Test Report

No.SZR170608004001 Date: Jun. 15, 2017 Page 1 of 25

Applicant	:	FOSHAN KAICHENG LIGHTING CO., LTD
Address	:	NO.235 Lianjiang First Road, Chancheng District, Foshan, Guangdong, P.R.China

The submitted sample and sample information was/were submitted and identified by/on the behalf of the client

Sample name	:	LED Floodlight
Type /model	:	LV-SMD 50W, LV-SMD (10-200W), MK-SMD (10-100W), BK-SMD (10-300W)
Sample received date	:	Jun. 08, 2017
Testing period	:	Jun. 08, 2017 to Jun. 15, 2017
Test requested	:	As specified by client, to screen Lead(Pb), Cadmium(Cd), Mercury(Hg), Chromium(Cr) and Bromine(Br) in the submitted sample(s) by XRF.

According to the RoHS Directive 2011/65/EU

Test Method: Please refer to the following page(s).

Test Result(s): Please refer to the following page(s).

Tested by Wenbin Lin Inspected by Sahon Chen Approved by Joe Li

ANBOTEK Anbotek CERTIFICATION

Test Report

Test Method:

Screening test by XRF spectroscopy

XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1:2013.

Element	Limit of IEC 62321-3-1:2013. Unit (mg/kg)		MDL	
	Polymers and metals	Composite material	Polymers	Other material
Pb	BL≤(700-3σ) <X <(1300+3σ) ≤OL	BL≤(500-3σ)<X <(1500+3σ) ≤OL	10 mg/kg	50 mg/kg
Cd	BL≤(70-3σ)<X <(130+3σ) ≤OL	LOD≤(50-3σ)<X <(150+3σ) ≤OL	10 mg/kg	50 mg/kg
Hg	BL≤(700-3σ)<X <(1300+3σ) ≤OL	BL≤(500-3σ)<X <(1500+3σ) ≤OL	10 mg/kg	50 mg/kg
Cr	BL≤(700-3σ)< X	BL≤(500-3σ)< X	10 mg/kg	50 mg/kg
Br	BL≤(300-3σ)< X	BL≤(250-3σ)< X	10 mg/kg	50 mg/kg

Note:

-BL = Under the XRF screening limit

-OL = Further chemical test will be conducted while result is above the screening limit

-X= The symbol “X” marks the region where further investigation is necessary

-3σ= The reproducibility of analytical instruments

-LOD= Detection limit

Test Results:

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
1	Metal shell with white coating	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
2	White jacket tube	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
3	Silvery label	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
4	Brown jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
5	Coppery metal pole	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
6	Blue jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
7	Yellow green jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
8	Metal frame with white coating	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
9	Silvery metal screw	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
10	White coating	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
11	Glass	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
12	Milky plastic pad	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
13	Silvery metal ring	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
14	Silvery metal gasket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
15	Silvery screw pole	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
16	White coating	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
17	Silvery metal block	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
18	White plastic frame	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
19	Silvery metal screw	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
20	White plastic cover	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
21	Yellow LED lamp	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
22	Metal screw	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
23	Soldering tin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
24	Light blue coating	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
25	Silvery metal bottom board	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
26	White glue	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
27	Silvery metal screw pole	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
28	Silvery metal nut	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
29	Milky plastic pad	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
30	Milky plastic ring	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
31	Silvery metal nut	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
32	Milky plastic ribbon	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
33	Coppery cable core	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
34	Silvery metal plate	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
35	Milky plastic block	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
36	Black thermal shrinkable sleeve	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
37	Silvery metal contact pin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
38	Silvery metal ring	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
39	Blue jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
40	Brown jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
41	Silvery cable core	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
42	Silvery white metal shell	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
43	Silvery label	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
44	Red jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
45	Black jacket	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
46	Black plastic baffle	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
47	Gray glue	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
48	Transparent plastic plate	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
49	PCB	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
50	Soldering tin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
51	Green electrolytic capacitor scarfskin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
52	Silvery white metal shell	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
53	Yellow paper	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
54	Silvery foil paper	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
55	Gray foil paper	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
56	Black plastic plug	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
57	Pin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
58	Yellow gummed tape	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
59	Black magnetic pillar	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
60	Black plastic pedestal	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
61	Yellow wire	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
62	Coppery wire (thin)	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
63	Coppery wire (thick)	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
64	Milky plastic wire tube	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
65	Black plastic shell	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
66	Black inner plastic	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
67	Silvery metal wire	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
68	Pin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	
69	White cotton line	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	BL	
70	Glass diode	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
71	Red capacitor	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
72	IC	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
73	Chip resistor	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	

