



TEST REPORT

Reference No. : WTF16F0345649C
Applicant : Leader Lighting Co., Ltd.
Address : No.16 Jun Ye Bei Road, Zone C, Shishan Technology&Industry Garden, Nanhai District, FoshanCity, Guangdong Province, China
Manufacturer : Leader Lighting Co., Ltd.
Address : No.16 Jun Ye Bei Road, Zone C, Shishan Technology&Industry Garden, Nanhai District, FoshanCity, Guangdong Province, China
Sample Name : LED Lamps
Model No. : LD-3008D/9(89830008/05)
Reference Model No. : LD-3008D/2(89830008/01), LD-3008D/3(89830008/02), LD-3008D/4A(89830008/03), LD-3008D/5(89830008/04), C10594+558(89830003/05)
Test Requested : In accordance with the RoHS Directive 2011/65/EU
Test Method : With Reference to EN 62321:2009 Procedures for the Determination of level of Six Regulated Substance in Electrotechnical Products.
1) Screening by XRF Spectroscopy
2) Wet Chemical Test Method
- Determination of Lead, Mercury and Cadmium by ICP-OES
- Determination of Hexavalent Chromium by Colorimetric Method
- Determination of PBBs and PBDEs by GC-MS
Test Conclusion : Based on the performed tests on the submitted samples, the results comply with the RoHS Directive 2011/65/EU
Date of Receipt sample : 2016-03-22
Date of Test : 2016-03-22 to 2016-04-07
Date of Issue : 2016-04-08
Test Result : Please refer to next page (s)

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

Prepared By:

Waltek Services (Foshan) Co., Ltd.

Address: No. 13-19, 2/F, 2nd Building, Sunlink International Machinery City, Chencun Town, Shunde District, Foshan, Guangdong, China
Tel :+86-757-23811398
Fax:+86-757-23811381

Compiled by:

Sue Xu

Sue.Xu / Project Engineer

Waltek Services (Foshan) Co., Ltd.

<http://www.waltek.com.cn>

Approved by:



Lion Wang

Lion.Wang / Lab Manager

**Test Results:**

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
1	Grey coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
2	Silvery metal shell	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
3	Transparent plastic sleeve	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
4	Transparent glass sheet with white printing	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
5	Silvery metal holder	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
6	Silvery metal shell	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
7	White sponge adhesive sheet	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
8	Black heat-shrinkable tube	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
9	Transparent plastic cover of connector	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
10	Silvery metal sheet of connector	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
11	White plastic cable tie	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
12	Silvery metal cap	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
13	Transparent rubber gasket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
14	Silvery metal axle	Cd	BL	Cr ⁶⁺ :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
15	Silvery metal screw	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
16	Silvery metal gasket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
17	Silvery metal gasket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
18	Silvery metal nut	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
19	Silvery metal shell	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
20	Transparent plastic cover	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
21	Silvery metal sleeve	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
22	Red plastic gasket	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
23	Silvery metal screw	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
24	Blue plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
25	Silvery metal wire	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
26	Brown plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
27	Chip LED	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
28	Silvery metal sheet with white coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
29	White fibre sleeve	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
30	Solder	Cd	BL	Pb :245	Comply
		Pb	IN		
		Hg	BL		
		Cr	BL		
		Br	BL		
31	White plastic shell	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
32	Black plastic sleeve	Cd	IN	Cd :53	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
33	Brown plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
34	Green plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
35	Silvery metal wire	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
36	Blue plastic wire covering	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
37	White plastic shell of terminal strip	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
38	Silvery metal sleeve of terminal strip	Cd	IN	Cd :34 #Pb :2.20×10 ⁴	Comply
		Pb	OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
39	Silvery metal screw of terminal strip	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
40	Orange plastic shell	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
41	Silvery metal screw with black coating	Cd	BL	Cr ⁶⁺ :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
42	White plastic film with black printing	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
43	White plastic shell	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
44	White plastic shell of thermostat	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
45	Silvery metal holder of thermostat	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
46	Multicolour metal sheet of thermostat	Cd	BL	Cr ⁶⁺ :Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
47	Silvery metal contact of thermostat	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
48	Silvery metal sheet of thermostat	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
49	Black plastic base of thermostat	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
50	Black epoxy resin of thermostat	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
51	White plastic wire covering	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
52	Silvery metal wire	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
53	Green plastic shell of terminal strip	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
54	Silvery metal screw of terminal strip	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
55	Silvery metal sheet of terminal strip	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
56	Silvery metal sleeve of terminal strip	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
57	Yellow body of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
58	Silvery metal pin of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
59	Triple insulation winding of inductor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
60	Coppery metal winding of inductor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
61	Green coating of inductor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
62	Dark grey magnetic ring of inductor	Cd	BL	Cr ⁶⁺ :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
63	Black plastic base of inductor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
64	Silvery metal pin of inductor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
65	Black heat-shrinkable tube	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
66	Blue plastic film of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
67	Silvery metal shell of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
68	Black rubber stopper of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
69	Grey metal foil of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
70	Silvery-grey metal foil of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
71	Brown paper of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
72	Transparent plastic adhesive tape of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
73	Silvery metal pin of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
74	Red body of capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
75	Silvery metal pin of capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
76	Yellow plastic shell of capacitor	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
77	Yellow epoxy resin of capacitor	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
78	Silvery film of capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
79	Silvery metal pin of capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
80	Red plastic shell of fuse	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
81	Black plastic base of fuse	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
82	Silvery metal wire of fuse	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
83	White fibre of fuse	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
84	Silvery metal pin of fuse	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
85	Yellow coating	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
86	Black body of audion	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
87	Silvery metal pin of audion	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
88	Transparent plastic sleeve	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
89	Grey body with multicolour printing of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
90	Silvery metal pin of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
91	Black body of diode	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
92	Silvery metal pin of diode	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
93	Black body of audion	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
94	Silvery metal pin of audion	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
95	Silvery metal screw	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
96	Transparent plastic label with black printing of transformer	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
97	Yellow plastic adhesive tape of transformer	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
98	Transparent plastic adhesive tape of transformer	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
99	Dark gray magnetic core of transformer	Cd	BL	Cr ⁶⁺ :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
100	Black plastic bobbin of transformer	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
101	Coppery metal winding of transformer	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
102	Silvery metal pin of transformer	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
103	Black body of audion	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
104	Silvery metal pin of audion	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
105	Silvery metal heat sink	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
106	Silvery metal pin	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
107	Blue body of capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
108	Silvery metal pin of capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
109	Brown plastic film of electrolytic capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
110	Black body of IC	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
111	Silvery metal pin of IC	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
112	Green body with multicolour printing of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
113	Silvery metal pin of resistor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
114	Chip diode	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
115	Chip capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
116	Chip resistor	Cd	BL	NA	Comply
		Pb	*OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
117	Chip glass diode	Cd	BL	NA	Comply
		Pb	*OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
118	Chip audion	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
119	Chip IC	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
120	Chip capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
121	Chip capacitor	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
122	Solder	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
123	Green PCB	Cd	BL	PBBs :ND PBDEs :ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
124	Silvery metal terminal	Cd	BL	NA	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

