



TEST REPORT

Reference No. : WTF15F0628498C
Applicant : Zhongshan Dayuan Lighting Co., Ltd
Address : Dong'An Road, Haizhou, Guzhen town, Zhongshan city, Guangdong province
Manufacturer : Zhongshan Dayuan Lighting Co., Ltd
Address : Dong'An Road, Haizhou, Guzhen town, Zhongshan city, Guangdong province
Sample Description : Fixed Lamps
Model No. : C29544F-9R(37830001/01)
Reference Model No. : DY131-5(37830004/01), DY055-6+6S(37830005/01)
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 : 2015-06-18
Date of Test : 2015-06-18 to 2015-07-13
Date of Issue : 2015-07-20
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.

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**Test Results:**

Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
1	Semi-transparent glue	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
2	Transparent glass shell	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
3	Silvery metal bracket without white coating	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
4	White coating of metal bracket	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
5	Silvery metal shell	Cd	BL	Cr ⁶⁺ : Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
6	Transparent glass bead	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
7	Silvery metal screw	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
8	Silvery metal screw	Cd	BL	Not tested	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	Silvery metal washer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
10	Silvery metal nut	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
11	Semi-transparent rubber gasket	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
12	Silvery metal screw	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
13	Silvery metal sleeve	Cd	BL	Cr ⁶⁺ : Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
14	Silvery metal washer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
15	Silvery metal washer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
16	Semi-transparent nylon cable tie	Cd	BL	Not tested	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	White plastic shell of socket	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
18	Silvery metal pin of socket	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
19	Chip LED	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
20	Semi-transparent glass sheet	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
21	Chip LED	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
22	Chip resistor	Cd	BL	Not tested	Comply
		Pb	*OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
23	Silvery metal sheet with white coating	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
24	Silvery metal shell	Cd	BL	Not tested	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	Blue plastic wire covering	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
26	Silvery metal wire	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
27	White fibre sleeve	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
28	Golden metal terminal	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
29	Brown plastic wire covering	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
30	Blue plastic tube	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
31	Silvery metal terminal	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
32	Red plastic tube	Cd	BL	Not tested	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	White plastic adhesive label with black printing	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
34	White plastic adhesive label with black printing	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
35	White plastic shell	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
36	Coppery metal wire	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
37	Red-black body of glass diode	Cd	BL	Not tested	Comply
		Pb	*OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
38	Silvery metal pin of glass diode	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
39	Beige body with multicolour printing of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
40	Silvery metal pin of resistor	Cd	BL	Not tested	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	Green plastic shell of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
42	Silvery metal screw of connector	Cd	BL	Cr ⁶⁺ : Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
43	Silvery metal nut of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
44	Silvery metal sleeve of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
45	Black plastic keystroke of switch	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
46	Silvery metal shell of switch	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
47	Black plastic base of switch	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
48	Silvery metal sheet of switch	Cd	BL	Not tested	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	Silvery metal pin of switch	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
50	Silvery metal wire	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
51	Black plastic shell of relay	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
52	Coppery metal sheet of relay	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
53	Silvery-coppery metal contact of relay	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
54	Silvery metal sheet of relay	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
55	White plastic bobbin of relay	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
56	Silvery metal axle of relay	Cd	BL	Not tested	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	Silvery metal pin of relay	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
58	Black heat-shrinkable tube of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
59	White ceramic shell of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
60	Silvery metal cover of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
61	Silvery metal wire of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
62	White sand of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
63	Silvery metal pin of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
64	Chip audion	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		