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Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Conclusion
74	Moses tube body	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
75	Chip capacitor	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
76	Chip diode	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
77	Blue Y capacitor	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
78	Diode	Pb	BL	PASS
		Cd	LOD	
		Hg	BL	
		Cr	BL	
		Br	BL	
79	Pin	Pb	BL	PASS
		Cd	BL	
		Hg	BL	
		Cr	BL	
		Br	/	

Test Report

Note:

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

Remark:

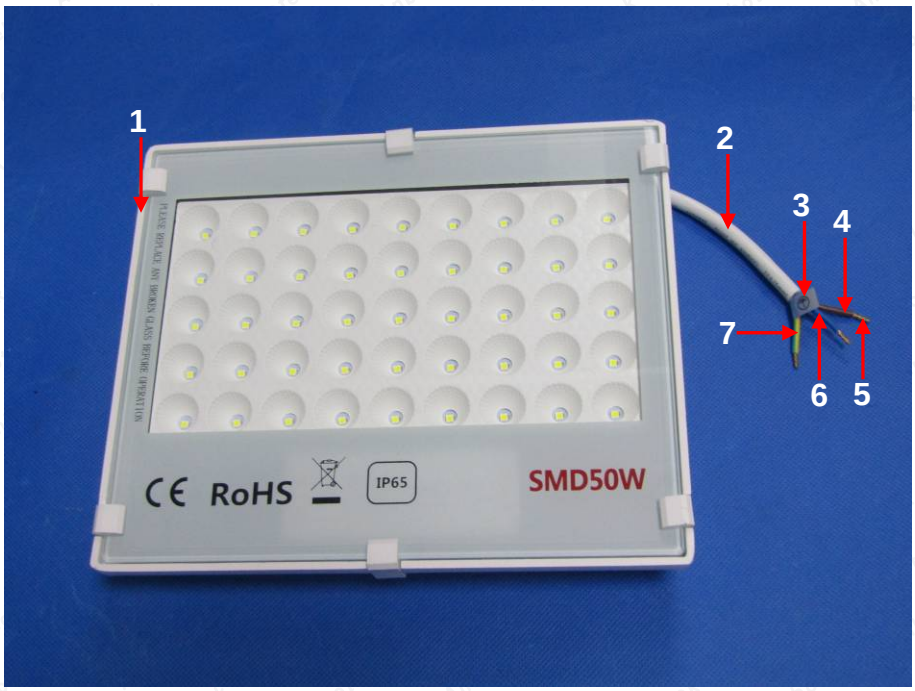
- The screening results are only used for reference.

