



WUXIANG

Shenzhen Wuxiang Testing (Group) Co., Ltd

Report No. WUX202303170856UL

## APPLICATION FOR TEST REPORT

**UL 2849**

**On Behalf of**

Prepared For: Lankeleisi Bike Inc  
Address: 17665 66A AVE #609 Surrey BC V3S 2A7

Product Name: Electric bicycle  
Model: RV800  
Trade Mark: LANKELEISI  
Manufacturer: Dongguan jietu outdoor sporting goods Co., Ltd  
Address: Blue Cress, No.1, Jindong Hedong 2nd Road, Chang'an Town, Dongguan City, Guangdong Province, China

Prepared By: Shenzhen Wuxiang Testing (Group) Co., Ltd.  
Building B, Xinbaosheng, No.233, Xixiang Street, Bao'an District, Shenzhen, China

Test Date: March 17, 2023 to March 24, 2023  
Date of Report: March 24, 2023  
Report No.: WUX202303170856UL





### UL 2849 TEST REPORT

Standard: <u>UL 2849-2016</u>			
Report No.:	WUX202303170856UL	Client:	Lankeleisi Bike Inc
Product:	Electric bicycle	Rated data:	Adaptor Input: AC110-240V~ , 50/60Hz, 3.0A, Output: DC 54.6V===3.0A
Project Engineer:	Tony Bl		
Test Engineer:	Rust He	Protection class	--
Application Date	March 17, 2023	Protection against moisture:	Min. IP44
Requested Date	March 24, 2023	Construction:	With battery
Re-test	<input type="checkbox"/>	Operation mode	Continuous
Full-test	<input checked="" type="checkbox"/>	Weight:	>20kg
Tested Model :	RV800	Sample No.	1#
Should the heating test be done in heating oven?	<input type="checkbox"/> Yes °C <input checked="" type="checkbox"/> No		
Altitude during operation (m)	<input type="checkbox"/> Up to 2000 <input checked="" type="checkbox"/> No		
Altitude of test laboratory (m)	<input checked="" type="checkbox"/> below 2000 <input type="checkbox"/> No		
Other information:.....	Outdoor used, With battery, With over charge protection, Over discharge protection, over current protection and temperature protection.		

<b>Lab Use Only</b>			
Lab Start Date	March 17, 2023	Lab Finish Date	March 24, 2023
Ambient Temperature, °C	24.1	Relative Humidity, %	49

Remarks:

Tested by(Engineer: Rust He):   Checked by(Manager: Tony Bl): 



**\*\*Modified History\*\***

Revision	Description	Issued Data	Remark
Revision 1.0	Initial Test Report Release	2023/03/24	Rust He



No.	Clause(s)	Test(s)	Remark	Comment
1	7	Connection to Supply Source	UL 1310	Pass
2	8	Personnel Protection Systems	UL 2231-1	Pass
3	9	Bonding of the Vehicle	Screw to fix.	Pass
4	10	Double Insulation	UL 1310 for adaptor	Pass
5	11	Safety Circuits and Safety Analysis	UL 60730-1	Pass
6	12	Enclosures	Min.IPX4	Pass
7	13	Materials	UL 746C RTI>80°C V-1, UL94	Pass
8	14	Flammability	V-1, UL94 Passed by UL 1310 for adaptor	Pass
9	15	Electrical Spacings and Separation of Circuits	Passed by UL 1310 for adaptor	Pass
10	16	Printed Wiring Boards	UL 796	Pass
11	17	Wiring and Terminals	Non-replaceable batteries No Terminals outside	Pass
12	18	Transformers	Passed by UL 1310 for adaptor	Pass
13	19	Fuses	Passed by UL 1310 for adaptor	Pass
14	20	Capacitors		N/A
15	21	Strength of Enclosures		Pass
16	22	Sharp Edges		Pass
17	23	Battery Packs	UL 2580	Pass
18	24	Operator Interface	UL 60950-1	Pass
19	25	Motors and Motor Controllers	UL 1004-1	Pass
20	26	Mounting		Pass
21	28	Input Test	See the table	Pass
22	29	Leakage Current	See the table	Pass
23	30	Capacitor Discharge Test	See the table	Pass
24	31	Temperature Test	See the table	Pass
25	32	Dielectric Strength Test	See the table	Pass



