



RoHS TEST REPORT

Applicant: Zhongying Optoelectronics (Shenzhen) Technology Co., LTD
Address: 4th Floor, Building B, Jingchengda Science Park, Shiyan Street, Baoan District, Shenzhen

The following sample(s) was/were submitted and identified on behalf of the client as:

Product name: Neck hung fan
Trade name: N/A
Model: Z3
Manufacturer: Zhongying Optoelectronics (Shenzhen) Technology Co., LTD
Address: 4th Floor, Building B, Jingchengda Science Park, Shiyan Street, Baoan District, Shenzhen

Shenzhen iTC Product Testing Co., Ltd.
Issued by: Add. :Room 204, No.10, Phase 1, Zone 3, Xinxing Industrial Park,Xinhe Community, Fuhai Street, Bao'an District, Shenzhen, Guangdong, China

Testing Period: May 13 to May 18, 2022

Test Requirement:

EU RoHS Directive 2011/65/EU and its amendment directives
 2015/863/EU (RoHS 2.0) on Lead, Cadmium, Mercury, Hexavalent
 Chromium, PBBs, PBDEs, DEHP, BBP, DBP & DIBP content
 IEC 62321-3-1:2013;
 IEC 62321-4:2013+A1:2017;
 IEC 62321-5:2013; IEC 62321-6:2015;
 IEC 62321-7-1:2015;IEC 62321-7-2:2017;
 IEC 62321-8:2017

Conclusion:

Pass

Wrote by: Amanda Chen

Reviewed by: _____



Approved by: John Liu

Date: May 18, 2022



Seq. No.	Tested Part(s)		
1	Plastic of enclosure	2	Button
3	Fan blade	4	Internal wire
5	Motor	6	PCB
7	Battery	8	USB
9	Screw	10	Insulation paper

Test Item(s):	RESULT							MDL
	1	2	3	4	5	6	7	
Cadmium(Cd)	N.D	N.D	N.D	N.D	N.D	N.D	N.D	2
Lead(Pb)	N.D	N.D	N.D	N.D	N.D	N.D	N.D	2
Mercury(Hg)	N.D	N.D	N.D	N.D	N.D	N.D	N.D	2
Hexavalent Chromium Cr(VI) by alkaline extraction	N.D	N.D	N.D	N.D	N.D	N.D	N.D	8
Sum of PBBs	N/A	N.D	N.D	N.D	N.D	N.D	N.D	—
Monobromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Dibromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Tribromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Tetrabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Pentabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Hexabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Heptabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Octabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Nonabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Decabromo biphenyl	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Sum of PBDEs	N/A	N.D	N.D	N.D	N.D	N.D	N.D	—
Monobromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Dibromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Tribromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Tetrabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Pentabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Hexabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Heptabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Octabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Nonabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Decabromobiphenyl ether	N/A	N.D	N.D	N.D	N.D	N.D	N.D	5
Dibutyl Phthalate(DBP)	N/A	N.D	N.D	N.D	N.D	N.D	N.D	50
Benzyl butyl phthalate (BBP)	N/A	N.D	N.D	N.D	N.D	N.D	N.D	50
Bis-(2-ethylhexyl)-Phthalate (DEHP)	N/A	N.D	N.D	N.D	N.D	N.D	N.D	50
Diisobutyl Phthalate(DIBP)	N/A	N.D	N.D	N.D	N.D	N.D	N.D	50

Test Item(s):	RESULT							MDL
	8	9	10	11	12	13	14	
Cadmium(Cd)	N.D	N.D	N.D	/	/	/	/	2
Lead(Pb)	N.D	N.D	N.D	/	/	/	/	2
Mercury(Hg)	N.D	N.D	N.D	/	/	/	/	2
Hexavalent Chromium Cr(VI) by alkaline extraction	N.D	N.D	N.D	/	/	/	/	8
Sum of PBBs	N/A	N.D	N.D	/	/	/	/	—
Monobromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Dibromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Tribromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Tetrabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Pentabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Hexabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Heptabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Octabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Nonabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Decabromo biphenyl	N/A	N.D	N.D	/	/	/	/	5
Sum of PBDEs	N/A	N.D	N.D	/	/	/	/	—
Monobromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Dibromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Tribromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Tetrabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Pentabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Hexabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Heptabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Octabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Nonabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Decabromobiphenyl ether	N/A	N.D	N.D	/	/	/	/	5
Dibutyl Phthalate(DBP)	N/A	N.D	N.D	/	/	/	/	50
Benzyl butyl phthalate (BBP)	N/A	N.D	N.D	/	/	/	/	50
Bis-(2-ethylhexyl)-Phthalate (DEHP)	N/A	N.D	N.D	/	/	/	/	50
Diisobutyl Phthalate(DIBP)	N/A	N.D	N.D	/	/	/	/	50



