



中国认可
国际互认
检测
TESTING
CNAS L6478



TEST REPORT

Report No...... : WTF22F10204182C
Applicant..... : Mid Ocean Brands B.V.
Address..... : 7/F., Kings Tower, 111 King Lam Street, Cheung Sha Wan, Kowloon, Hong Kong
Manufacturer..... : 103221
Sample Name..... : Table light wireless charger
Sample Model..... : MO6349
Date of Receipt sample..... : 2022-10-14
Testing period..... : 2022-10-14 to 2022-10-24
Date of Issue..... : 2022-10-24
Test Result..... : Refer to next page (s)

Prepared By:

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Signed for and on behalf of
Waltek Testing Group (Foshan) Co., Ltd.

Swing.Liang



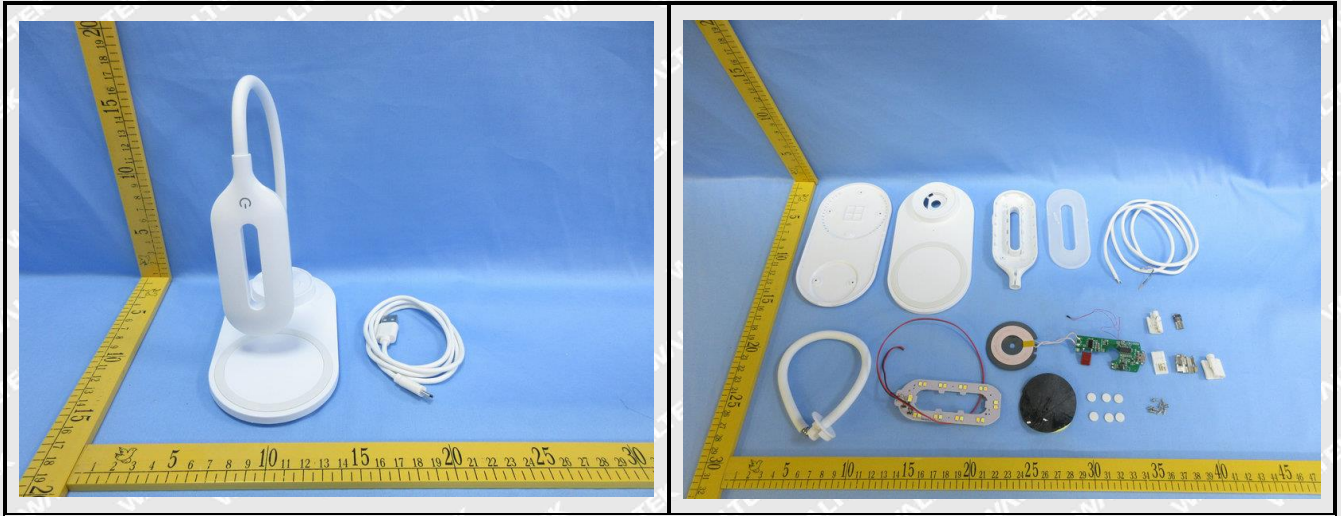
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- Test Requested** : In accordance with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863.
- Test Method**..... : 1) With reference to IEC 62321-2:2021, disassembly, disjunction and mechanical sample preparation
2) With reference to IEC 62321-3-1:2013, screening - Lead, mercury, cadmium, total chromium and total bromine by X-ray fluorescence spectrometry
3) With reference to IEC 62321-4:2013+AMD1:2017 CSV, determination of Mercury by ICP-OES
4) With reference to IEC 62321-5:2013, determination of Lead and Cadmium by ICP-OES
5) With reference to IEC 62321-7-2: 2017 and IEC 62321-7-1: 2015, determination of Hexavalent Chromium by UV-Vis
6) With reference to IEC 62321-6:2015, determination of PBBs and PBDEs by GC-MS
7) With reference to IEC 62321-8:2017, determination of Phthalates content by GC-MS.
- Test Conclusion** : **Pass** (Based on the performed tests on the submitted samples, the results comply with the RoHS Directive 2011/65/EU and its amendment (EU) No. 2015/863)

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Sample Photo(s):