26	33	Isolation Resistance Test	See the table	Pass
27	34	Humidity Conditioning	See the table	Pass
28	35	Abnormal Operations Tests	See the table	Pass
29	36	Vibration Test	See the table	Pass
30	37	Impact Test	See the table	Pass
31	38	Environmental Tests	See the table	Pass
32	39	Motor Assistance Control - Pedalec		Pass
33	40	Startup Assistance Mode Test		Pass
34	41	Maximum Assistance Speed		Pass
35	42	Mold Stress	See the table	Pass
36	43	Permanence of Marking	See the table	Pass
37	45-46	MARKINGS		Pass
38	48-52	INSTRUCTIONS		Pass

**Spacings (15)**

13	Electrical Spacings						Pass
Clearance (cl) and creepage distance (cr) at/of/between:	U peak (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	Required cr (mm)	cr (mm)	
Opposite polarity of battery	--	54.6	1.8	>2.2	1.8	>2.2	
Input to Enclosure	--	--	--	--	--	--	
Primary component to accessible enclosure (RI)	--	--	--	--	--	--	
Primary trace to secondary trace under transformer (T1) (RI)	--	--	--	--	--	--	
Primary winding to secondary winding of transformer (T1) (RI)	--	--	--	--	--	--	
Supplementary information							
Note(s): --							

**Protection of Users – Accessibility of Terminals (17)**

17	Accessibility probe					Pass
Location	Dimension of opening	Tester	Observations	Pass	Fail	
Opening	No opening	Articulate probe	Can't touch Live parts and dangerous moving parts	√	--	



### INPUT TEST (28)

#### Method:

EUT is operating at:  $U=U_n, F=F_n$ .

Load of the EUT is under maximum normal load.

The input current and wattage to the EUT shall be measured.

Multiple rated voltages or rated voltage range, each rated voltage shall be measured.

The current and power shall be taken under steady state conditions.

#### Result:

28	TABLE: Electrical data (in normal conditions)						Pass
<input checked="" type="checkbox"/> Max. Available load <input type="checkbox"/> All interfaces and wireless max. load transmission <input type="checkbox"/> 1/8 of 100% or <input type="checkbox"/> Max. available non-clipped output power _____ <input type="checkbox"/> _____							
U (V)	F (Hz)	I (A)	I <sub>rated</sub> (A)	P (W)	Fuse #	I <sub>fuse</sub> (A)	Condition/status
110V	50	1.58	3.0	71.9	F1	1.58	Charge the battery
110V	60	1.58	3.0	71.9	F1	1.58	Charge the battery
240V	50	1.87	3.0	71.6	F1	1.87	Charge the battery
240V	60	1.88	3.0	71.6	F1	1.88	Charge the battery
DC54.6V	--	2.0	3.0	64.9	--	--	Charge the battery
Voltage regulator: CTT01S ; Power meter: CTT15S; DC Electrical load: CTT48S;							

**Leakage Current (29)**

<b>29</b>	<b>Leakage Current</b>			<b>Pass</b>
Test voltage: 120V/ 60Hz				
Measured point:		$U_2$ (mV)	(mA)	Limit (mA)
Line and output accessible terminal		--	0.13	0.5
Neutral and output accessible terminal		--	0.13	0.5
Line and accessible enclosure surface		--	0.09	0.5
Neutral and accessible enclosure surface		--	0.09	0.5
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				

**Capacitor Discharge Test (30)**

<b>30</b>	<b>Discharge of Capacitors in Equipment</b>			<b>P</b>
Test voltage: 240V/ 50Hz				
Condition	$\tau$ calculated (s)	$\tau$ measured (ms)	t u $\rightarrow$ 0V (ms)	Comments
L and N Positive half cycle	--	--	196	Limit: 196V <sub>peak</sub> x 37% = V After 1s, 8V





## Temperature Test (31)

### Method:

EUT primary is  $U=U_n$ ,  $F=F_n$ , operated under normal max. load.