Note:

- 1. mg/kg=milligram per kilogram
- 2. ND=Not Detected(<MDL)
- 3. MDL=Method Detection Limit
- 4. NA=Not Applicable
- 5. “—” =Not regulated

RoHS Requirement(mg/kg) :

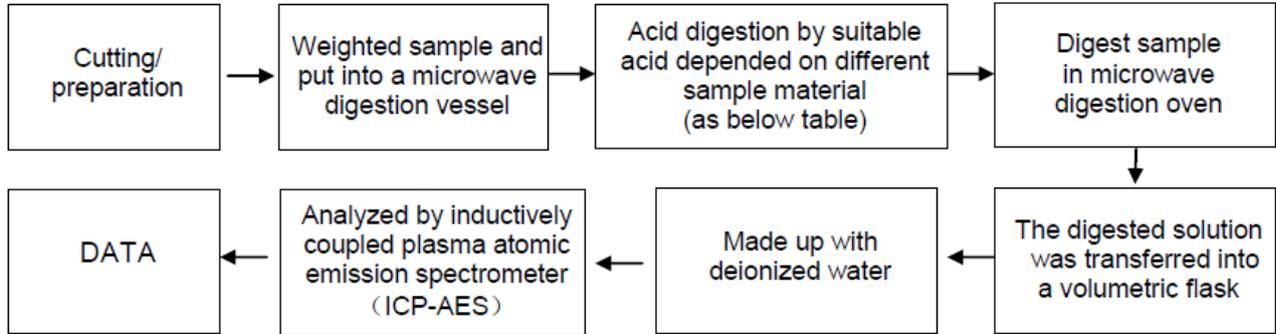
Restricted substances	Cd	Pb	Hg	Cr(VI)	PBBs	PBDEs	BBP	DBP	DEHP	DIBP
RoHS limit	100	1000	1000	1000	1000	1000	1000	1000	1000	1000