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**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 EN 62321:2009 (unit: mg/kg)

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

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) ppm = mg / kg, based on the dry weight of tested sample.
- (5) ND = Not Detected, less than the value of Method Detection Limit.
- (6) NA = Not Applicable, as the XRF screening test result was below the limit, it was not need to conduct the wet chemical testing.
- (7) MDL= Method Detection Limit in wet chemical test

Test Items	Pb	Cd	Hg	Cr ⁶⁺	PBB	PBDE
Units	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MDL	2	2	2	2	5	5

The MDL for single compound of PBBs and PBDEs is 5mg/kg and MDL of Cr⁶⁺ for polymer and composite sample is 2mg/kg.

- (8) According to EN 62321:2009, determined of Cr⁶⁺ on metal sample by spot test /boiling water extraction test method, and result is shown as Positive/Negative.

Spot test:

Negative = Absence of Cr⁶⁺ coating, Positive = Presence of Cr⁶⁺ coating.

(The tested sample should be further verified by boiling water extraction method if the spot test result is Negative or cannot be confirmed.)

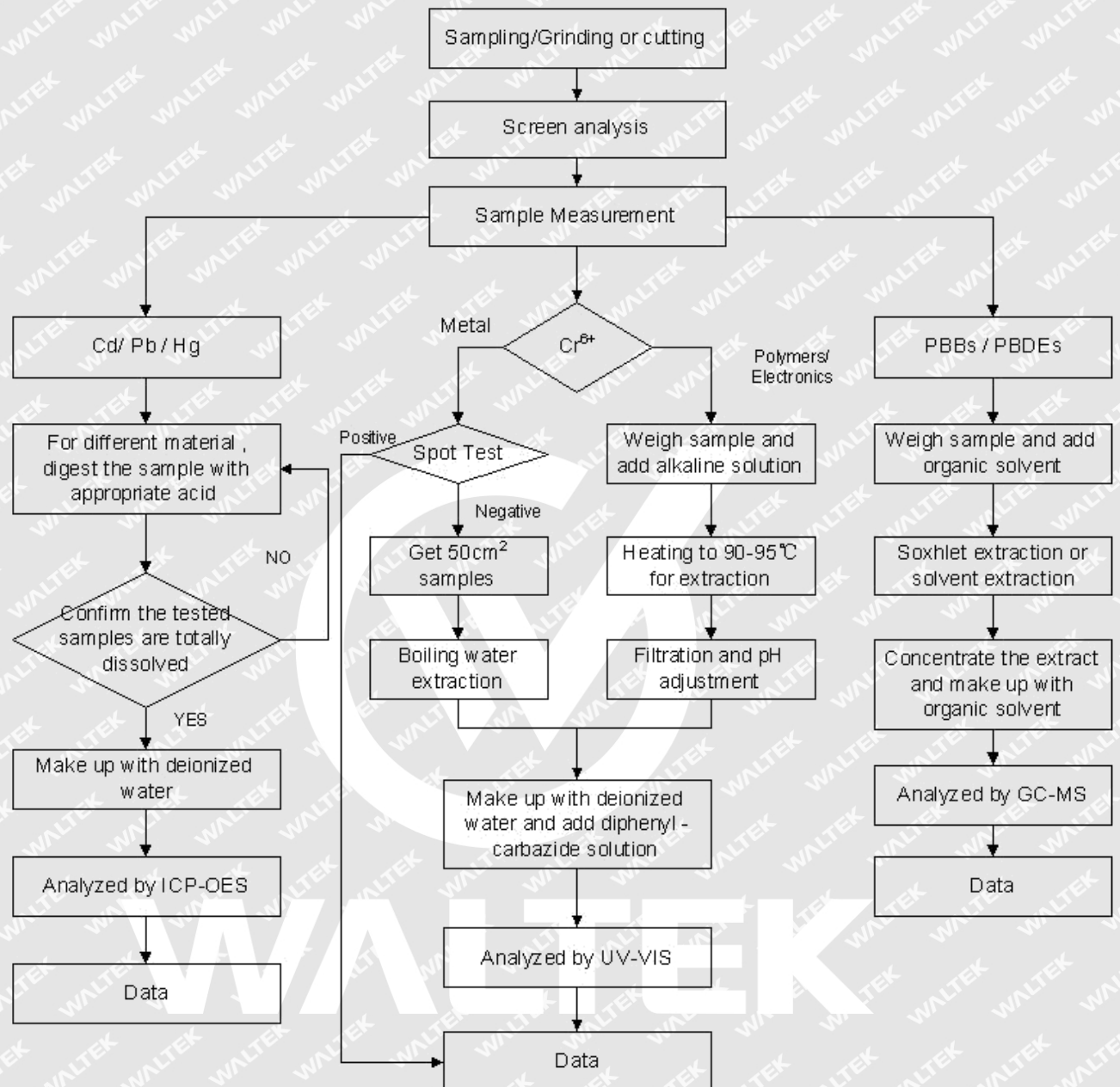
Boiling water extraction:

Negative = Absence of Cr⁶⁺ coating.

Positive = Presence of Cr⁶⁺ coating, the detected concentration in boiling water extraction solution is equal or greater than 0.02mg/kg with 50cm² sample surface area.

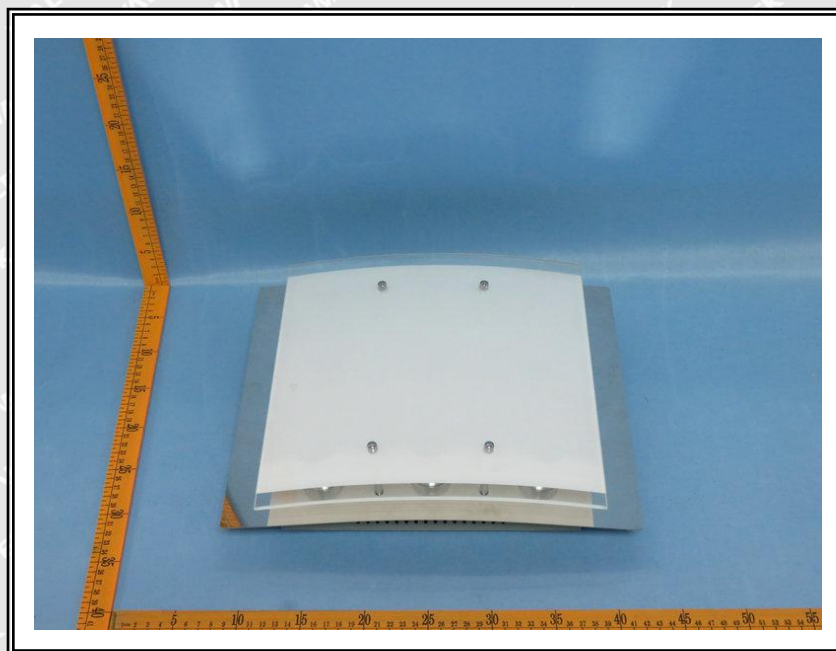
Information on storage conditions and production date of the tested sample is unavailable and thus Cr⁶⁺ results represent status of the sample at the time of testing.

- (9) * = According to the declaration from client, the source of lead in test sample could be from the glass or ceramic material of that electronic component which is exempted by Directive 2011/65/EU.
- (10)[#] = According to the declaration from client, the source of lead in test sample could be from copper alloy while lead as copper alloy containing up to 4% lead by weight is exempted by Directive 2011/65/EU.