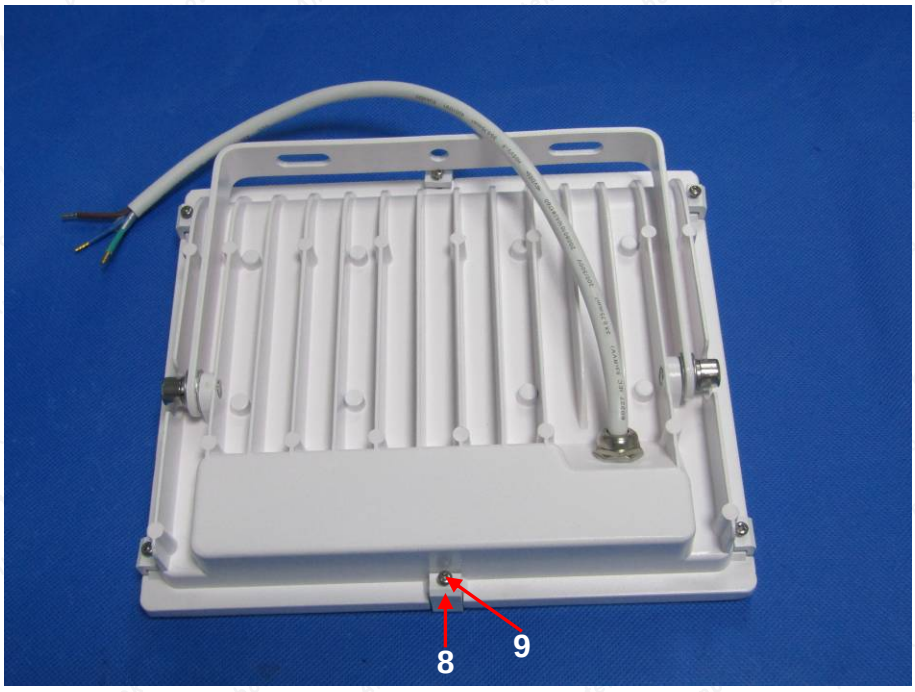
- When conducting the test for PBBs&PBDEs, XRF was introduced to screen Br Exclusively; When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

Photograph of Sample

Test Report

Photo(s) of the tested component(s)





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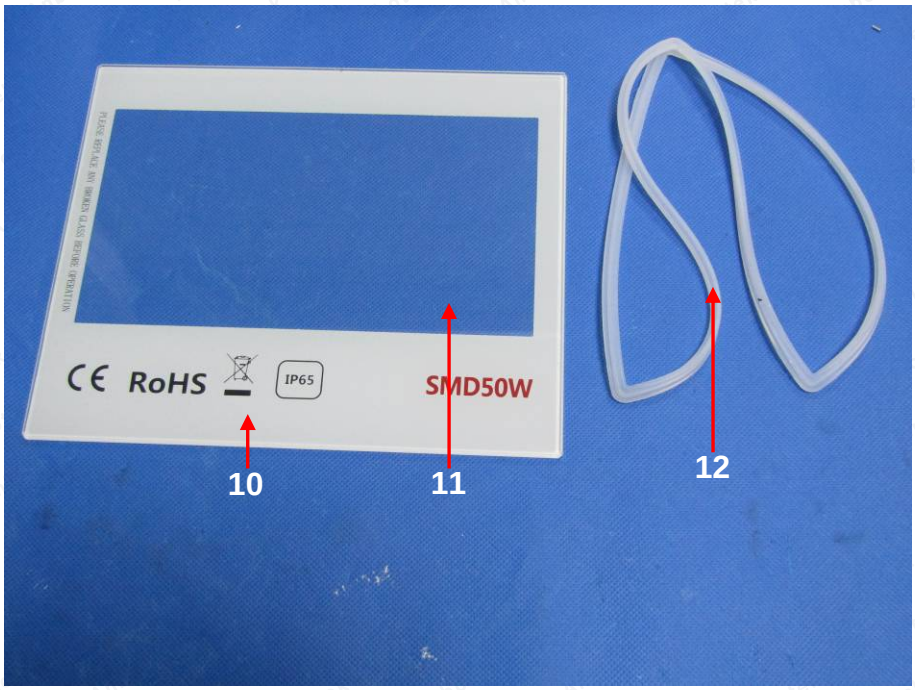