Part No.	Part Description	Result of XRF		Result of Wet Chemical Testing (mg/kg)	Conclusion on RoHS
65	Chip capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
66	Chip IC	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
67	Chip inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
68	Chip resistor	Cd	BL	Not tested	Comply
		Pb	*OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
69	Solder	Cd	BL	Pb : 284	Comply
		Pb	IN		
		Hg	BL		
		Cr	BL		
		Br	BL		
70	Green PCB	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
71	White plastic shell of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
72	Black plastic tube	Cd	BL	Not tested	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	White plastic shell of connector	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
74	White plastic shell	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
75	Silvery metal heat sink	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
76	Silvery metal rivet	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
77	Silvery metal washer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
78	Silvery metal pin	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
79	Black body of audion	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
80	Silvery metal pin of audion	Cd	BL	Not tested	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	Dark grey magnetic ring of audion	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
82	Black body of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
83	Silvery metal pin of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
84	Red plastic shell of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
85	Black plastic base of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
86	Silvery metal wire of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
87	White fibre of fuse	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
88	Silvery metal pin of fuse	Cd	BL	Not tested	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	Red body of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
90	Silvery metal pin of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
91	Black body of rectifier	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
92	Silvery metal pin of rectifier	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
93	Silvery metal sheet of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
94	Dark grey magnetic core of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
95	Black plastic bobbin of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
96	Coppery metal winding of inductor	Cd	BL	Not tested	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	Silvery metal pin of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
98	Blue body of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
99	Silvery metal pin of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
100	Gray body with multicolour printing of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
101	Silvery metal pin of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
102	Coppery metal winding of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
103	Red metal winding of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
104	Dark grey magnet ring without green coating of inductor	Cd	BL	Not tested	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	Green coating of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
106	Blue body of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
107	Silvery metal pin of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
108	Brown plastic film of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
109	Silvery metal shell of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
110	Black rubber stopper of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
111	Silvery metal pin of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
112	Grey metal foil of electrolytic capacitor	Cd	BL	Not tested	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-grey metal foil of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
114	Brown paper of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
115	Green plastic film of electrolytic capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
116	Blue plastic shell of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
117	Black heat-shrinkable tube of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
118	Dark grey magnetic core of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
119	Coppery metal winding of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
120	Silvery metal pin of inductor	Cd	BL	Not tested	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	Triple insulation winding of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
122	Transparent plastic sleeve of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
123	Black plastic base of inductor	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
124	Silvery metal pin of inductor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
125	Blue body of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
126	Silvery metal pin of resistor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
127	Yellow plastic shell of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
128	Yellow epoxy resin of capacitor	Cd	BL	Not tested	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
129	Silveryfilm of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
130	Silvery metal pin of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
131	Black body of IC	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
132	Silvery metal pin of IC	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
133	Black body of diode	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
134	Silvery metal pin of diode	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
135	White paper adhesive label with black printing of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
136	Yellow plastic adhesive tape of transformer	Cd	BL	Not tested	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
137	Dark gray magnetic core of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
138	Black plastic bobbin of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
139	Triple insulation winding of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
140	Transparent plastic sleeve of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
141	Coppery metal winding of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
142	Silvery metal pin of transformer	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
143	Green body of capacitor	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
144	Silvery metal pin of capacitor	Cd	BL	Not tested	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
145	Chip diode	Cd	BL	PBBs : ND PBDEs : ND	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	IN		
146	Chip glass diode	Cd	BL	Not tested	Comply
		Pb	*OL		
		Hg	BL		
		Cr	BL		
		Br	BL		
147	Green PCB	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
148	Solder	Cd	BL	Pb : 382	Comply
		Pb	IN		
		Hg	BL		
		Cr	BL		
		Br	BL		
149	White plastic shell of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
150	Silvery metal terminal of connector	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
151	Green plastic wire covering	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
152	Silvery metal wire	Cd	BL	Not tested	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
153	Red plastic wire covering	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
154	Blue plastic wire covering	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
155	Black plastic wire covering	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
156	Black heat-shrinkable tube	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
157	Semi-transparent plastic insulation cap	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
158	Silvery metal terminal	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
159	White plastic shell of remote control	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
160	White plastic adhesive label with black printing of remote control	Cd	BL	Not tested	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
161	Silvery metal sheet of remote control	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
162	Black plastic adhesive sheet with multicolour printing of remote control	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
163	Transparent plastic adhesive tape of remote control	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
164	Silvery metal screw	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
165	Silvery metal body of crystal oscillator	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
166	Silvery metal pin of crystal oscillator	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
167	Red semi-transparent body of LED	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
168	Silvery metal pin of LED	Cd	BL	Not tested	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
169	Green PCB	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
170	Silvery metal sheet	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
171	Silvery metal strip	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
172	Solder	Cd	BL	Pb : 264	Comply
		Pb	IN		
		Hg	BL		
		Cr	BL		
		Br	BL		
173	White paper adhesive label with black printing	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		
174	Silvery metal sheet without gray coating	Cd	BL	Cr ⁶⁺ : Negative	Comply
		Pb	BL		
		Hg	BL		
		Cr	IN		
		Br	BL		
175	Gray coating metal sheet	Cd	BL	Not tested	Comply
		Pb	BL		
		Hg	BL		
		Cr	BL		
		Br	BL		

**Remark:**

- (1) Results are obtained by EDXRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), UV-VIS (for Cr^{6+}) 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	$\text{BL} \leq (70-3\sigma) < \text{IN} < (130+3\sigma) \leq \text{OL}$	$\text{BL} \leq (70-3\sigma) < \text{IN} < (130+3\sigma) \leq \text{OL}$	$\text{LOD} < \text{IN} < (150+3\sigma) \leq \text{OL}$
Pb	$\text{BL} \leq (700-3\sigma) < \text{IN} < (1300+3\sigma) \leq \text{OL}$	$\text{BL} \leq (700-3\sigma) < \text{IN} < (1300+3\sigma) \leq \text{OL}$	$\text{BL} \leq (500-3\sigma) < \text{IN} < (1500+3\sigma) \leq \text{OL}$
Hg	$\text{BL} \leq (700-3\sigma) < \text{IN} < (1300+3\sigma) \leq \text{OL}$	$\text{BL} \leq (700-3\sigma) < \text{IN} < (1300+3\sigma) \leq \text{OL}$	$\text{BL} \leq (500-3\sigma) < \text{IN} < (1500+3\sigma) \leq \text{OL}$
Cr	$\text{BL} \leq (700-3\sigma) < \text{IN}$	$\text{BL} \leq (700-3\sigma) < \text{IN}$	$\text{BL} \leq (500-3\sigma) < \text{IN}$
Br	$\text{BL} \leq (300-3\sigma) < \text{IN}$	--	$\text{BL} \leq (250-3\sigma) < \text{IN}$

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) 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 Cr^{6+} for polymer and composite sample is 2mg/kg

- (7) According to EN 62321:2009, determined of Cr^{6+} on metal sample by spot test /boiling water extraction test method, and result is shown as Positive/Negative.

Spot test:

Negative = Absence of Cr^{6+} coating, Positive = Presence of Cr^{6+} coating.