Temperatures of parts are measured by thermal couplers, windings are measured by resistance change method.

Measuring place shall be a point close to the heat source.

The test is continued until thermal stable.

Voltage is changed lower or higher tolerance without rest of time.

### Result:

31	TABLE: Thermal requirements,						Pass
	Supply voltage (V) .....	DC54.6V	--	--	--	--	—
	Ambient T <sub>min</sub> (°C) .....	24.2	--	--	--	--	—
	Ambient T <sub>max</sub> (°C) .....	24.8	--	--	--	--	—
	Max. load	Charge battery	--	--	--	--	
	Model	--	--	--	--	--	
	Maximum measured temperature T of part/at::	T (°C)					Allowed T <sub>max</sub> (°C)
	Enclosure of Adaptor	--	--	--	--	--	95
	PCB near IC	51.9	--	--	--	--	130
	Internal wire	38.8	--	--	--	--	75
	Capacitor	43.6	--	--	--	--	105
	Connector	42.9	--	--	--	--	70
	Battery	36.1	--	--	--	--	60
	Enclosure of battery	32.8	--	--	--	--	95
	--						
Supplementary information:							
Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class



--	--	--	--	--	--	--	--
Supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - NR: No Rupture - NS: No Electric shock hazard - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)							

**Result:**

31	TABLE: Thermal requirements,						Pass
	Supply voltage (V) .....	AC120V 60Hz	--	--	--	--	—
	Ambient Tmin (°C) .....	24.4	--	--	--	--	—
	Ambient Tmax (°C) .....	24.9	--	--	--	--	—
	Max. load	Charge battery	--	--	--	--	
	Model	--	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
	Enclosure of Adaptor	56.1	--	--	--	--	95
	PCB near IC	48.6	--	--	--	--	130
	Internal wire	34.7	--	--	--	--	75
	Capacitor	46.3	--	--	--	--	105
	Connector	44.2	--	--	--	--	70
	Battery	35.5	--	--	--	--	60
	Enclosure of battery	36.1	--	--	--	--	95
	--						



Supplementary information:							
Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class
--	--	--	--	--	--	--	--
Supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - NR: No Rupture - NS: No Electric shock hazard - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)							

**Result:**

31	TABLE: Thermal requirements,						Pass
	Supply voltage (V) .....	Power by full Battery	--	--	--	--	—
	Ambient Tmin (°C) .....	24.2	--	--	--	--	—
	Ambient Tmax (°C) .....	24.9	--	--	--	--	—
	Max. load	Max. load	--	--	--	--	
	Model	--	--	--	--	--	
Maximum measured temperature T of part/at::		T (°C)					Allowed Tmax (°C)
Enclosure of Adaptor		--	--	--	--	--	95
PCB near IC		58.1	--	--	--	--	130
Internal wire		43.3	--	--	--	--	75
Capacitor		46.7	--	--	--	--	105
Connector		--	--	--	--	--	70
Battery		40.2	--	--	--	--	60
Enclosure of battery		38.5	--	--	--	--	95
Winding of Motor		60.4					70
Enclosure of Motor		52.1					90




Supplementary information:							
Temperature T of winding:	t1 (°C)	R1 (Ω)	t2 (°C)	R2 (Ω)	T (°C)	Allowed T <sub>max</sub> (°C)	Insulation class
--	--	--	--	--	--	--	--

Supplementary information:

- NF: No Fire
- NE: No Explosion
- NL: No Leakage
- NR: No Rupture
- NS: No Electric shock hazard
- Fire: the emission of flames from a cell or battery.
- Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled.
- Leakage: visible escape of liquid electrolyte.- Others (please explain)



### Dielectric Voltage-Withstand Test (32)

#### Method:

The test is made while the EUT is still in well-heated condition

Make sure the power switch of the EUT is in ON position.