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**Test Results:****1. Lead, Mercury, Cadmium, Hexavalent Chromium, PBBs and PBDEs**

Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
1	White soft plastic ring with adhesive	BL	BL	BL	BL	BL	NA
2	White plastic shell	BL	BL	BL	BL	BL	NA
3	White plastic shell	BL	BL	BL	BL	BL	NA
4	White plastic shell	BL	BL	BL	BL	BL	NA
5	Semi-transparent plastic sheet	BL	BL	BL	BL	BL	NA
6	Silvery metal sheet	BL	BL	BL	IN	--	Cr ⁶⁺ : Negative
7	Silvery metal spring	BL	BL	BL	IN	--	Cr ⁶⁺ : Negative
8	White soft plastic tube	BL	BL	BL	BL	BL	NA
9	White plastic sheet	BL	BL	BL	BL	BL	NA
10	Solder	BL	BL	BL	BL	--	NA
11	Chip LED	BL	BL	BL	BL	BL	NA
12	Chip LED	BL	BL	BL	BL	BL	NA
13	White PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
14	Black plastic wire covering	BL	BL	BL	BL	BL	NA
15	Silvery metal wire	BL	BL	BL	BL	--	NA
16	Red plastic wire covering	BL	BL	BL	BL	BL	NA
17	Chip resistor	BL	BL	BL	BL	BL	NA
18	Chip audion	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
19	Chip capacitor	BL	BL	BL	BL	BL	NA



Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
20	Chip IC	BL	BL	BL	BL	BL	NA
21	Silvery metal spring	BL	BL	BL	BL	--	NA
22	Black sponge sheet with adhesive	BL	BL	BL	BL	BL	NA
23	Yellow paper film	BL	BL	BL	BL	BL	NA
24	White soft plastic sheet with adhesive	BL	BL	BL	BL	BL	NA
25	Silvery metal shell (USB plug)	BL	BL	BL	BL	--	NA
26	White plastic jacket (USB plug)	BL	BL	BL	BL	BL	NA
27	White plastic core (USB plug)	BL	BL	BL	BL	BL	NA
28	Golden metal pin (USB plug)	BL	BL	BL	BL	--	NA
29	Solder (USB plug)	BL	BL	BL	BL	--	NA
30	White plastic jacket (plug)	BL	BL	BL	BL	BL	NA
31	Silvery metal shell (plug)	BL	BL	BL	IN	--	Cr ⁶⁺ : Negative
32	Black plastic core (plug)	BL	BL	BL	BL	BL	NA
33	Solder (plug)	BL	BL	BL	BL	--	NA
34	Silvery metal pin (plug)	BL	BL	BL	BL	--	NA
35	Dark grey magnetic sheet	BL	BL	BL	BL	--	NA
36	White fibrous tube	BL	BL	BL	BL	BL	NA
37	Copper varnished wire	BL	BL	BL	BL	BL	NA
38	Yellow plastic adhesive tape	BL	BL	BL	BL	BL	NA
39	Solder	BL	BL	BL	BL	--	NA



Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
40	Chip IC	BL	BL	BL	BL	BL	NA
41	Chip IC	BL	BL	BL	BL	BL	NA
42	Silvery metal shell (socket)	BL	BL	BL	BL	--	NA
43	Black plastic core (socket)	BL	BL	BL	BL	BL	NA
44	Silvery metal pin (socket)	BL	BL	BL	BL	--	NA
45	Red capacitor	BL	BL	BL	BL	BL	NA
46	Chip audion	BL	BL	BL	BL	BL	NA
47	Dark grey magnetic core (inductor)	BL	BL	BL	BL	--	NA
48	Copperly varnished wire (inductor)	BL	BL	BL	BL	BL	NA
49	Chip diode	BL	BL	BL	BL	BL	NA
50	Chip capacitor	BL	BL	BL	BL	BL	NA
51	Chip resistor	BL	BL	BL	BL	BL	NA
52	Chip IC	BL	BL	BL	BL	BL	NA
53	Green PCB	BL	BL	BL	BL	IN	PBBs : ND PBDEs : ND
54	Black EC	BL	BL	BL	BL	BL	NA
55	Red varnished wire	BL	BL	BL	BL	BL	NA
56	White plastic wire jacket	BL	BL	BL	BL	BL	NA
57	Pink plastic wire covering	BL	BL	BL	BL	BL	NA
58	Dark grey plastic wire covering	BL	BL	BL	BL	BL	NA
59	Light green plastic wire covering	BL	BL	BL	BL	BL	NA