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

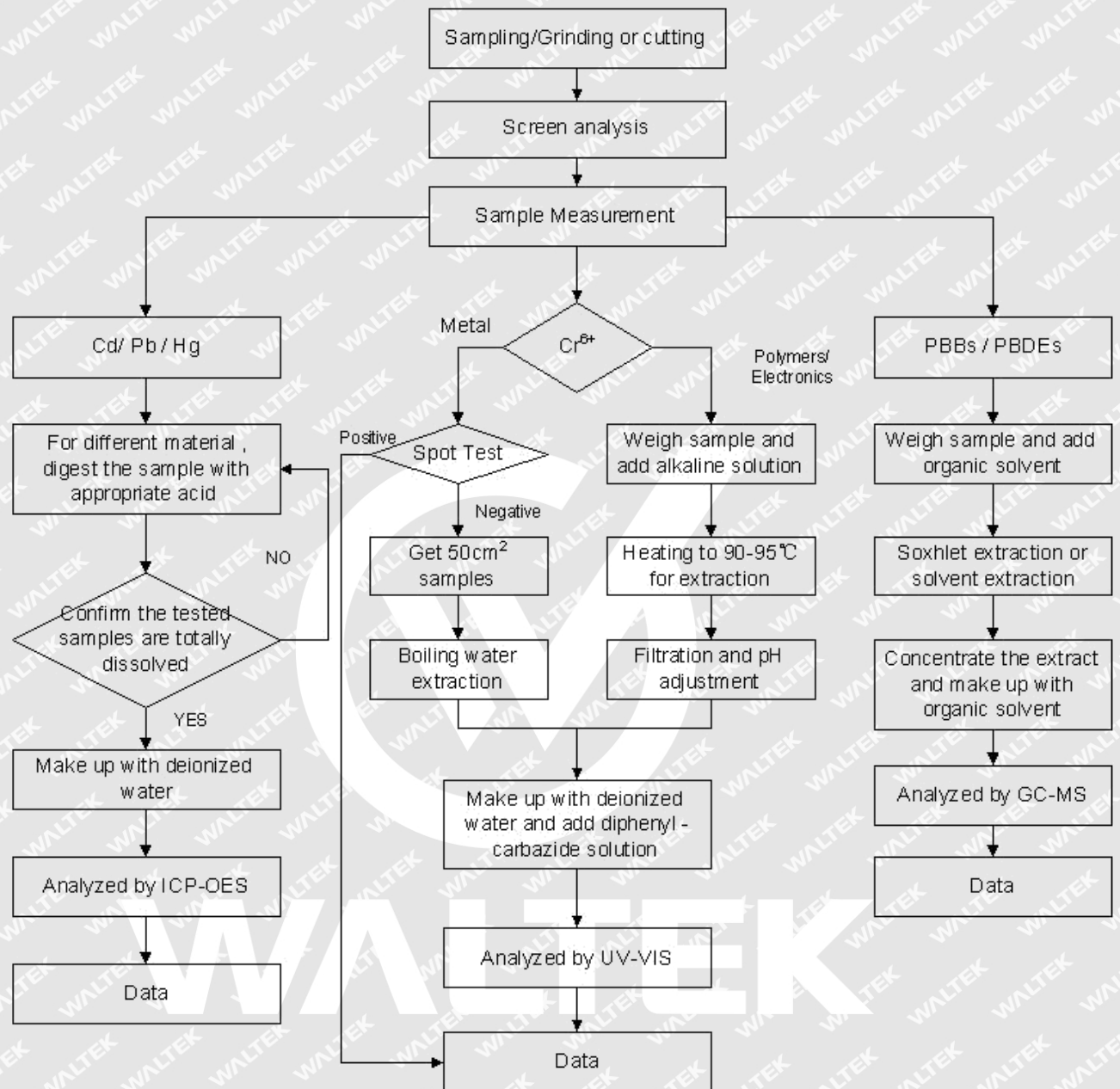
Boiling water extraction:

Negative = Absence of Cr^{6+} coating

Positive = Presence of Cr^{6+} 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 Cr^{6+} results represent status of the sample at the time of testing.

- (8) * = 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.

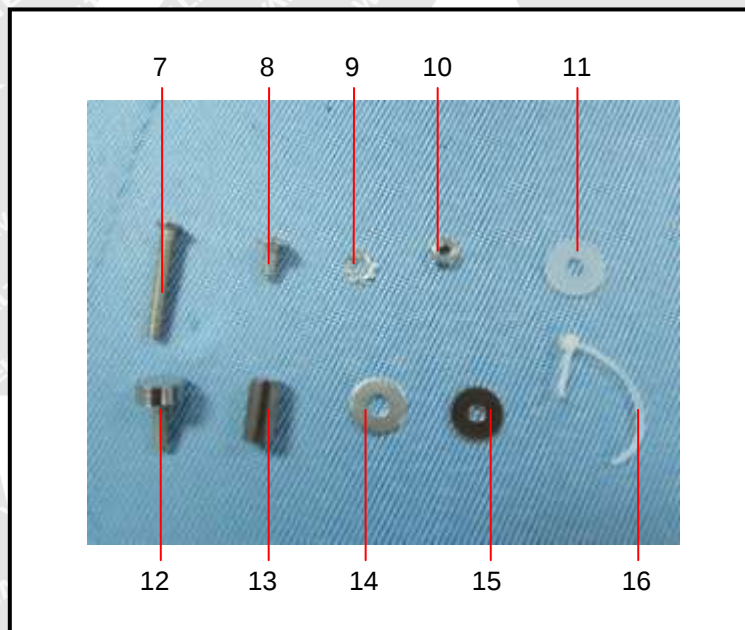
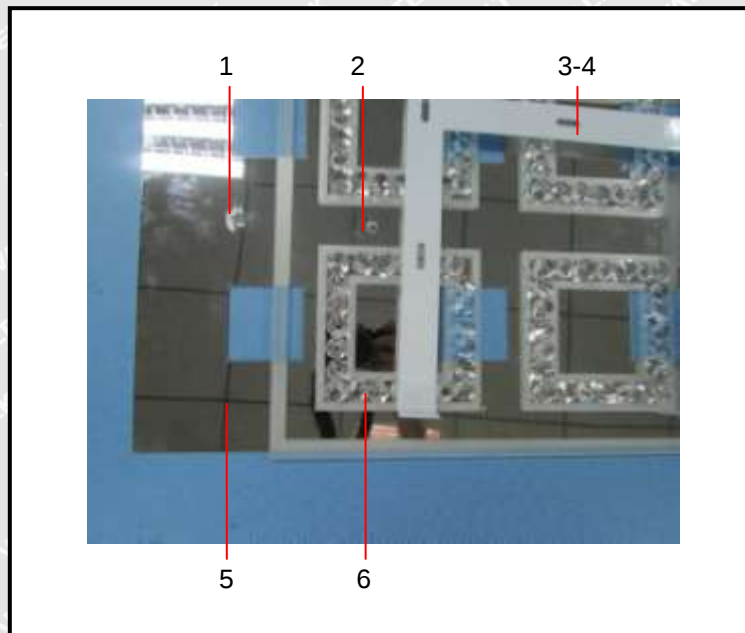
**Measurement Flowchart:**