Thin material can be tested in room temperature.

The test voltage is a.c. of 50 or 60 Hz or d.c. voltage equal to peak value of the a.c. voltage.

Test voltage is applied gradually raised from zero to the specified voltage and held at that value for 60s.

Insulation breakdown is: Current flows through the insulation rapidly increases in an uncontrolled manner; that is the insulation does not restrict the flow of the current.

Corona discharge or a single momentary flashover is not regarded as insulation breakdown.

A test incorporating reinforced insulation and lower grades insulation (BI, SI), care is taken not to overstress BI or SI.

Where capacitors (X or Y capacitors) are across the insulation, d.c. voltage is recommended for the test.

Discharge resistors shall be disconnected before testing.

#### Result:

32	Electric strength test		Pass
Test voltage applied between:		Test voltage (V)	Breakdown
input and enclosure		AC1480 60Hz	No
Input and output		AC1480 60Hz	No

**Isolation Resistance Test (33)****Method:**

The test is made while the EUT is still in well-heated condition

Make sure the power switch of the EUT is in ON position.

Thin material can be tested in room temperature.

The test voltage is d.c. 500 voltage

Test voltage is applied gradually raised from zero to the specified voltage and held at that value for 60s.

33	TABLE: Insulation resistance measurements	Pass
Insulation resistance R between:		R (M $\Omega$ )
		Required R ( $\Omega$ )
DC input and enclosure	>100 M $\Omega$	50000 $\Omega$
L/N and enclosure	>100 M $\Omega$	50000 $\Omega$
L/N and output	>100 M $\Omega$	50000 $\Omega$

**Humidity Conditioning (34)**

34	Humidity Conditioning Test	Pass		
Test voltage: 48h, 90%R.H., 32°C				
Measured point:		Test V (V)	Measured	Limit
Input and Enclosure		DC500V	>100MΩ	30000Ω
Neutral and output accessible terminal		DC500V	>100MΩ	30000Ω
Line and accessible enclosure surface		DC500V	>100MΩ	30000Ω
Neutral and accessible enclosure surface		DC500V	>100MΩ	30000Ω
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				
34	Dielectric Voltage-Withstand Test	Pass		
Measured point:		Test V (V)	Breakdown	Limit
Line and output accessible terminal		AC 1480V	No	100mA
Neutral and output accessible terminal		AC 1480V	No	100mA
Line and accessible enclosure surface		AC 1480V	No	100mA
Neutral and accessible enclosure surface		AC 1480V	No	100mA
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				



**Abnormal Operation Test (35)**

35	Abnormal Operations and Fault Conditions Test		<b>Pass</b>
Requirement	Result	Remarks	
<b>During the test:</b>			
Fire propagates beyond the EUT?	Yes/No	--	
Molten metal emitted?	Yes/No	--	
Enclosures deform to cause non-compliance with the standard?	Yes/No	--	
<b>After the test:</b>			
Electric strength test on reinforced insulation breakdown?	Yes/No	--	
Electric strength test on Basic insulation breakdown?	Yes/No	--	
<b>SC:</b> Short-circuited; <b>OC:</b> Open-circuited; <b>OL:</b> Over-load; <b>BK:</b> Block; <b>RP:</b> Reverse-polarity; <b>LK:</b> Lock; <b>DC:</b> Disconnect; <b>OVC:</b> Overcharging under Max. available charging voltage or 106% rated voltage; <b>ED:</b> Excessive discharging			
Voltage regulator, power meter, Data Acquisition/Switch Unit , Oscilloscope, Oscilloscope Probe, Digital Micro-ohmmeter, Withstanding Voltage Tester, DC Electrical load;			
<b>42 Abnormal Operations and Fault Conditions Test</b>			<b>Pass</b>
Ambient temperature (°C) .....		25.0°C	
Comp./ fault	Result / Observation		
U1 Pin 1-8	Test voltage: <u>DC54.6V</u> Duration: <u>10min</u> SC No: <u>    </u> I/P current (A): <u>2.34</u> I/P power (W): <u>    </u>	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after _____ <input type="checkbox"/> T.F opened after _____ <input type="checkbox"/> see raw data _____ <input checked="" type="checkbox"/> No hazards Remark: --
U1 Pin 2-6	Test voltage: <u>DC54.6V</u> Duration: <u>10min</u> SC No: <u>    </u> I/P current (A): <u>2.30</u> I/P power (W): <u>    </u>	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input checked="" type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after _____ <input type="checkbox"/> T.F opened after _____ <input type="checkbox"/> see raw data _____ <input checked="" type="checkbox"/> No hazards Remark: --