Part No.	Part Description	Result of XRF					Result of Wet Chemical Testing (mg/kg)
		Cd	Pb	Hg	Cr	Br	
60	White plastic wire covering	BL	BL	BL	BL	BL	NA
61	Coppery metal wire	BL	BL	BL	BL	--	NA
62	Silvery metal screw	BL	BL	BL	IN	--	Cr ⁶⁺ : Negative

Remark:

- (1) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr⁶⁺) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1: 2013 (unit: mg/kg)

Element	Polymer	Metal	Composite Materials
Cd	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	BL ≤ (70-3σ) < IN < (130+3σ) ≤ OL	LOD < IN < (150+3σ) ≤ OL
Pb	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Hg	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (700-3σ) < IN < (1300+3σ) ≤ OL	BL ≤ (500-3σ) < IN < (1500+3σ) ≤ OL
Cr	BL ≤ (700-3σ) < IN	BL ≤ (700-3σ) < IN	BL ≤ (500-3σ) < IN
Br	BL ≤ (300-3σ) < IN	--	BL ≤ (250-3σ) < IN

BL= Below Limit OL= Over Limit LOD = Limit of Detection -- = Not Regulated

- (2) "IN" expresses the inconclusive region, and further chemical testing to confirm whether it complies with the requirement of RoHS Directive.
- (3) The XRF screening test for RoHS elements – the reading may be different to the actual content in the sample be of non-uniformity composition.
- (4) mg / kg =milligram per kilogram=ppm, μg/cm²= Micrograms per square centimetre.
- (5) ND = Not Detected or lower than limit of quantitation.
- (6) NA = Not Applicable, as the XRF screening test result was below the limit or as the XRF screening directly determine that test result was over the limit, it was not need to conduct the wet chemical testing.
- (7) LOQ = Limit of quantitation.

Test Items	Pb	Cd	Hg	Cr ⁶⁺		PBB	PBDE
Units	mg/kg	mg/kg	mg/kg	mg/kg	μg/cm ²	mg/kg	mg/kg
LOQ	2	2	2	8	0.1	5	5

The LOQ for single compound of PBBs and PBDEs is 5mg/kg, LOQ of Cr⁶⁺ for polymer and composite sample is 8mg/kg and LOQ of Cr⁶⁺ for metal sample is 0.1μg/cm².



(8) RoHS Requirement

Restricted Substances	Limits
Cadmium (Cd)	0.01% (100 mg/kg)
Lead (Pb)	0.1% (1000 mg/kg)
Mercury (Hg)	0.1% (1000 mg/kg)
Chromium (VI) (Cr ⁶⁺)	0.1% (1000 mg/kg)
Polybrominated Biphenyls (PBBs)	0.1% (1000 mg/kg)
Polybrominated Diphenyl Ethers (PBDEs)	0.1% (1000 mg/kg)

- (9) According to IEC 62321-7-1:2015, determined of Cr⁶⁺ on metal sample by boiling water extraction test method, and result is shown as Positive/Negative.

Boiling water extraction:

Negative = Absence of Cr⁶⁺ coating, the detected concentration in boiling water extraction solution is less than 0.10ug/cm².

Positive = Presence of Cr⁶⁺ coating, the detected concentration in boiling water extraction solution is greater than 0.13ug/cm².

Information on storage conditions and production date of the tested sample is unavailable and thus Cr⁶⁺ results represent status of the sample at the time of testing.

(10) Abbreviation:

“Pb” denotes Lead, “Cd” denotes Cadmium, “Hg” denotes Mercury, “Cr” denotes Chromium, “Cr (VI)” denotes Hexavalent Chromium, “Br” denotes Bromine, “PBBs” denotes Total Polybrominated Biphenyls, “PBDEs” denotes Total Polybrominated Diphenyl Ethers.