Appendix

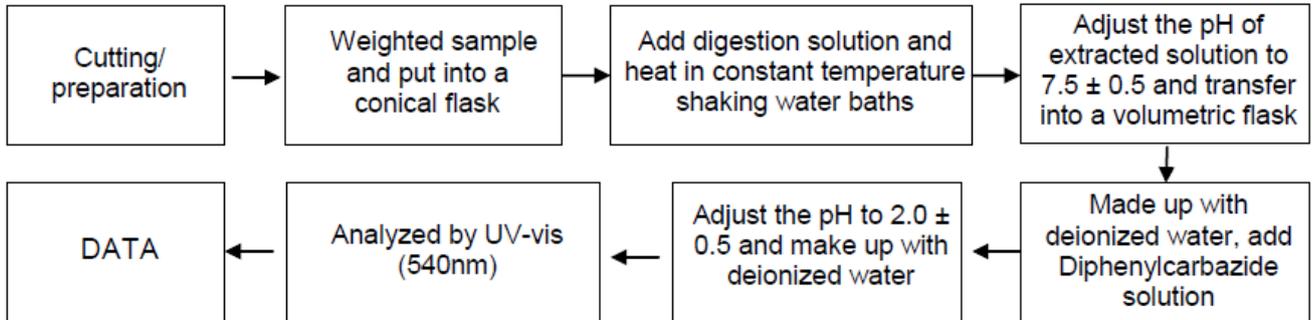
Test Flow chart

1. Test Flowchart for Cd / Pb /Hg content

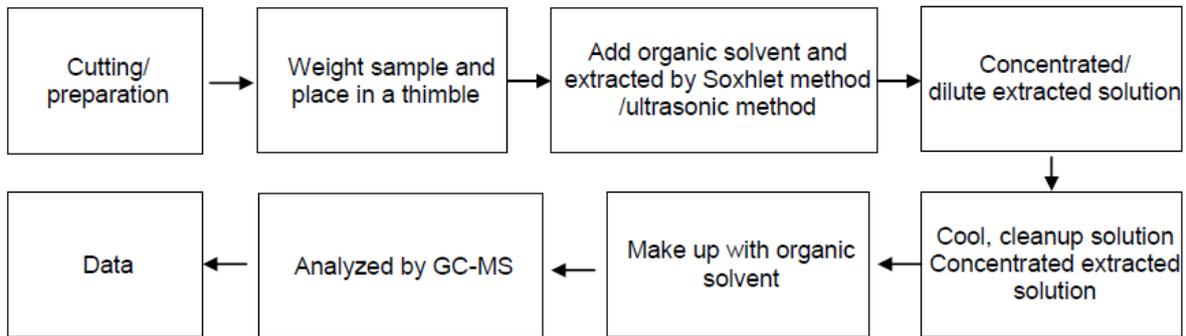
These samples were dissolved totally by pre-conditioning method according to below flow chart.