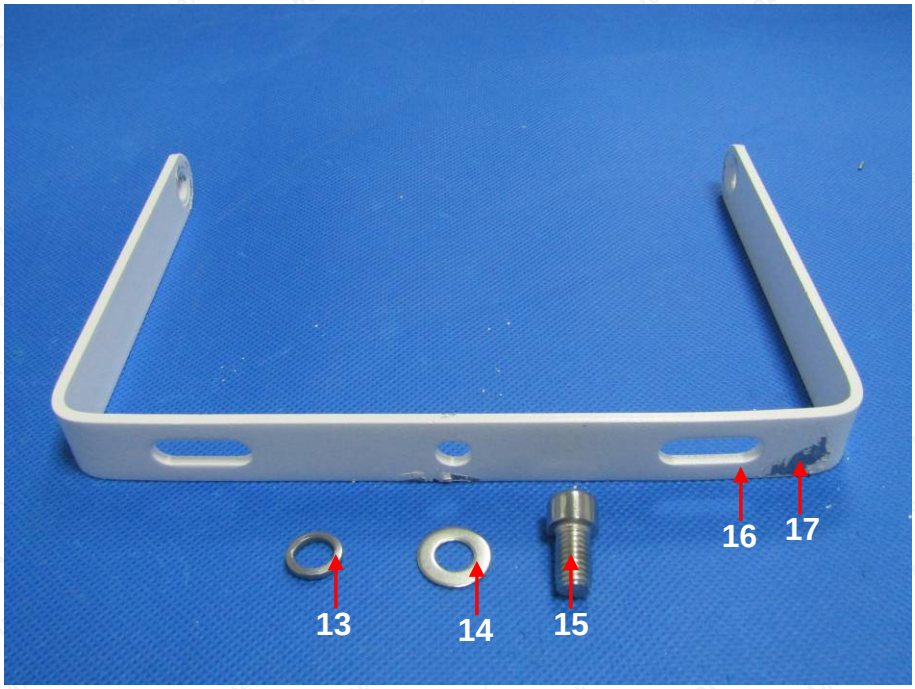

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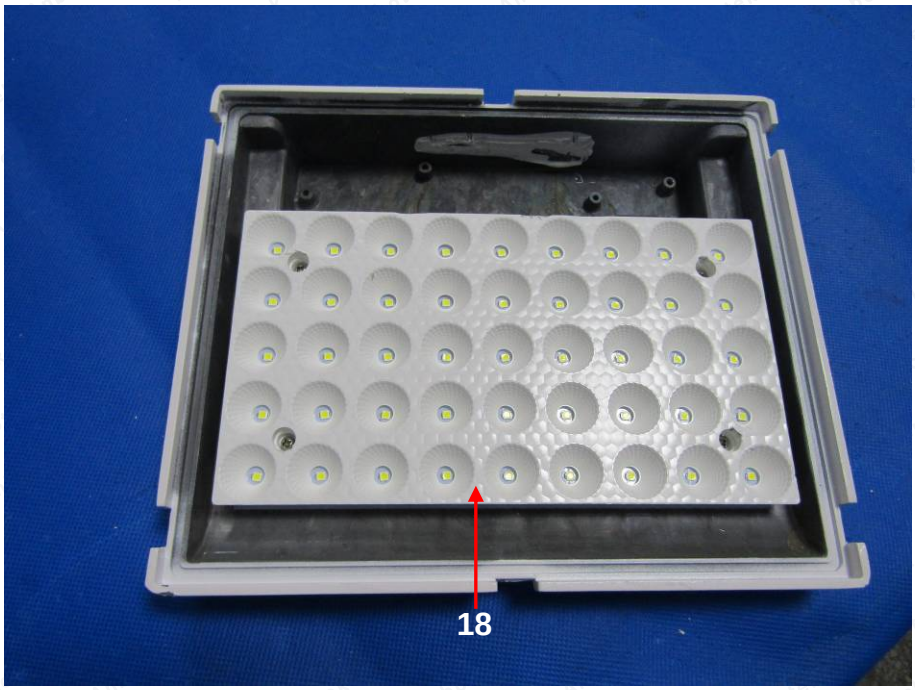

