*Tina Song*

Writing

Date:September 20,2011

B: Checklist for Judging New Type Battery or not

Confirmation of presence of change in “The element which is given influence”

(Change ⇒ ○、No change ⇒ -)

When there is no change in all items, it is NOT considered to be a New Type Battery.

Model which UN regulation test has completed	3UR18650A-2-FT-xx
Target model which is not a new type	3UR18650-2-T0782


Test Item (Function)	The element which is given influence	Presence of change
T1:Altitude Simulation (Decompression load)	<ul style="list-style-type: none"> <li>▪Crimped part, Gasket (Cell)</li> <li>▪Gas Release Vent, Cell Case (Cell)</li> <li>▪Pack (Plastic) Case</li> <li>▪Holding Member(Insulator, Insulation Tape, Both Sides Tape)</li> <li>▪Coating materials</li> </ul>	-
T2:Thermal Shock (Repetition of high temp. and low temp.)	<ul style="list-style-type: none"> <li>▪Crimped part, Gasket (Cell)</li> <li>▪Gas Release Vent, Cell Case (Cell)</li> <li>▪Finished state of Wound Electrodes (Cell)</li> <li>▪Pack (Plastic) Case</li> <li>▪Holding Member(Insulator, Insulation Tape, Both Sides Tape)</li> <li>▪Coating materials</li> </ul>	-
T3:Vibration (Vibration load)	<ul style="list-style-type: none"> <li>▪Finished state of Wound Electrodes (Cell)</li> <li>▪Electric wiring member</li> <li>▪Electronic Parts on a circuit board</li> <li>▪Cell Holding Member (Adhesive, Both Sides Tape, Lib of Plastic Case )</li> </ul>	-
T4: Shock(Shock load)	<ul style="list-style-type: none"> <li>▪Wiring Member</li> <li>▪Electronic Parts on a circuit board</li> <li>▪Cell Holding Member(Adhesive, Both Sides Tape, Lib of Plastic Case )</li> <li>▪Finished state of Wound Electrodes (Cell)</li> </ul>	-
T5:External Short Circuit(Short current)	<ul style="list-style-type: none"> <li>▪Over-voltage Protection</li> <li>▪Current Control Device</li> <li>▪Safety Device of cell (Cell)</li> <li>▪Lead Tab</li> </ul>	-
T6(Cell):Impact(Crash load)	<ul style="list-style-type: none"> <li>▪Separator (Cell)</li> <li>▪Insulation State in a cell (Cell)</li> </ul>	-
T7(Pack):Overcharge(Charge load)	<ul style="list-style-type: none"> <li>▪Overcharge Protection</li> <li>▪Thermal Device</li> <li>▪Safety Device of cell (Cell)</li> </ul>	-
Judgment result	New Type or not	New <del>(Not new)</del>

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approval



Check



Writing

## Certificate of UN test for Lithium ion battery

Customer Model : L11S6Y01  
 Sanyo Model : 3UR18650-2-T0782  
 Sanyo Product Code : F12431269



We declare that this battery passed UN test.

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

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

## Lithium ion battery Specification

Item	Nominal value	Note
Watt-hour rating	48 Wh	
Nominal voltage	10.8 V	
Lithium equivalent content	4.05 g	

Above test procedures are compliant to the following manual.

(Manual of Tests and Criteria ST/SG/AC.10/11/Rev.5, PartIII, sub-section 38.3)