U2 Pin 3-2	Test voltage: <u>_DC54.6V_</u> Duration: <u>_10min_</u> SC No: <u>__</u> I/P current (A): <u>_1.03_</u> I/P power (W): <u>_0_</u>	<input type="checkbox"/> Become steady, output power / current _____ <input checked="" type="checkbox"/> Shut down immediately, and <u>__No_</u> damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ___ <input type="checkbox"/> T.F opened after ___ <input type="checkbox"/> see raw data ___ <input checked="" type="checkbox"/> No hazards Remark: --
U2 pin 3-4	Test voltage: <u>_DC54.6V_</u> Duration: <u>_10min_</u> SC No: <u>__</u> I/P current (A): <u>_1.02_</u> I/P power (W): <u>_0_</u>	<input type="checkbox"/> Become steady, output power / current _____ <input checked="" type="checkbox"/> Shut down immediately, and <u>__No_</u> damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ___ <input type="checkbox"/> T.F opened after ___ <input type="checkbox"/> see raw data ___ <input checked="" type="checkbox"/> No hazards Remark: --
Battery	Test voltage: <u>_DC54.6V_</u> Duration: <u>_10min_</u> SC No: <u>__</u> I/P current (A): <u>_0_</u> I/P power (W): <u>_0_</u>	<input type="checkbox"/> Become steady, output power / current _____ <input checked="" type="checkbox"/> Shut down immediately, and <u>__No_</u> damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ___ <input type="checkbox"/> T.F opened after ___ <input type="checkbox"/> see raw data ___ <input checked="" type="checkbox"/> No hazards Remark:
Adaptor output	Test voltage: <u>AC120V_</u> Duration: <u>_10min_</u> SC No: <u>__</u> I/P current (A): <u>__</u> I/P power (W): <u>_1.03_</u>	<input type="checkbox"/> Become steady, output power / current _____ <input checked="" type="checkbox"/> Shut down immediately, and <u>__No_</u> damaged, can't be recovered, repeated _____ times. <input type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ___ <input type="checkbox"/> T.F opened after ___ <input type="checkbox"/> see raw data ___ <input checked="" type="checkbox"/> No hazards Remark: --
Locked Motor	Test voltage: <u>_54.6V_</u> Duration: <u>_2h_</u> Fuse or Fuse resistor No: <u>__</u> I/P current (A): <u>_Max. 2.11.A_</u> I/P power (W): <u>_0_</u>	<input type="checkbox"/> Become steady, output power / current _____ <input type="checkbox"/> Shut down immediately, and _____ damaged, can't be recovered, repeated _____ times. <input checked="" type="checkbox"/> Protected, can be recovered.	<input type="checkbox"/> Fuse opened immediately <input type="checkbox"/> Fuse opened after ___ <input type="checkbox"/> T.F opened after ___ <input type="checkbox"/> see raw data ___ <input checked="" type="checkbox"/> No hazards Winding of motor:80.7°C Remark: --