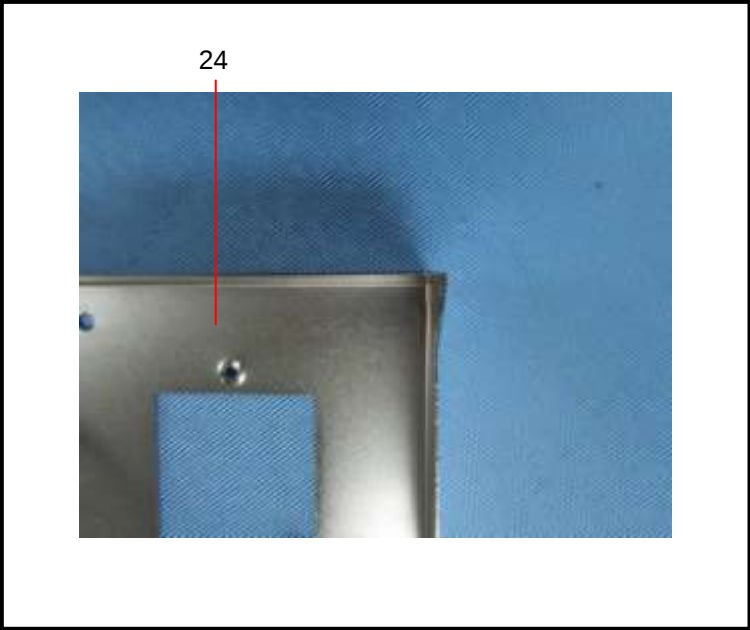
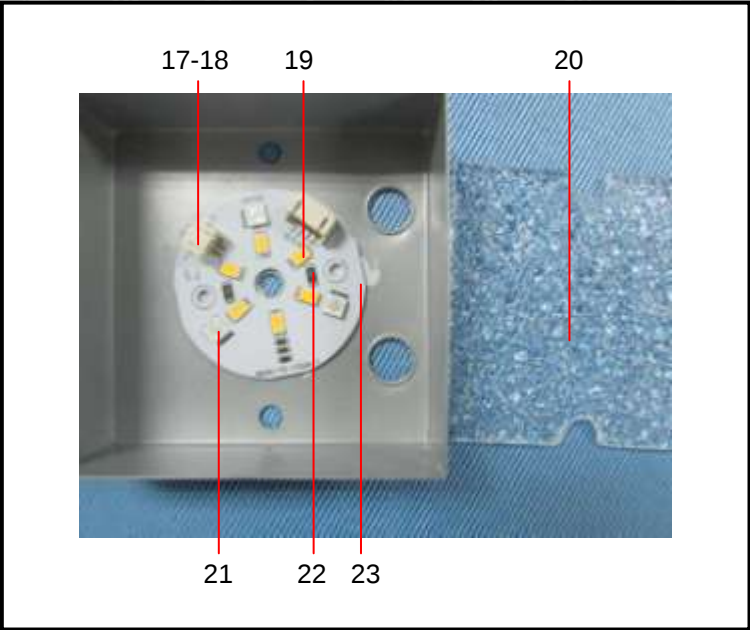