**Measurement Flowchart:**



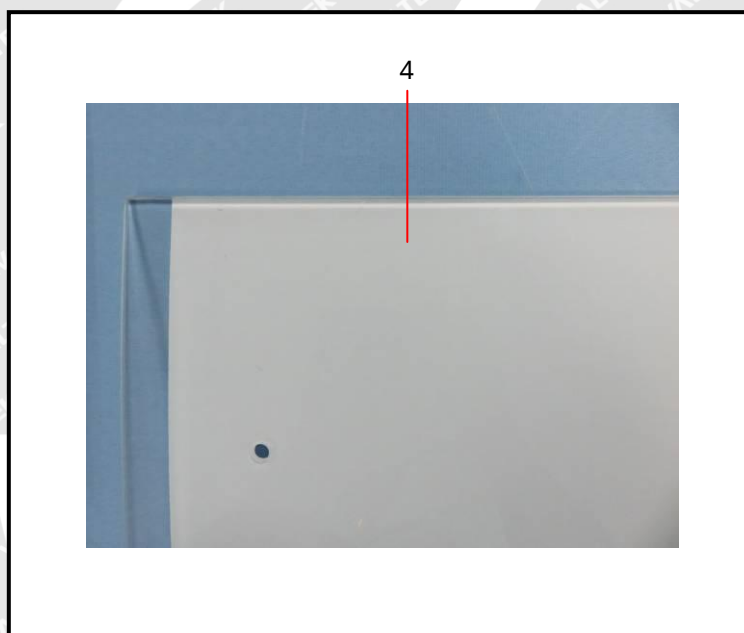
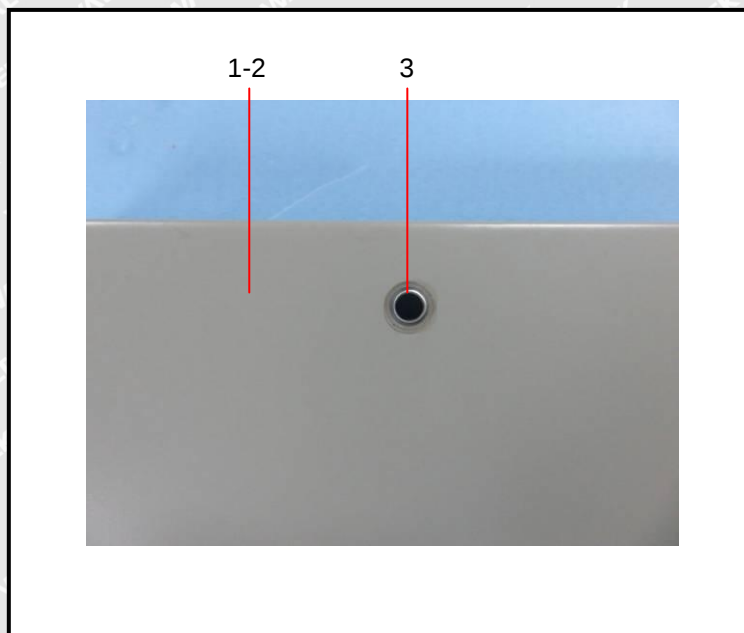
Sample Photo:

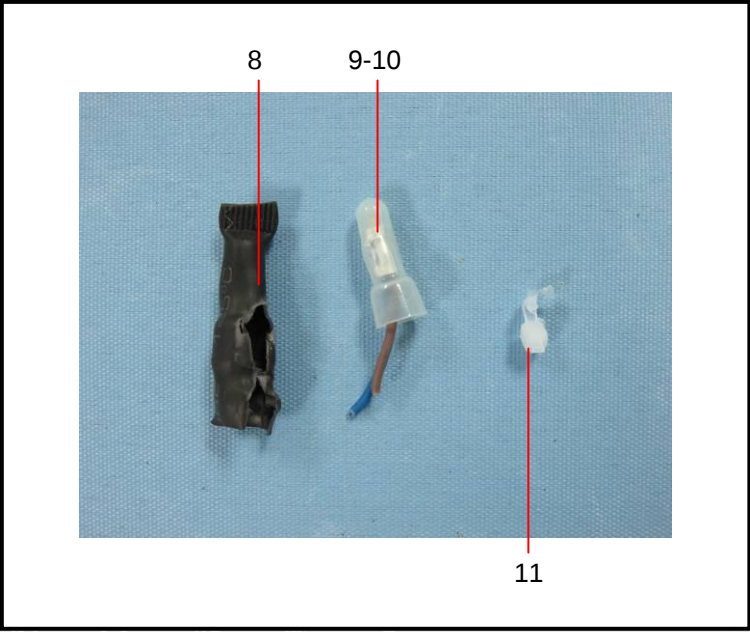
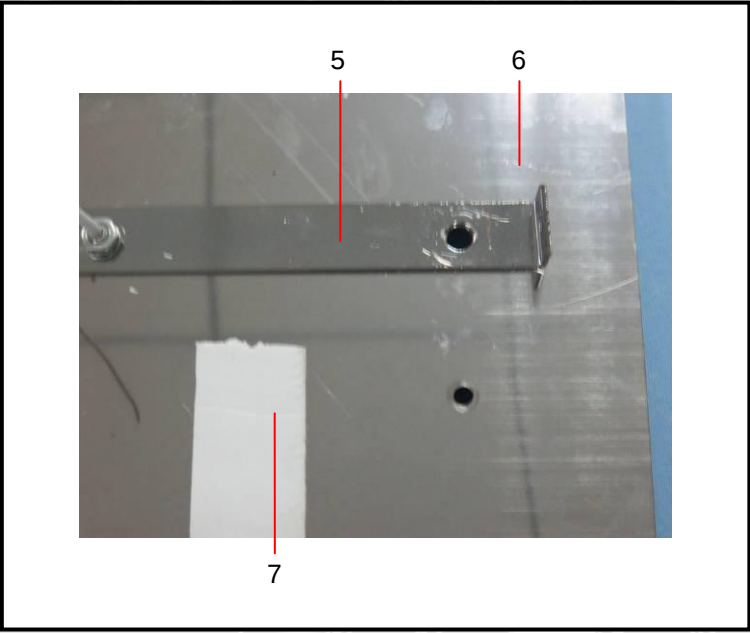