2. Test Flowchart for Cr₆₊ content



3. Test Flowchart for PBBs & PBDEs content



4. Test Flowchart for DEHP, BBP, DBP & DIBP content

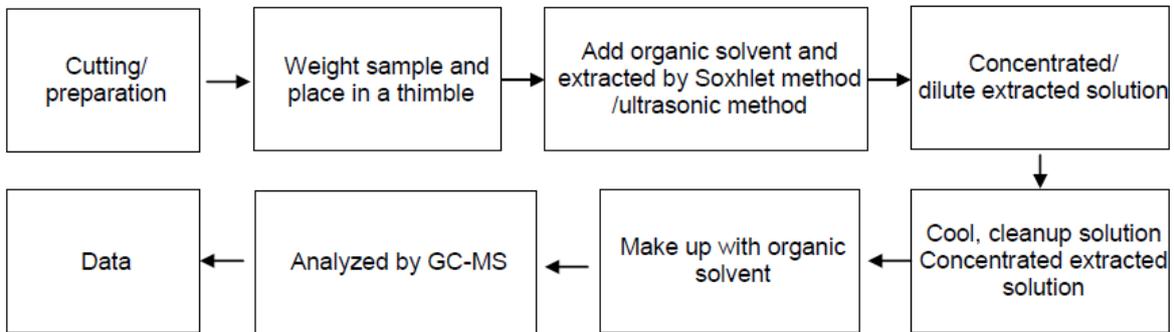


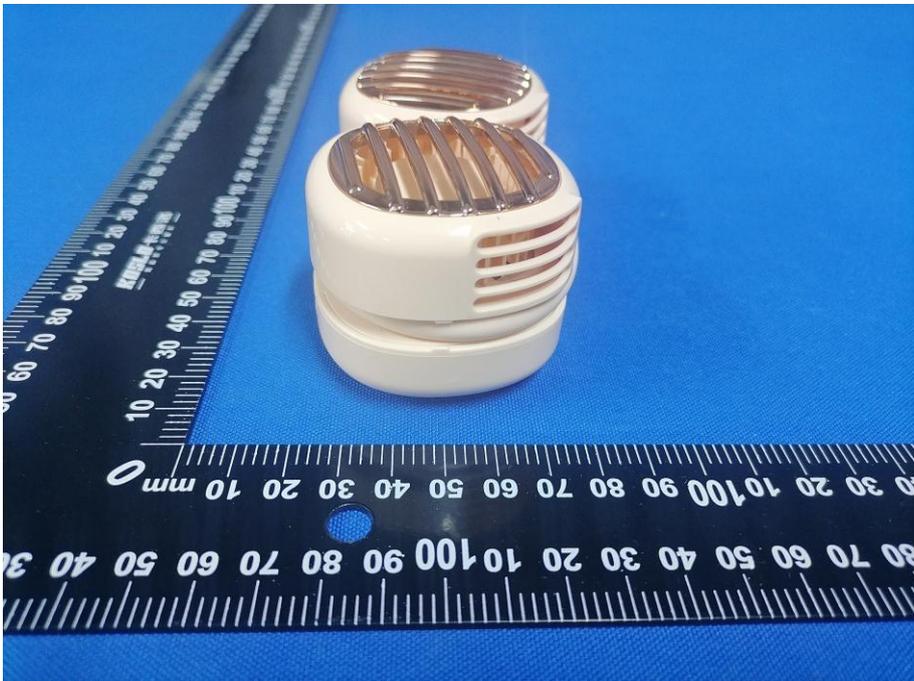
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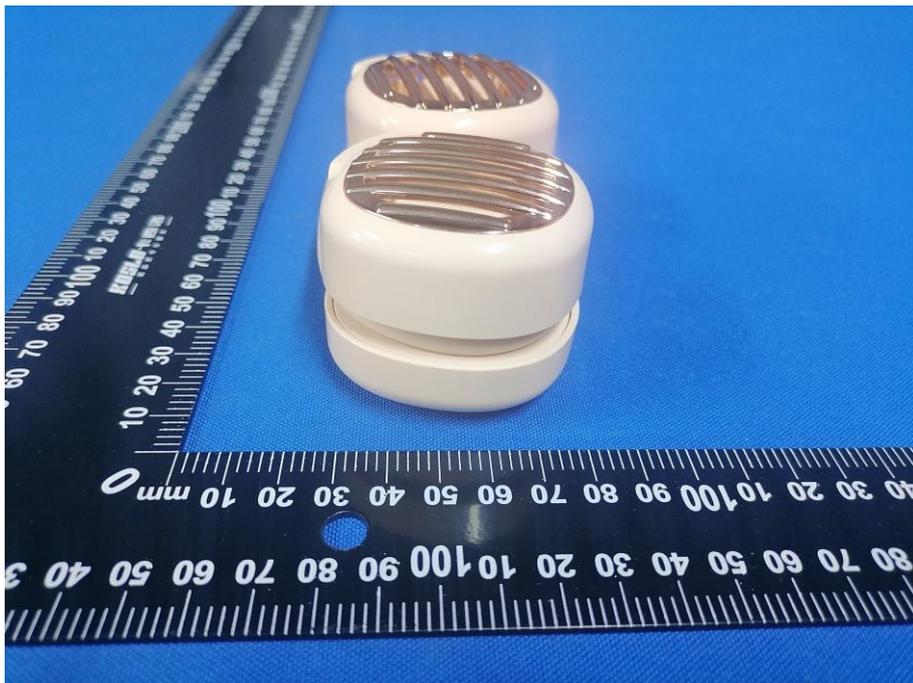
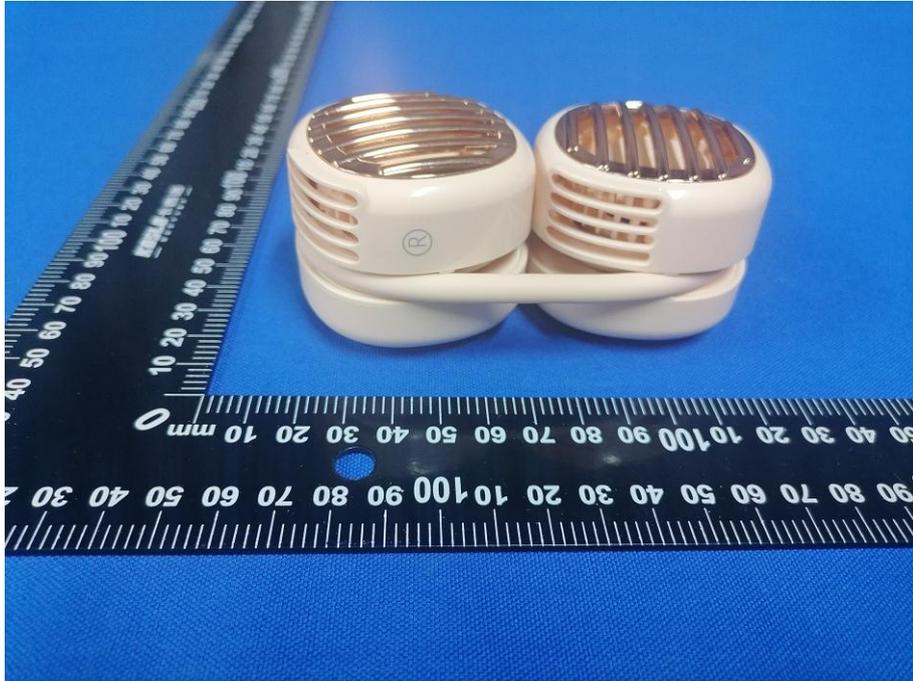
Sample material	Digestion Acid
Steel, copper, aluminum, solder	Aqua regia, HNO ₃ , HCl, HF, H ₂ O ₂
Glass	HNO ₃ /HF
Gold, platinum, palladium, ceramic	Aqua regia
Silver	HNO ₃
Plastic	H ₂ SO ₄ , H ₂ O ₂ , HNO ₃ , HCl
Others	Any acid to total digestion