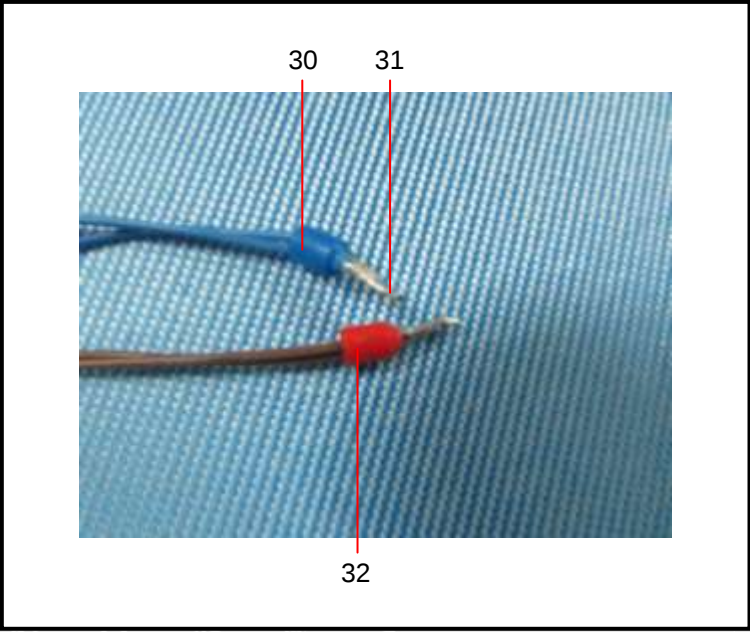
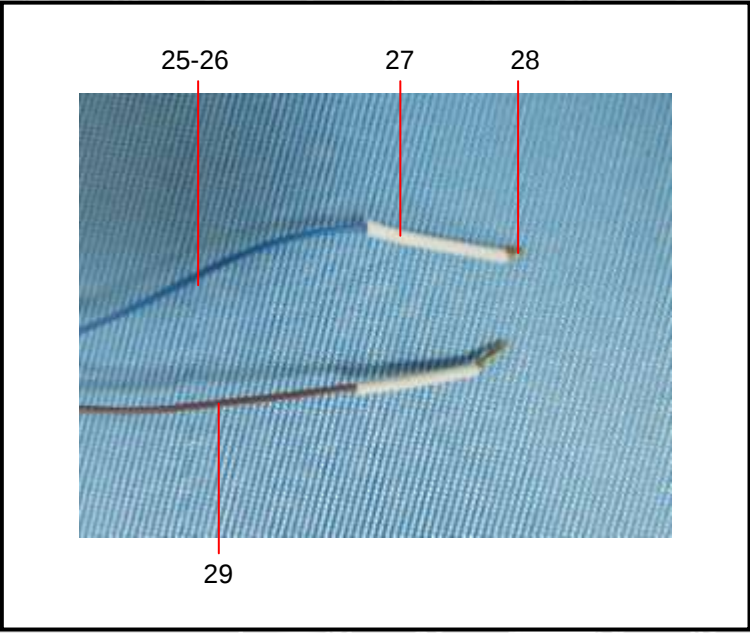
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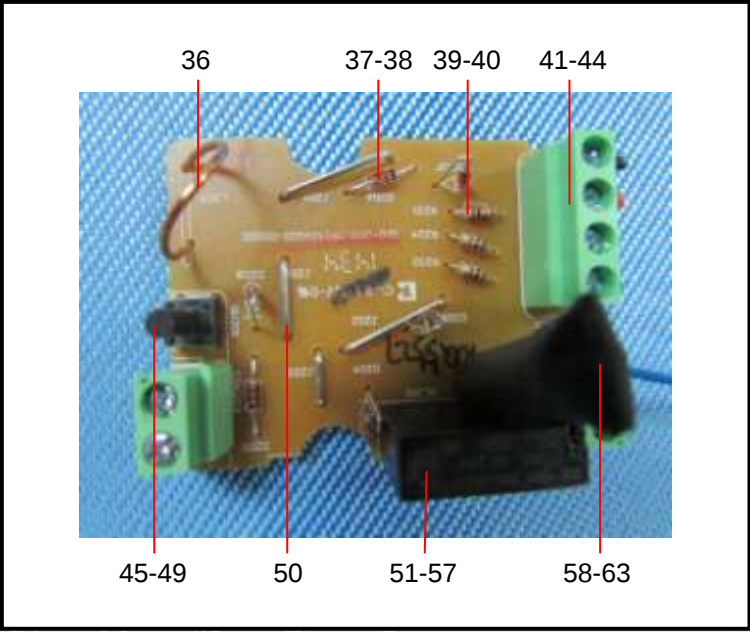
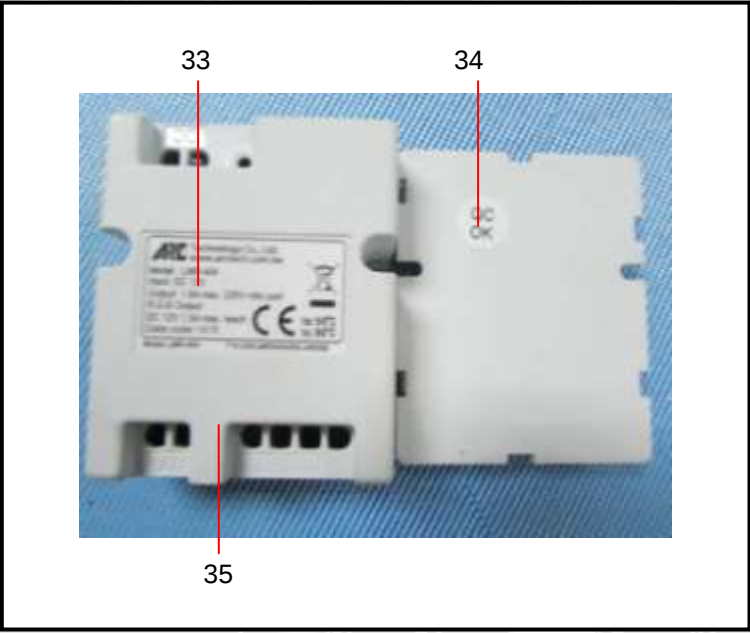