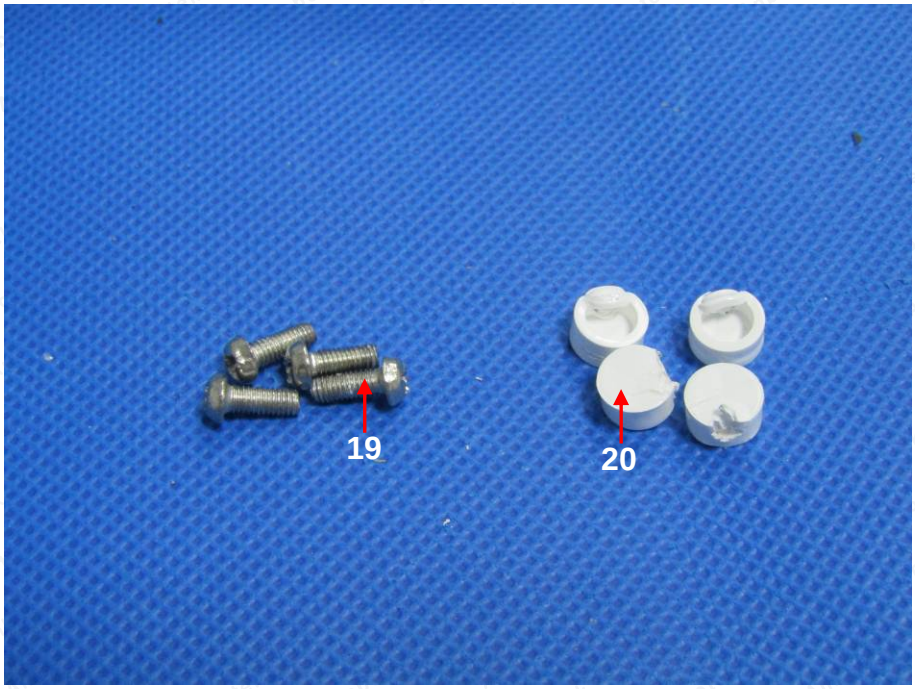

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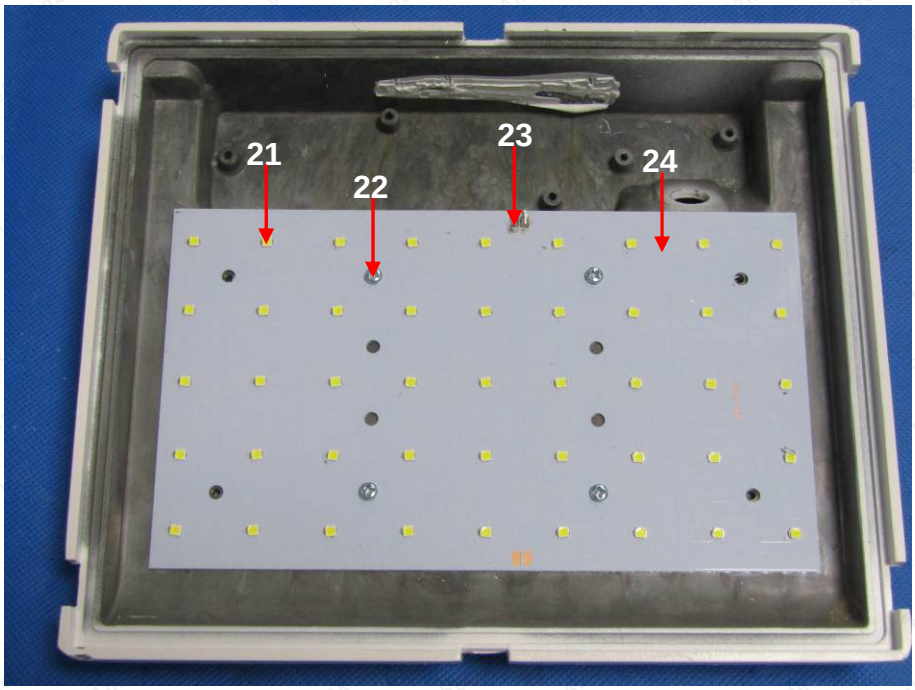