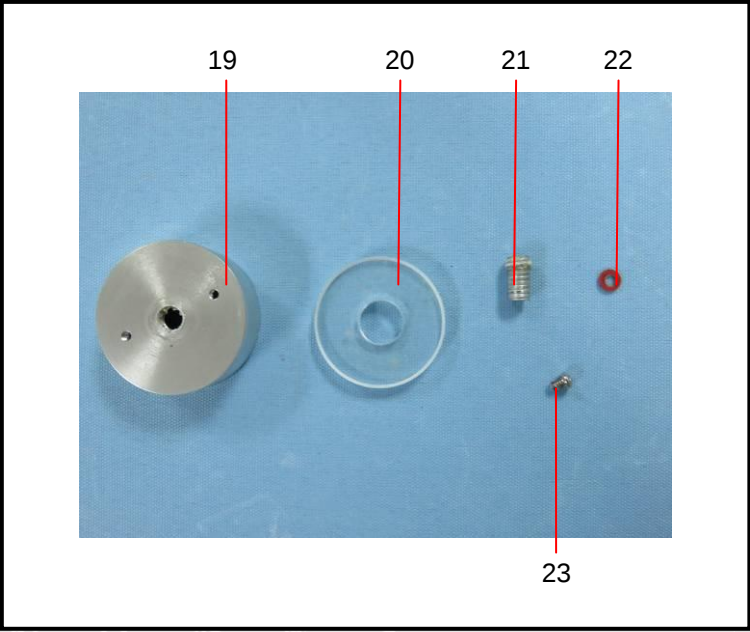
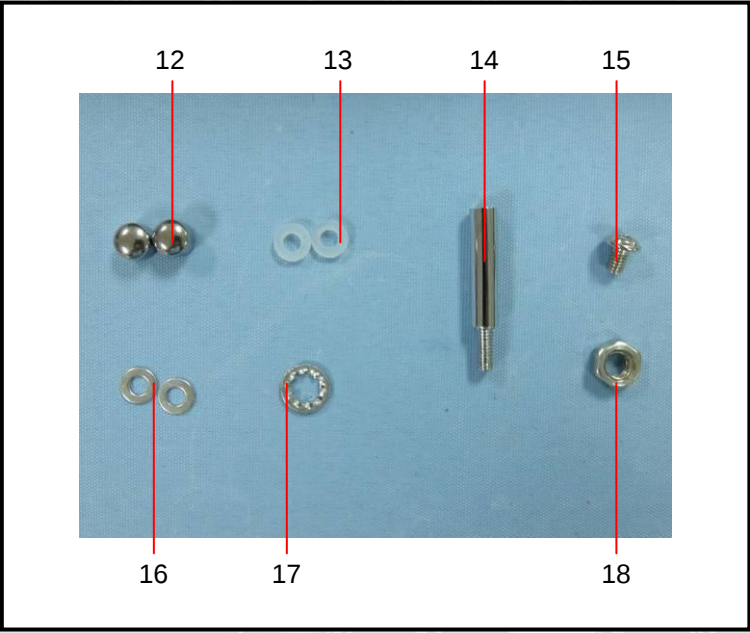
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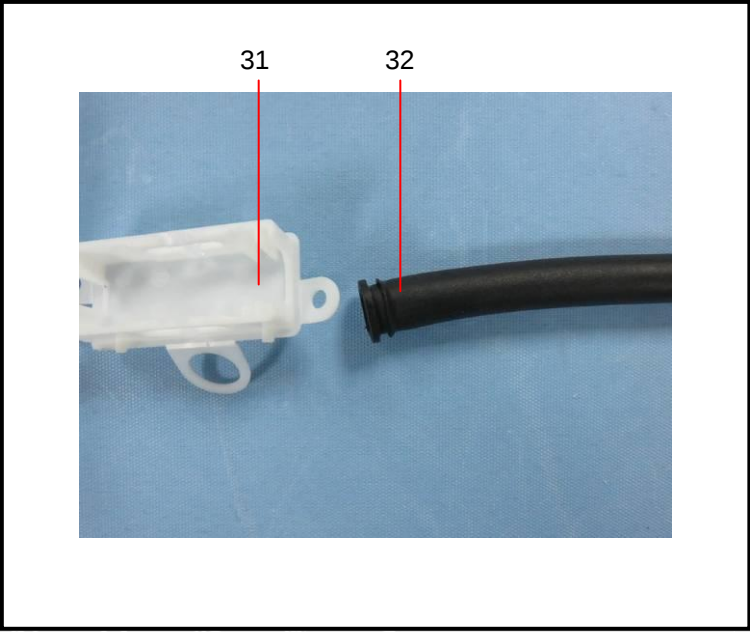
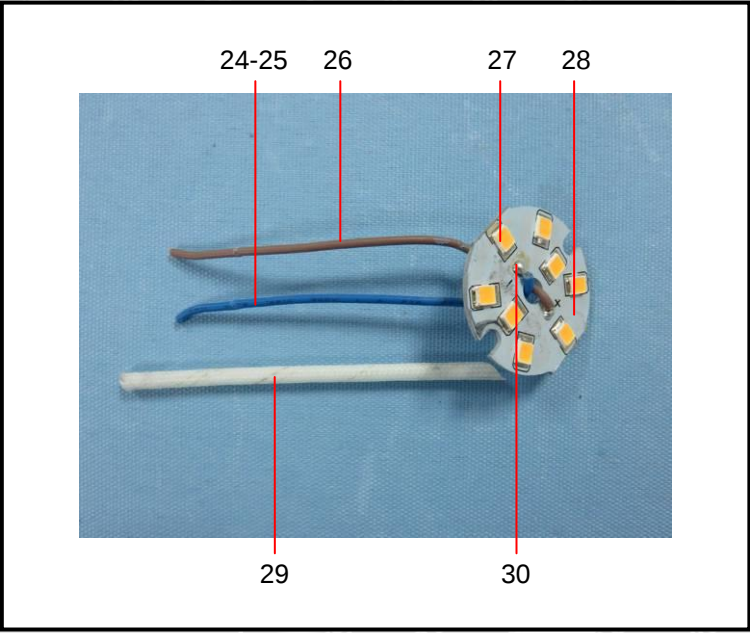