**Vibration Test (36)**

36	TABLE: Vibration tests				P
Model	OCV at start of test, (Vdc) for battery	Test frequency (Hz)	Vibration time (h)	Results	
ELECTRIC BIKE	Fully	10Hz~55Hz~10Hz	1h	P	
ELECTRIC BIKE	Fully	10Hz~55Hz~10Hz	1h	P	
ELECTRIC BIKE	Fully	10Hz~55Hz~10Hz	1h	P	
Supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - NR: No Rupture - NS: No Electric shock hazard - No loosening of parts - Operate normally.					



**Impact Test (37)**

37	TABLE: Strain relief test			Pass
Test part	Temperature (°C)	Duration (h)	Result	
Enclosure	70	1h	Pass electrical strength	
Notes: Oven temperature shall be 10 K higher than the maximum temperature on the enclosure but not less than 70°C.				
supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)				

37	TABLE: Impact test Vertically			Pass
Model	weighing	Test temperature (°C)	Impact energy (J)	Results
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
No damage.				
37	TABLE: Impact test Horizontally			Pass
Model	weighing	Test temperature (°C)	Impact energy (J)	Results
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
Enclosure	0.535kg, D:50.8mm	25	6.8J	P
No damage.				



### Water Exposure Tests (38.1)

Test procedure

For IPX4, the sample is positioned under oscillating spray tubes rotating at nearly±180° from the vertical for 10 minutes. The oscillation rate is two cycles of about360° in 12 seconds. Each surface of the enclosure within the spray arch is to be tested for 1 min/m2, with no less than 5 minutes of total test timeThe flow rate again depends upon the tube size, Withstand voltage test is pass, No harmful effects

IPX4	-For IPX4, the sample is positioned under oscillating spray tubes rotating at nearly±180° from the vertical for 10 minutes. The oscillation rate is two cycles of about360° in 12 seconds. Each surface of the enclosure within the spray arch is to be tested for 1 min/m2, with no less than 5 minutes of total test timeThe flow rate again depends upon the tube size, Withstand voltage test is pass, No harmful effects	No harmful effects	Pass
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supplementary information:

- NF: No Fire
- NE: No Explosion
- NL: No Leakage
- Fire: the emission of flames from a cell or battery.
- Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled.
- Leakage: visible escape of liquid electrolyte.- Others (please explain)



### Thermal Cycling Test (38.2)

38.2	TABLE: Heating Test				P
Sample	OCV at start of test, (Vdc)	Temperature raise rated(°C/min)	Test temperature (°C)	Duration (h)	Results
1#	Full battery	5°C/min ± 2 °C/min	50 to -30	6h	P

**Supplementary information:**

supplementary information:

- NF: No Fire
- NE: No Explosion
- NL: No Leakage
- Fire: the emission of flames from a cell or battery.
- Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled.
- Leakage: visible escape of liquid electrolyte.- Others (please explain)

Measured point:	Test V (V)	Measured	Limit
Input and Enclosure	DC500V	>100MΩ	30000Ω
Neutral and output accessible terminal	DC500V	>100MΩ	30000Ω
Line and accessible enclosure surface	DC500V	>100MΩ	30000Ω
Neutral and accessible enclosure surface	DC500V	>100MΩ	30000Ω

Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester

38.2	Dielectric Voltage-Withstand Test	Pass
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Measured point:	Test V (V)	Breakdown	Limit
Line and output accessible terminal	AC 1480V	No	100mA
Neutral and output accessible terminal	AC 1480V	No	100mA
Line and accessible enclosure surface	AC 1480V	No	100mA
Neutral and accessible enclosure surface	AC 1480V	No	100mA

Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester



**Mold Stress (42)**

42	TABLE: Strain relief test			Pass
Test part	Temperature (°C)	Duration (h)	Result	
Enclosure	70	1h	Pass Electrical strength	
Notes: Oven temperature shall be 10 K higher than the maximum temperature on the enclosure but not less than 70°C.				
supplementary information: - NF: No Fire - NE: No Explosion - NL: No Leakage - Fire: the emission of flames from a cell or battery. - Explosion: failure that occurs when a cell container or battery case opens violently and major components are forcibly expelled. - Leakage: visible escape of liquid electrolyte.- Others (please explain)				

42	TABLE: Insulation resistance measurements			Pass
Measured point:	Test V (V)	Measured	Limit	
Input and Enclosure	DC500V	>100MΩ	30000Ω	
Neutral and output accessible terminal	DC500V	>100MΩ	30000Ω	
Line and accessible enclosure surface	DC500V	>100MΩ	30000Ω	
Neutral and accessible enclosure surface	DC500V	>100MΩ	30000Ω	
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				
42	Dielectric Voltage-Withstand Test			Pass
Measured point:	Test V (V)	Breakdown	Limit	
Line and output accessible terminal	AC 1480V	No	100mA	
Neutral and output accessible terminal	AC 1480V	No	100mA	
Line and accessible enclosure surface	AC 1480V	No	100mA	
Neutral and accessible enclosure surface	AC 1480V	No	100mA	
Oscilloscope, Measuring circuit for touch current according to Annex D, Leakage Current Tester				



### ***Permanence of Marking (43)***

43	MARKING DURABILITY		Durable and legible	
Type of marking	15 seconds of water	15 seconds of petroleum	Pass	Fail
Rating label	--	--	√	--
Stop watch				



Photo documentation

Photo 1 Over view



Photo 2 Over view







Photo 3 Over view



Photo 4 Over view





Photo 5 Over view



Photo 6 Over view

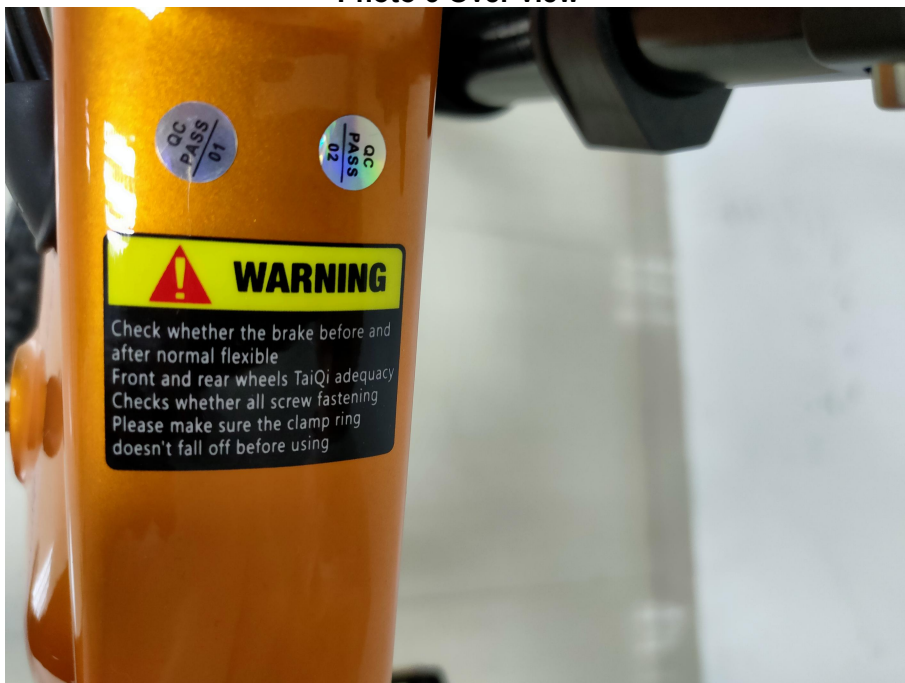




Photo 7 Over view



Photo 8 Adaptor view





Photo 9 Adaptor view



\*\*\* End of Report \*\*\*