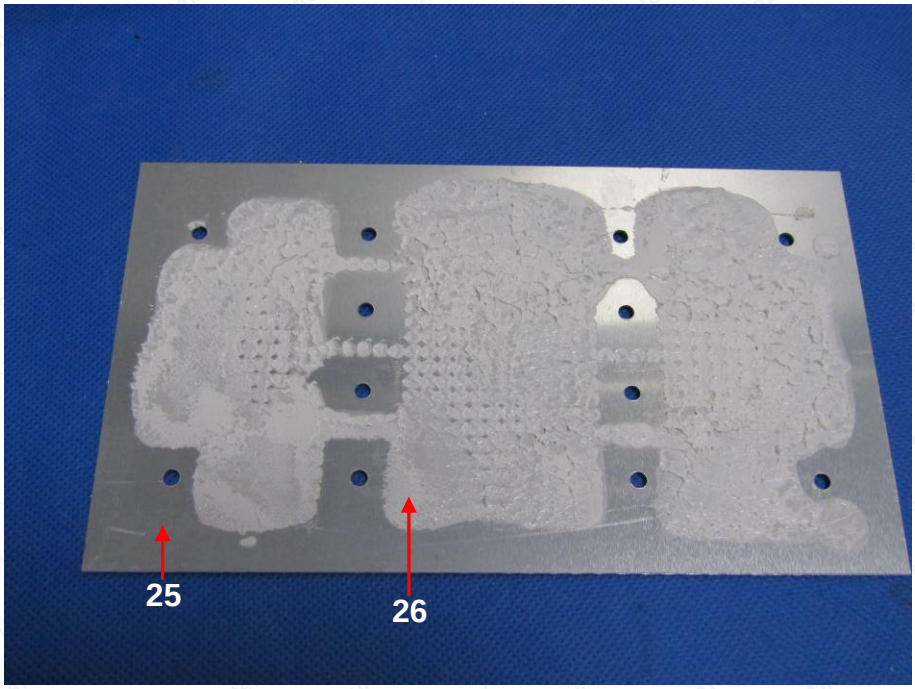

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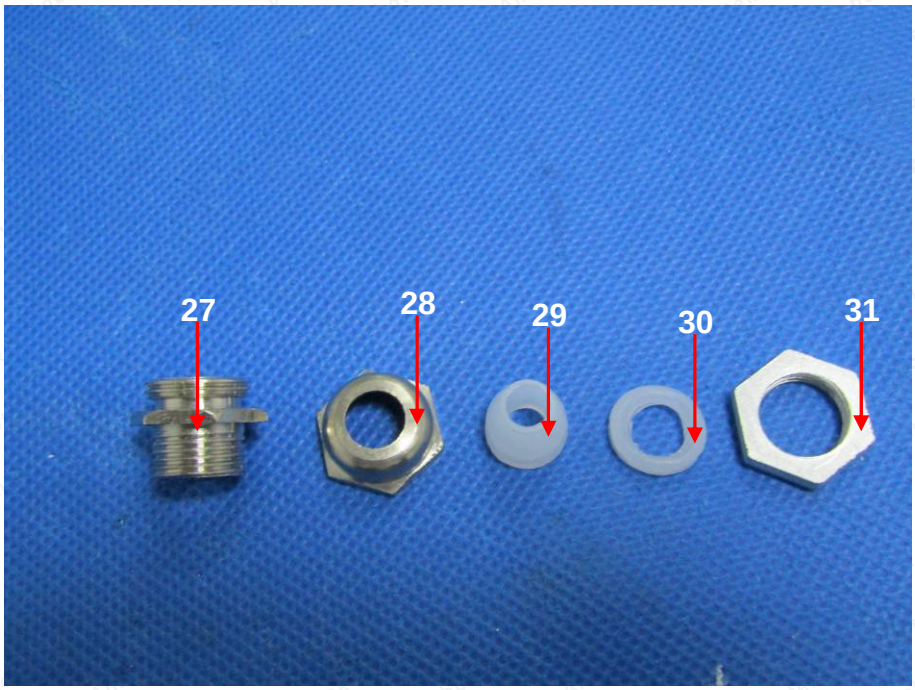