2. Phthalates:

Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T01	1	ND	ND	ND	ND
T02	2+3+4+5+9 [△]	ND	ND	ND	ND
T03	6	--	--	--	--
T04	7	--	--	--	--
T05	8	ND	ND	ND	ND
T06	10	--	--	--	--
T07	11+12+13+17+18 [△]	ND	ND	ND	ND
T08	14	ND	ND	94	ND
T09	15	--	--	--	--
T10	16	ND	ND	ND	ND
T11	19+20+37+40+41 [△]	ND	ND	ND	ND
T12	21	--	--	--	--
T13	22	ND	ND	ND	ND
T14	23	ND	ND	ND	ND
T15	24	ND	ND	ND	ND
T16	25	--	--	--	--
T17	26	ND	ND	ND	ND



Serial No.	Part No.	Result (mg/kg)			
		DBP	BBP	DEHP	DIBP
T18	27+32 [△]	ND	ND	ND	ND
T19	28	--	--	--	--
T20	29	--	--	--	--
T21	30	ND	ND	ND	ND
T22	31	--	--	--	--
T23	33	--	--	--	--
T24	34	--	--	--	--
T25	35	--	--	--	--
T26	36	ND	ND	ND	ND
T27	38	ND	ND	ND	ND
T28	39	--	--	--	--
T29	42	--	--	--	--
T30	43	ND	ND	ND	ND
T31	44	--	--	--	--
T32	45+46+48+49+50 [△]	ND	ND	ND	ND
T33	47	--	--	--	--
T34	51+52+53+54+55 [△]	ND	ND	ND	ND
T35	56	125	ND	ND	ND
T36	57	87	ND	ND	ND
T37	58	88	ND	ND	ND
T38	59	ND	ND	ND	ND
T39	60	77	ND	74	ND
T40	61	--	--	--	--
T41	62	--	--	--	--

Note:

- (1) mg/kg = milligram per kilogram= ppm
- (2) ND = Not Detected or lower than limit of quantitation.
- (3) -- = Not Regulated.
- (4) LOQ = Limit of quantitation.

Test Items	DBP	BBP	DEHP	DIBP
Units	mg/kg	mg/kg	mg/kg	mg/kg
LOQ	50	50	50	50

- (5) Abbreviation:

“DBP” denotes Dibutyl phthalate, “BBP” denotes Benzyl butyl phthalate (BBP), “DEHP” denotes Bis(2-ethylhexyl)-phthalate, “DIBP” denotes Diisobutyl phthalate, “PHT” denotes Phthalates.