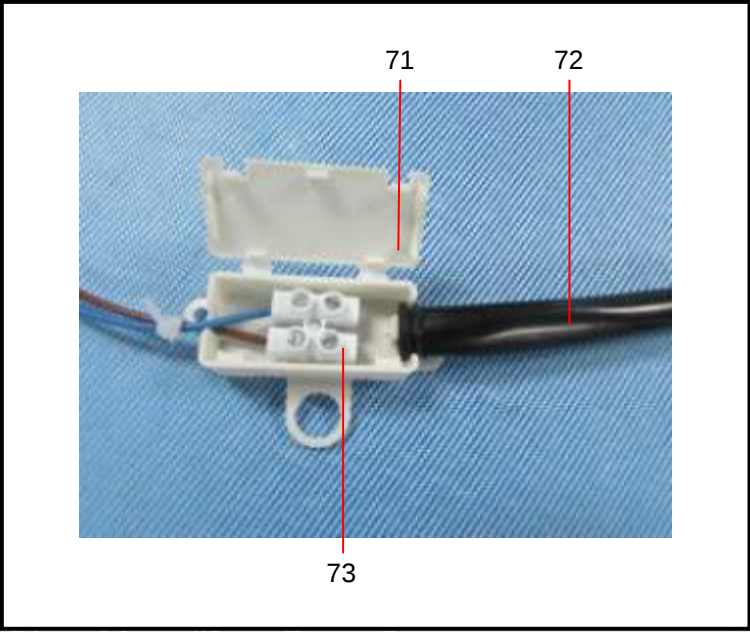
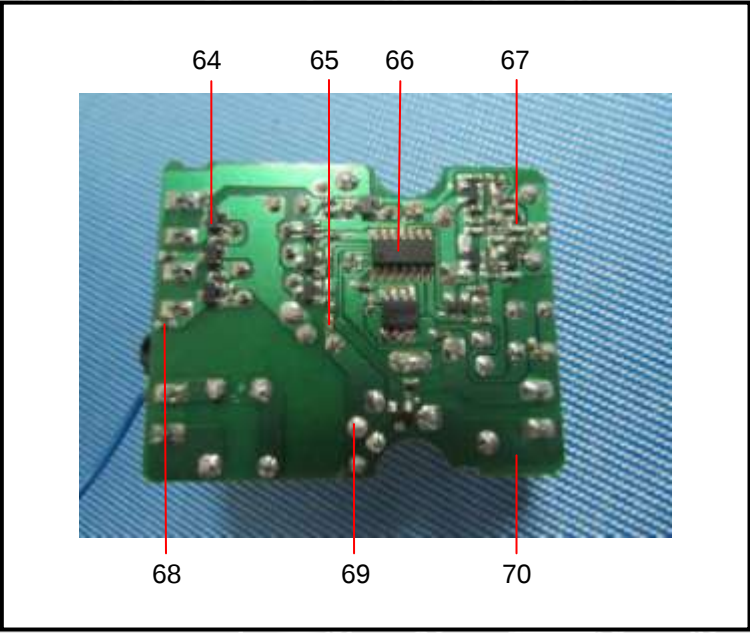
WALTEK