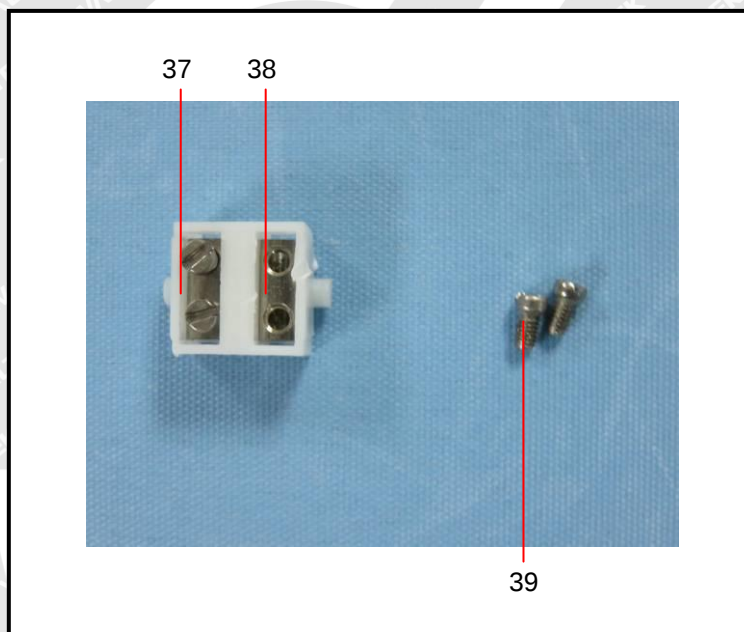
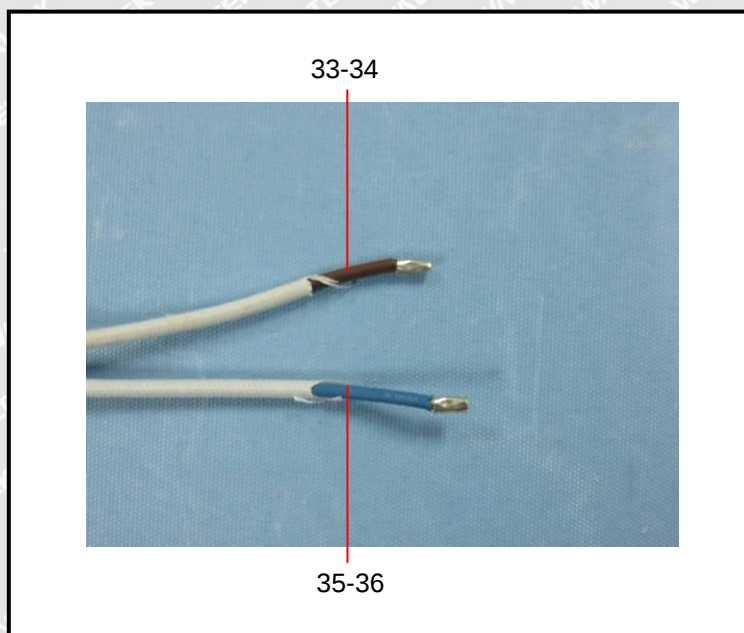
Photograph of parts tested:

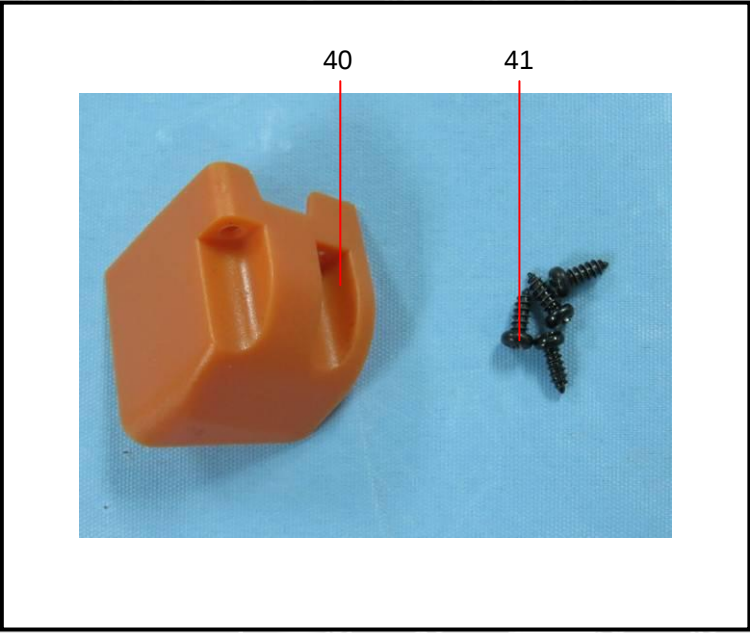


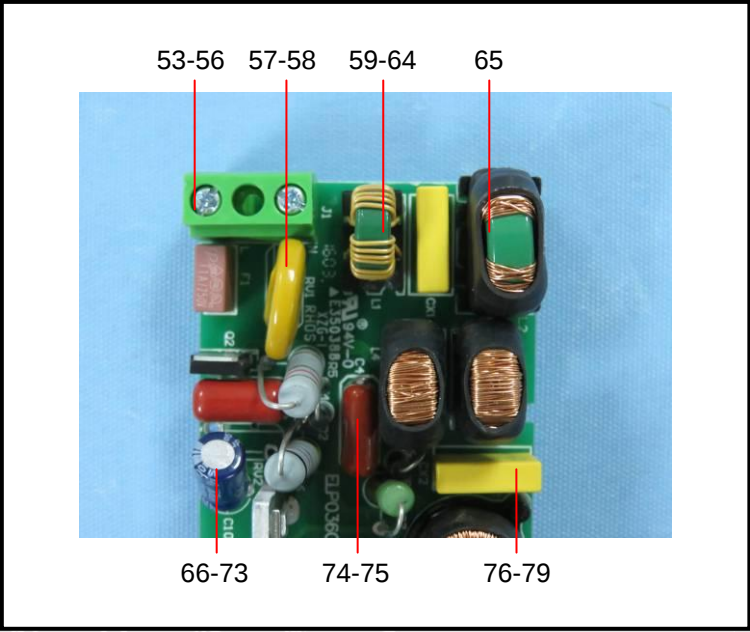
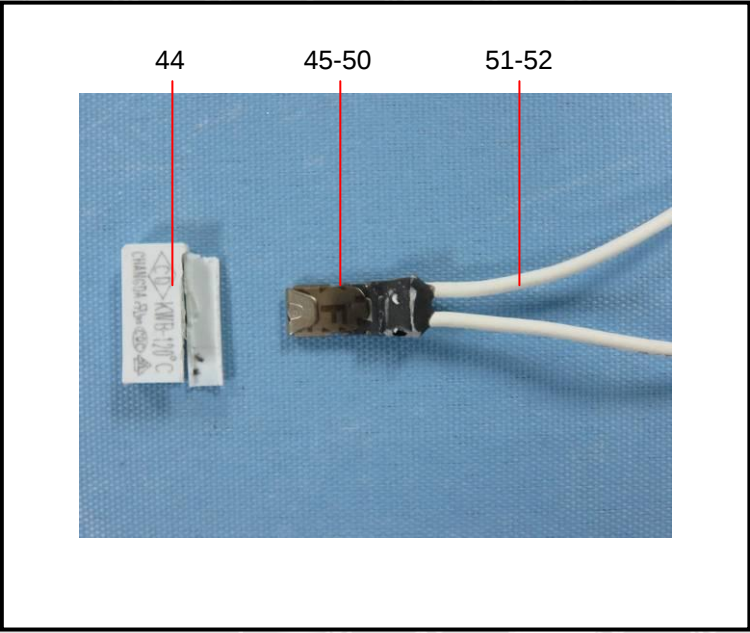


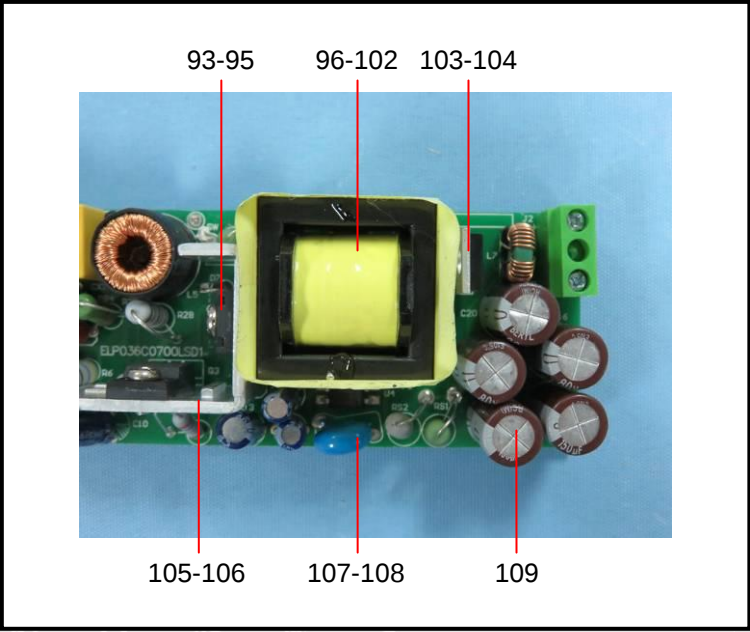
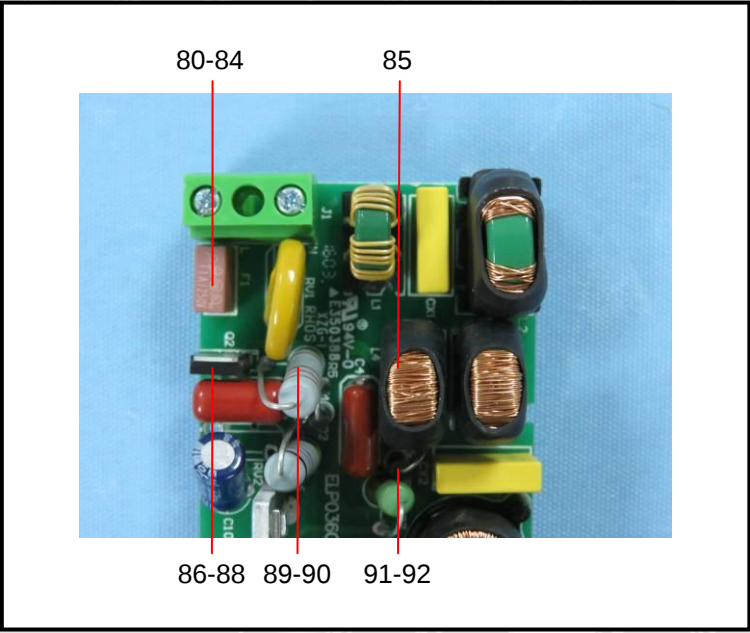