- (6) RoHS requirement

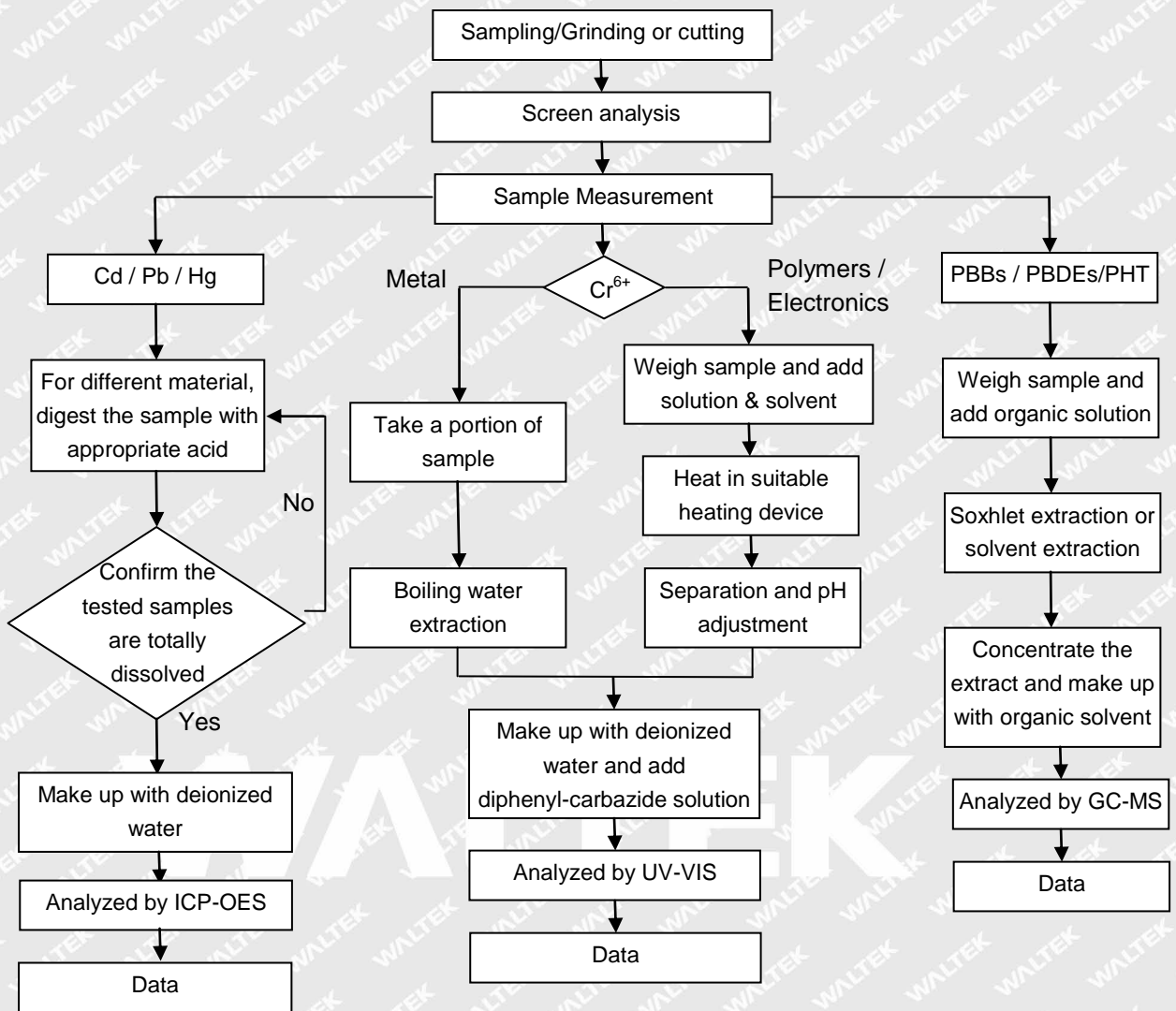
Restricted Substances	Limits
Dibutyl phthalate (DBP)	0.1% (1000 mg/kg)
Benzyl butyl phthalate (BBP)	0.1% (1000 mg/kg)
Di(2-ethylhexyl) phthalate (DEHP)	0.1% (1000 mg/kg)
Di-iso-butyl phthalate (DIBP)	0.1% (1000 mg/kg)

- (7) “△”= As client’s requirement, the testing was conducted based on mixed components. Results are calculated by the minimum weight of mixed components.

Measurement Flowchart:

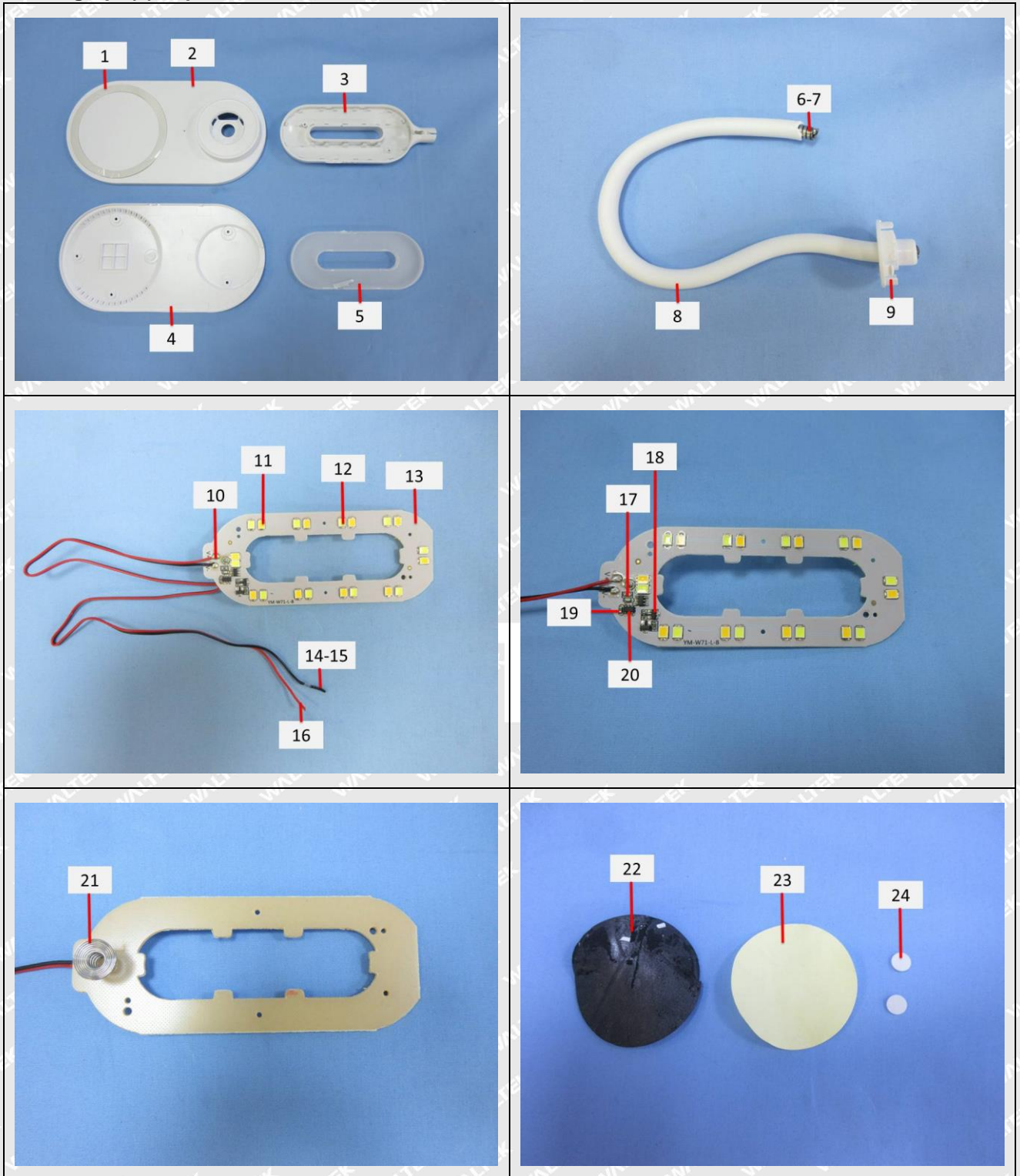
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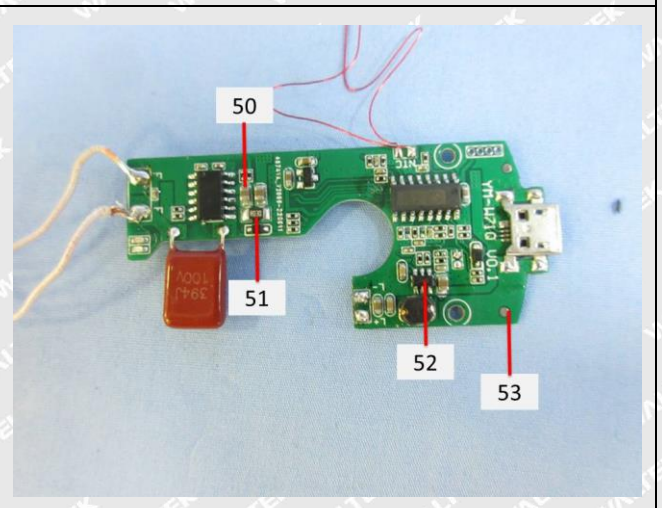
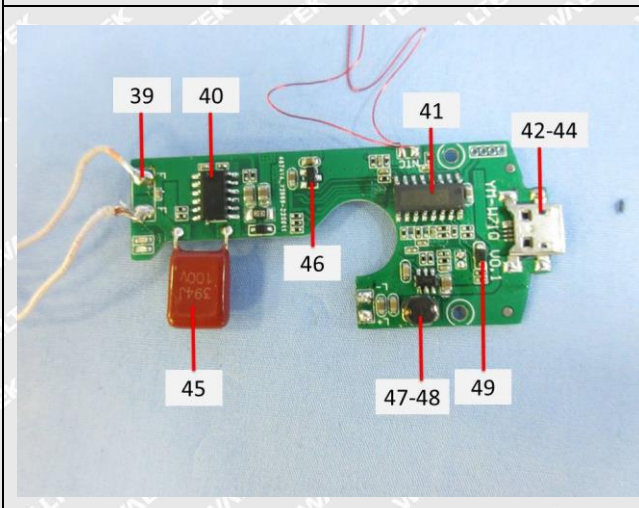