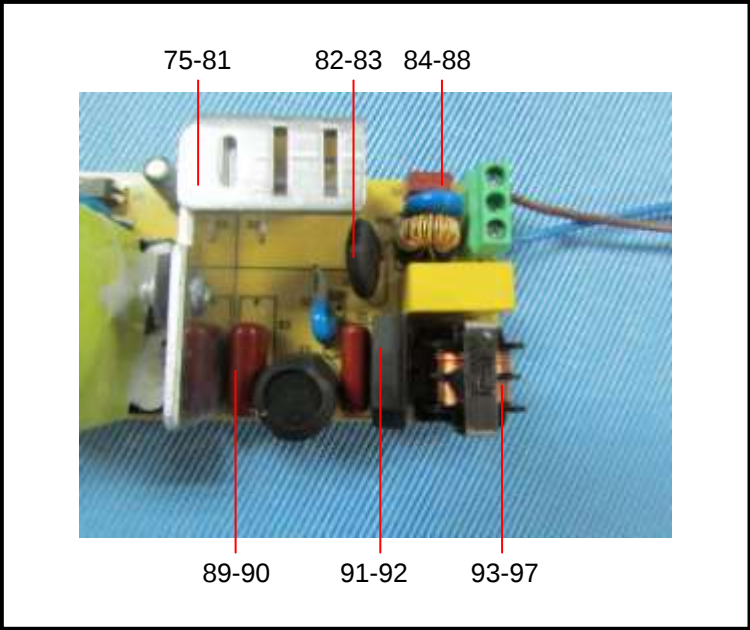
**Photograph of parts tested:**

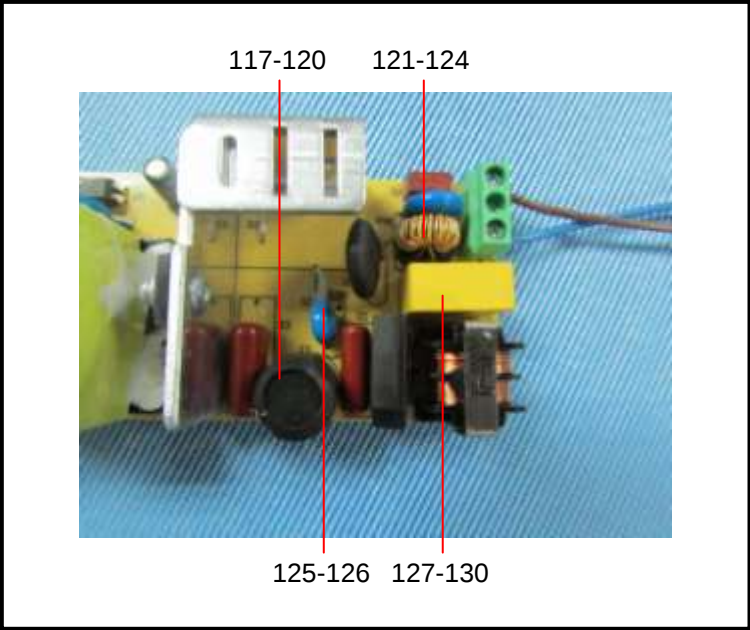
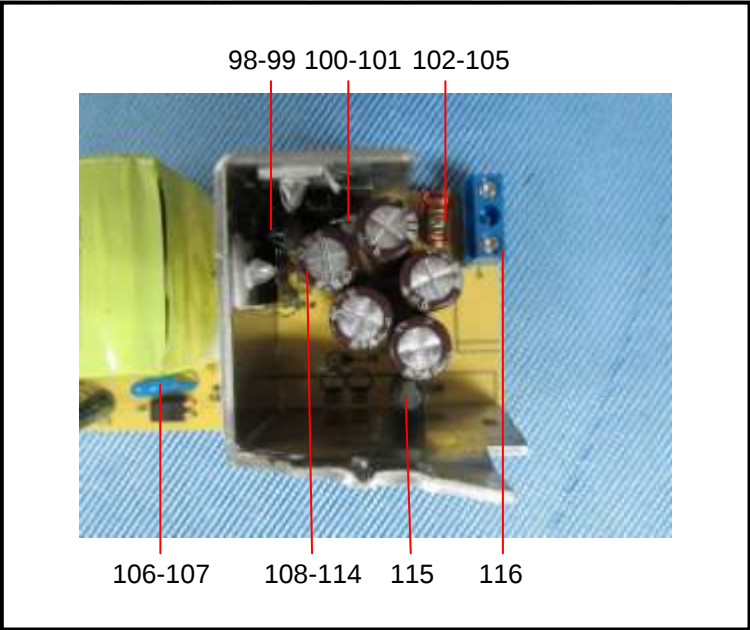


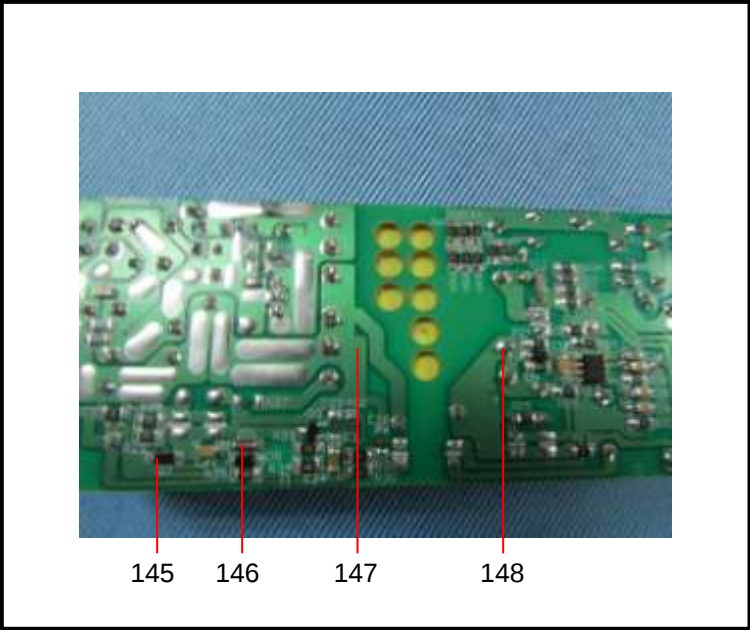
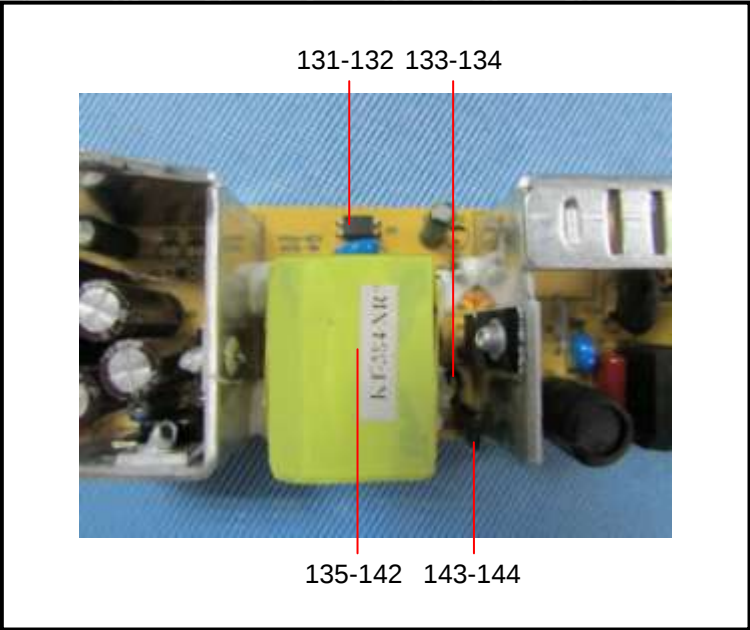