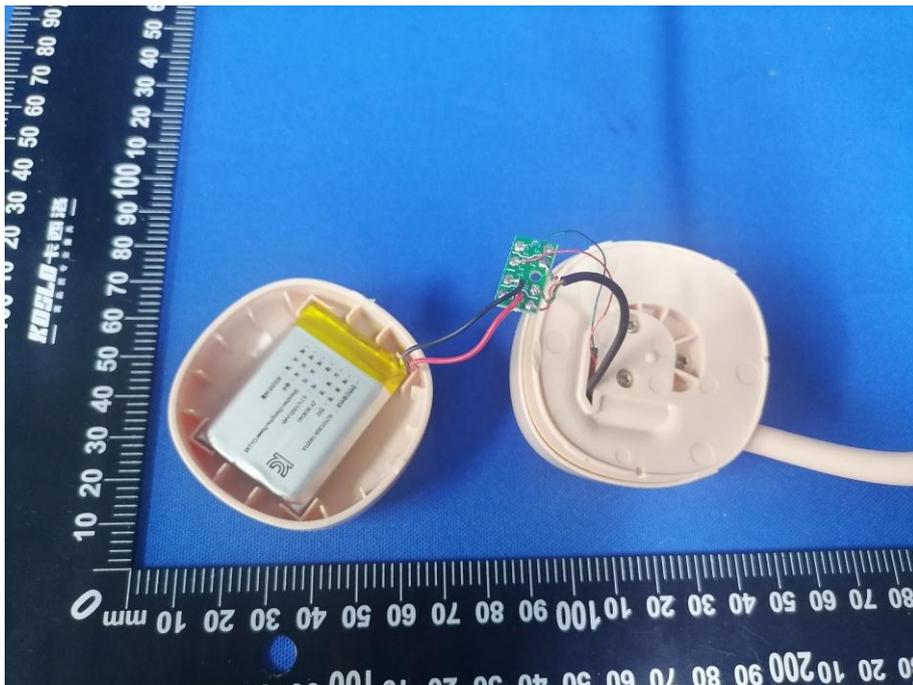
Sample photo:

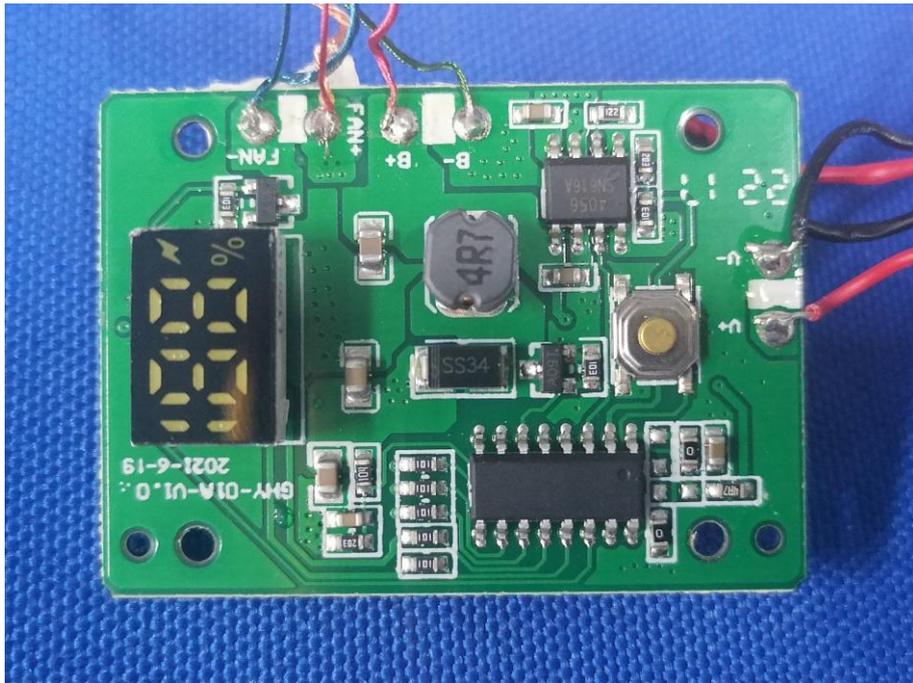
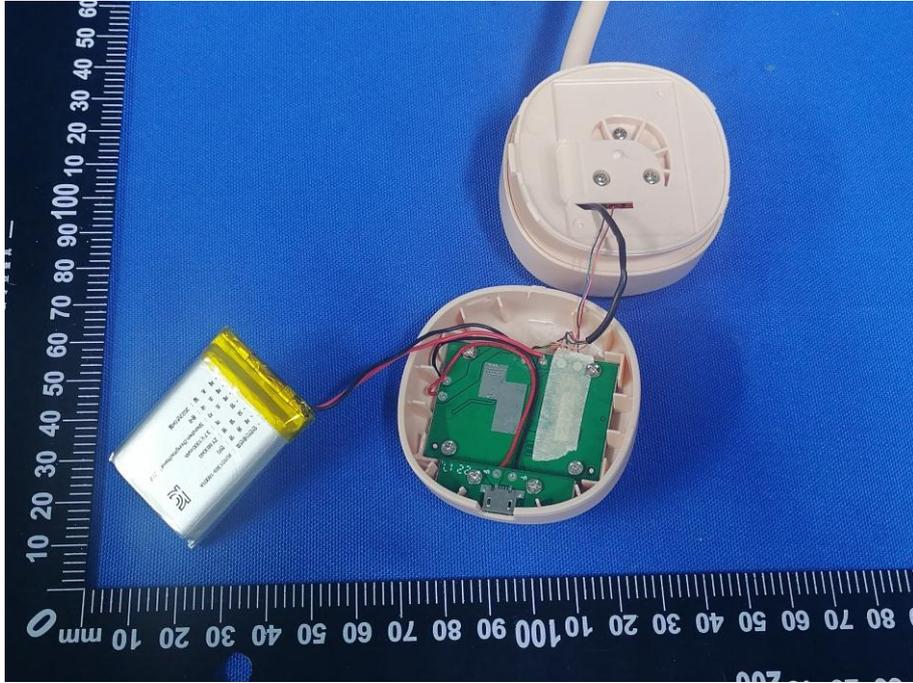