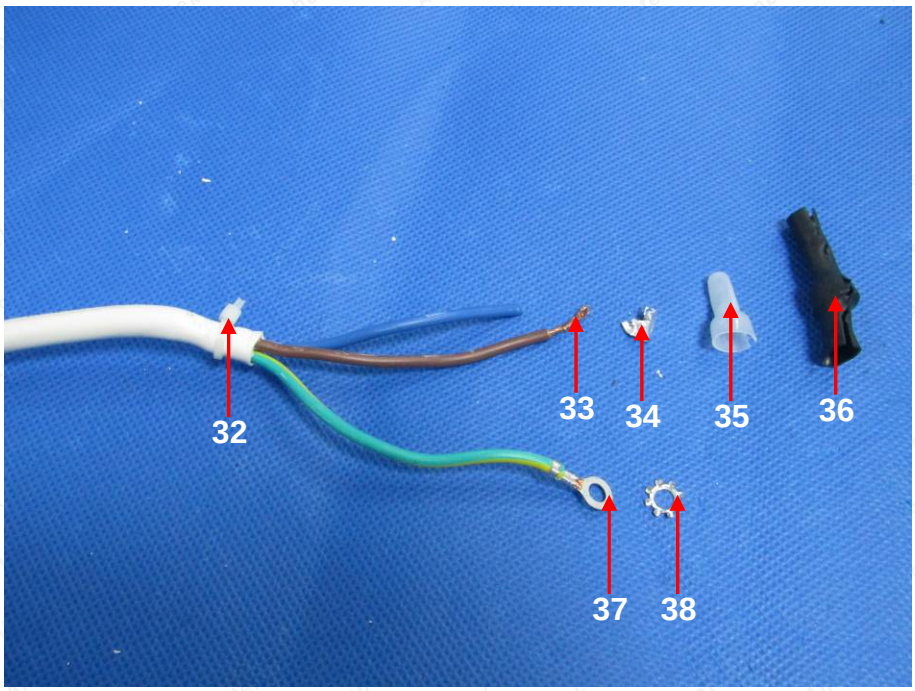

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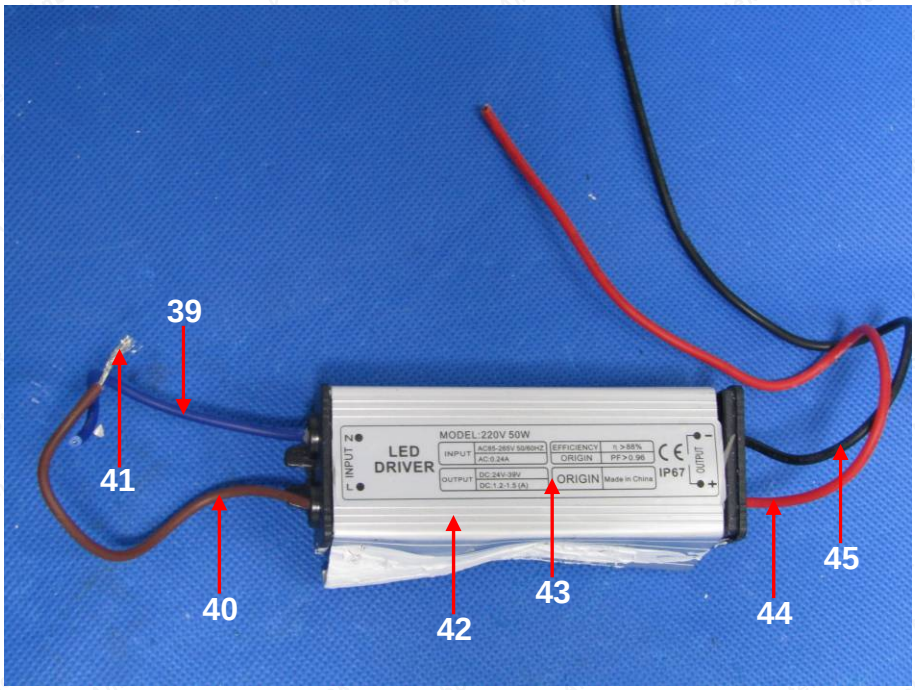