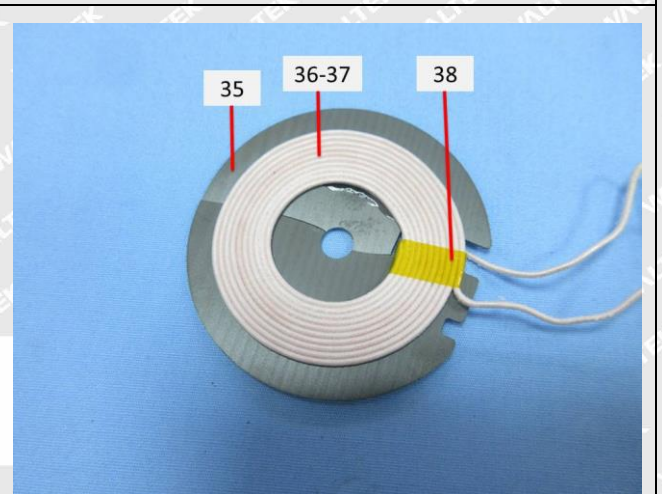
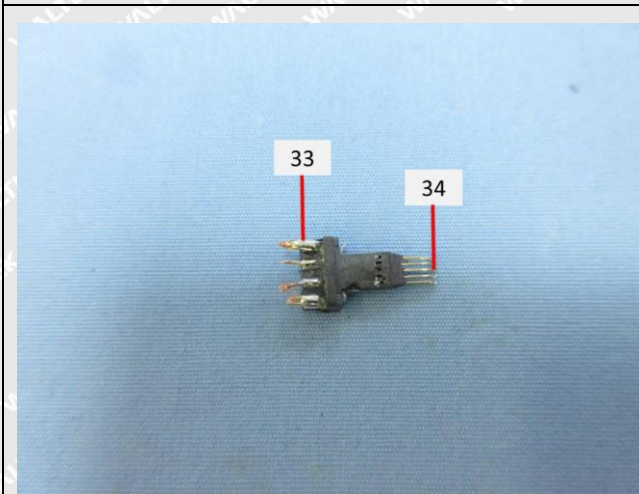
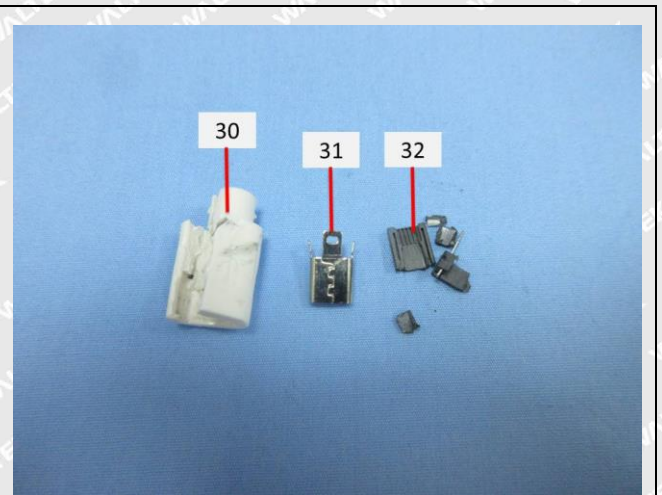
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