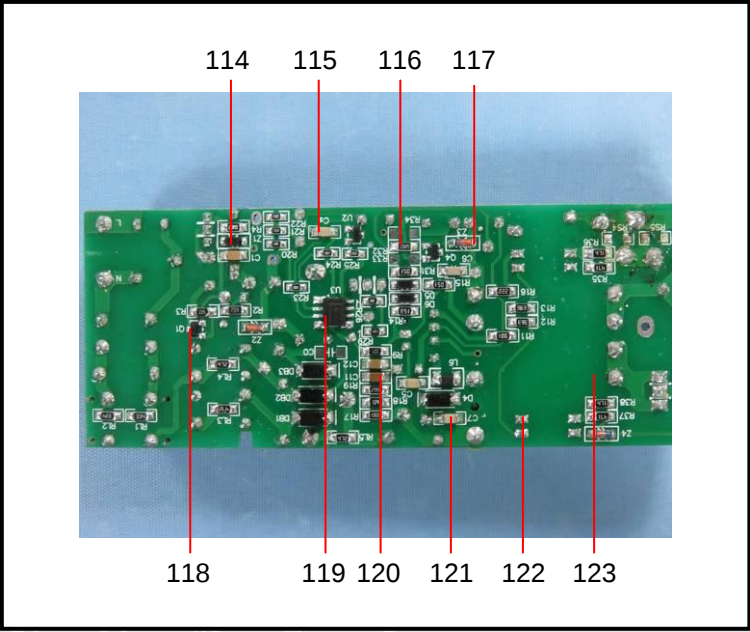
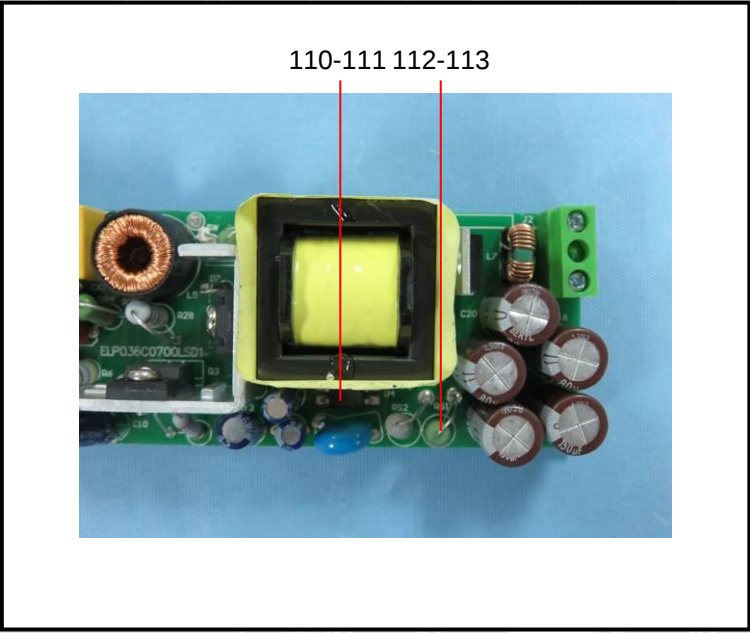


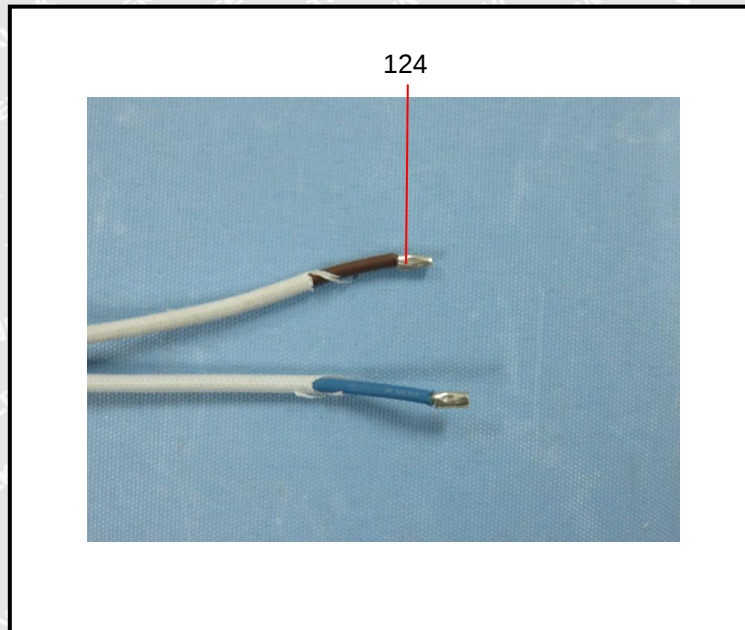












===== End of Report =====

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