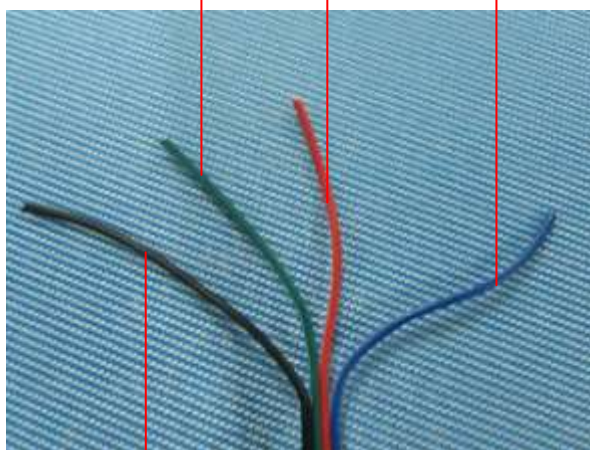
149-150



151-152

153

154



155



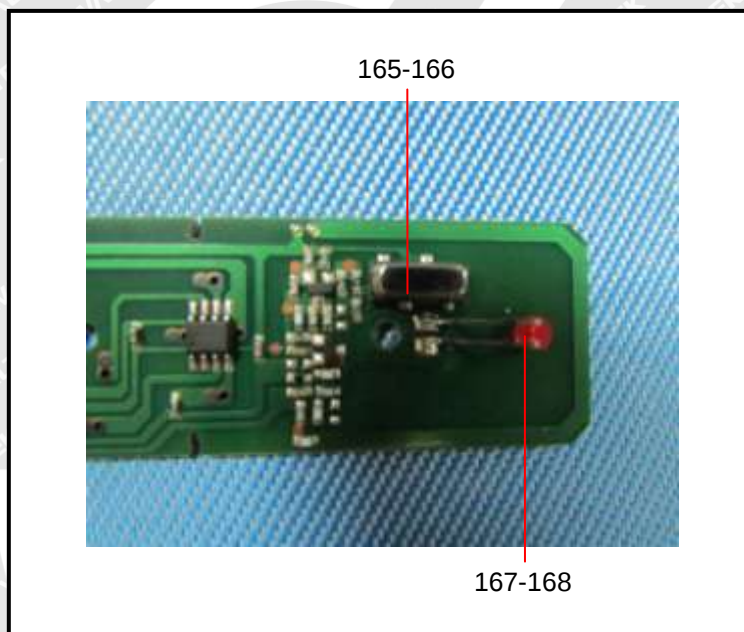
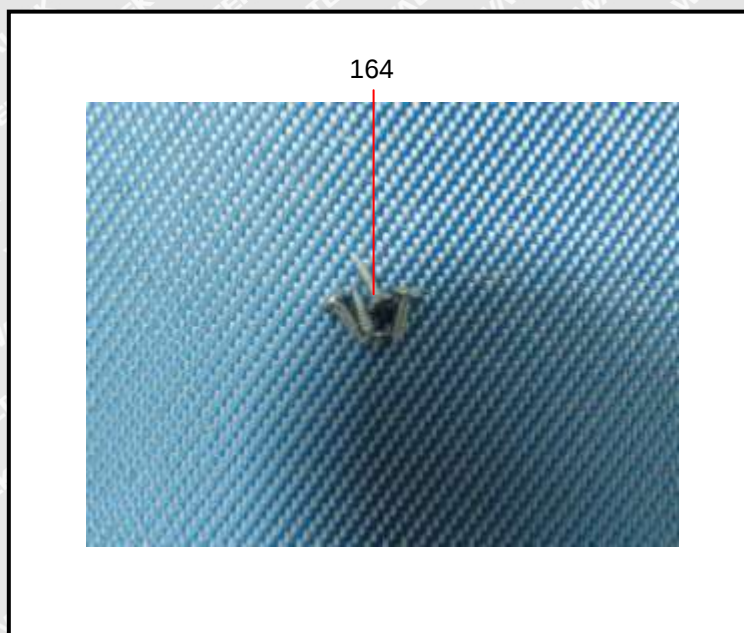
156-158

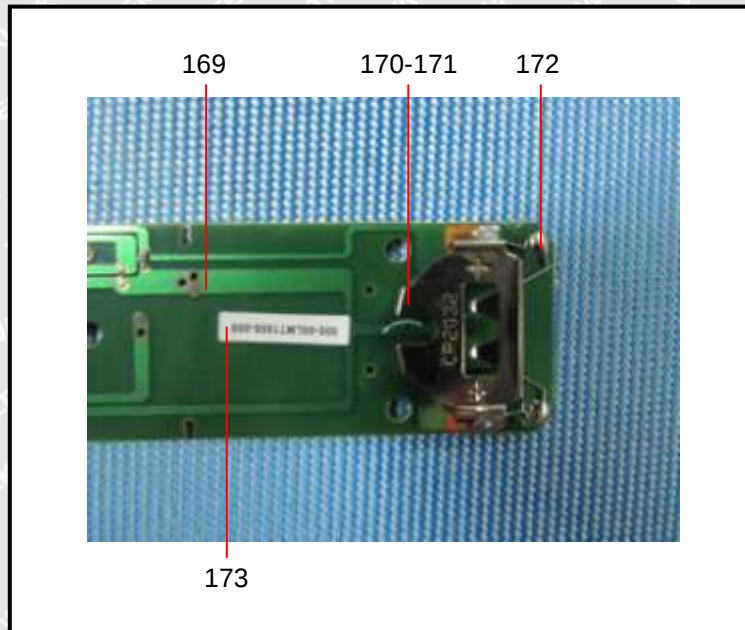


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===== End of Report =====