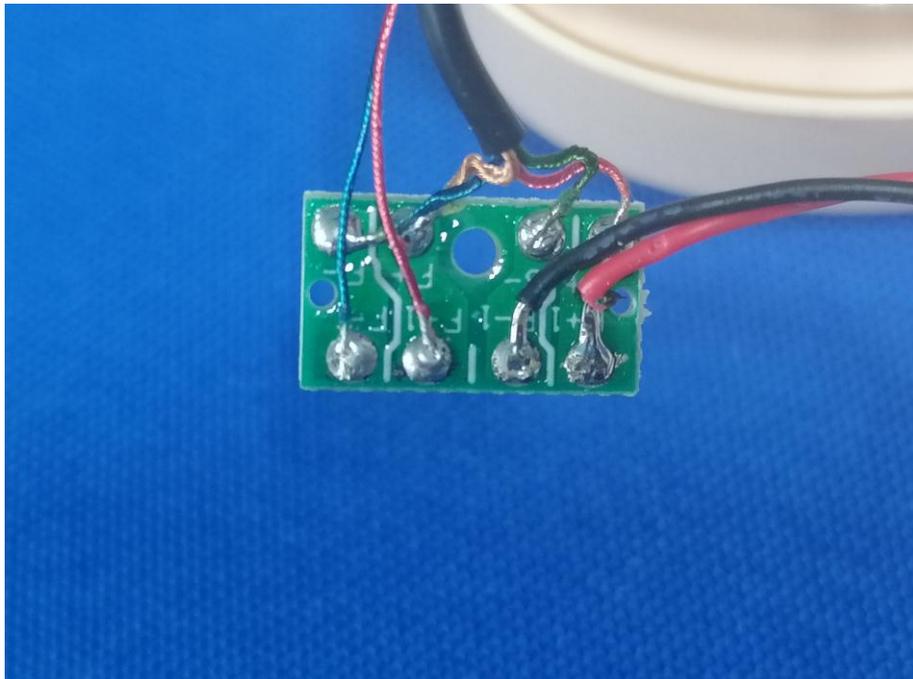
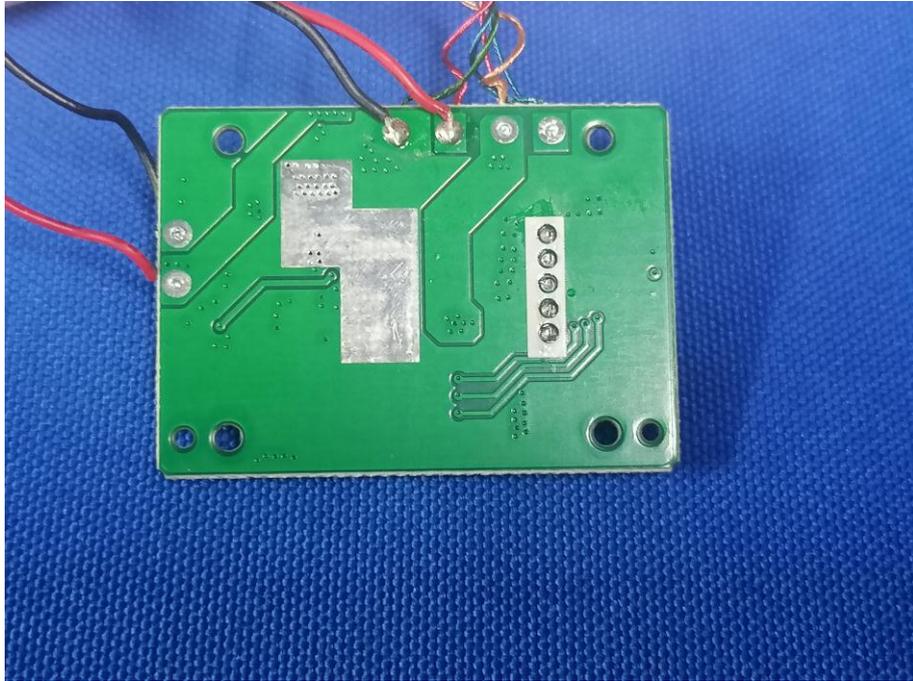


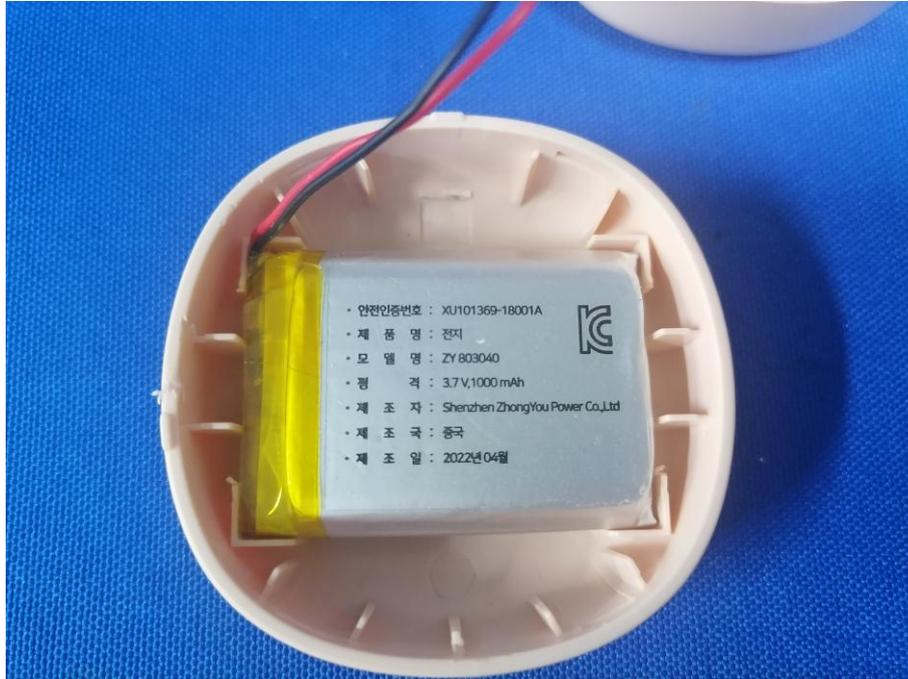












End of Report

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