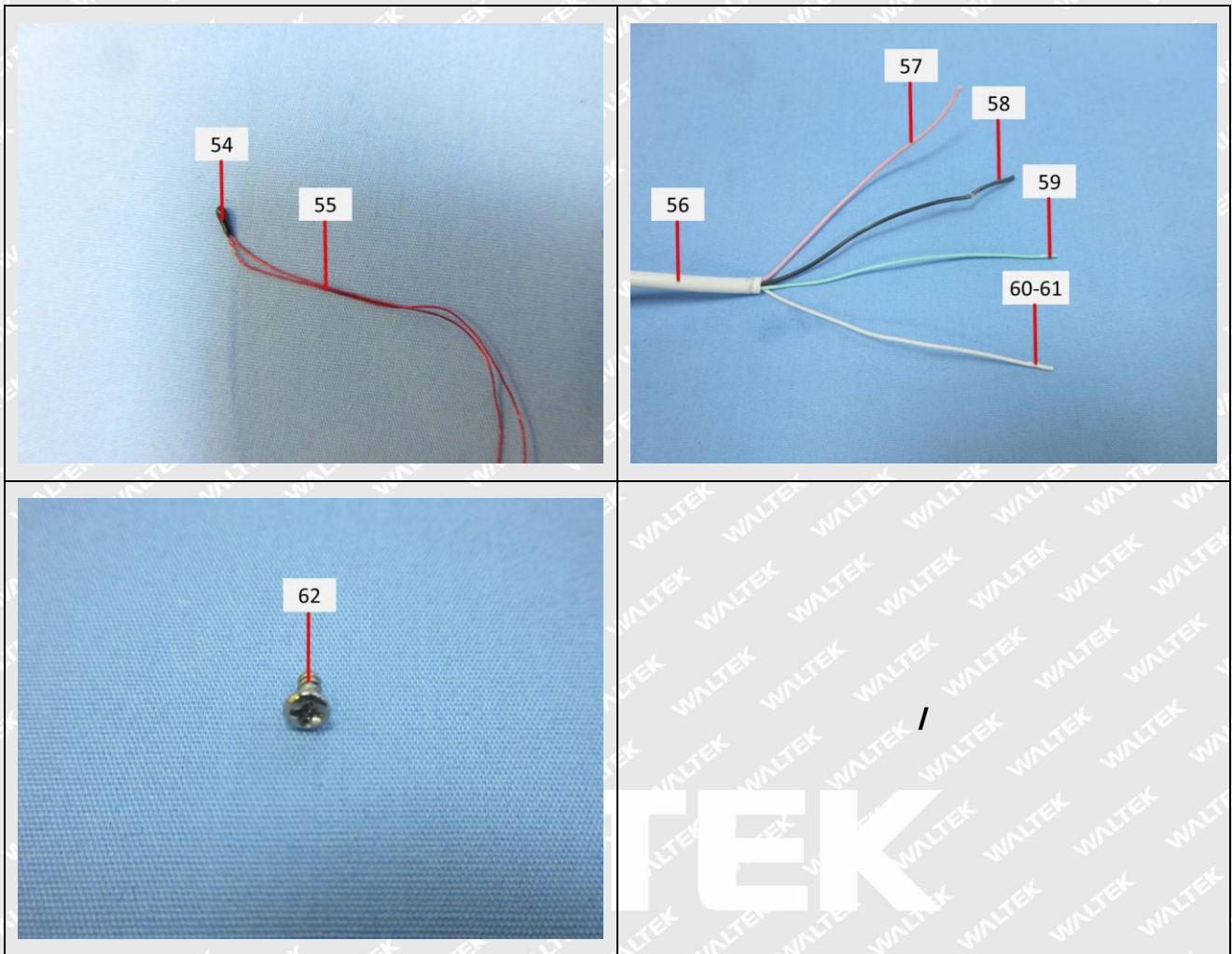




Photograph(s) of parts tested:







Remarks:

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===== End of Report =====