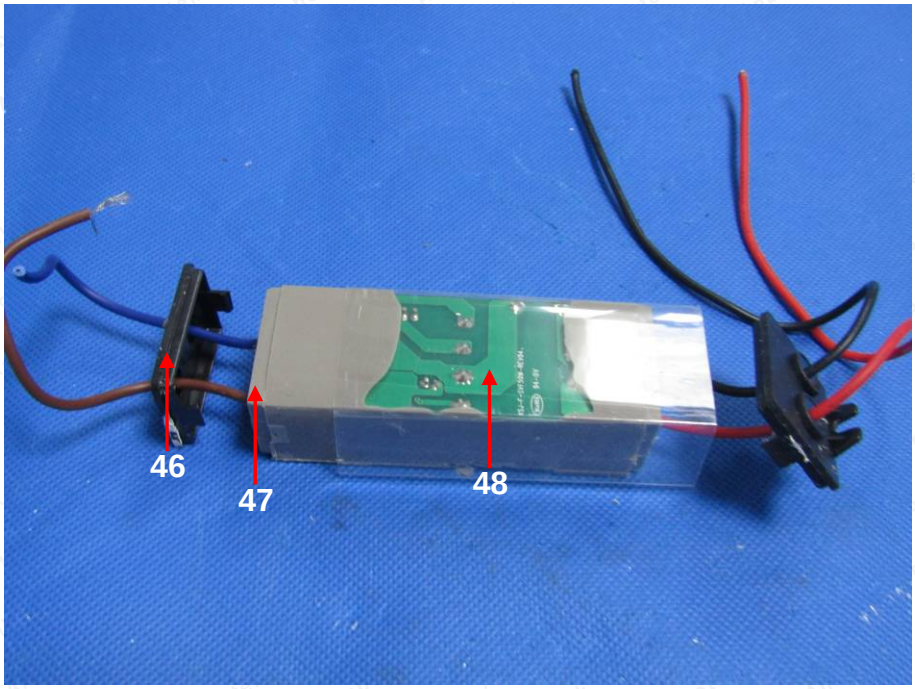

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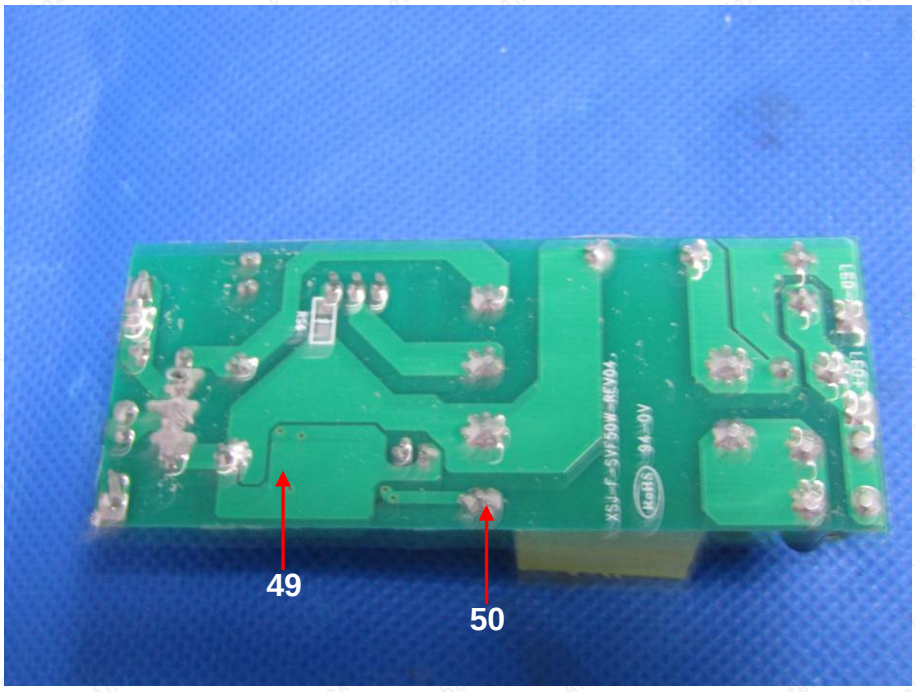

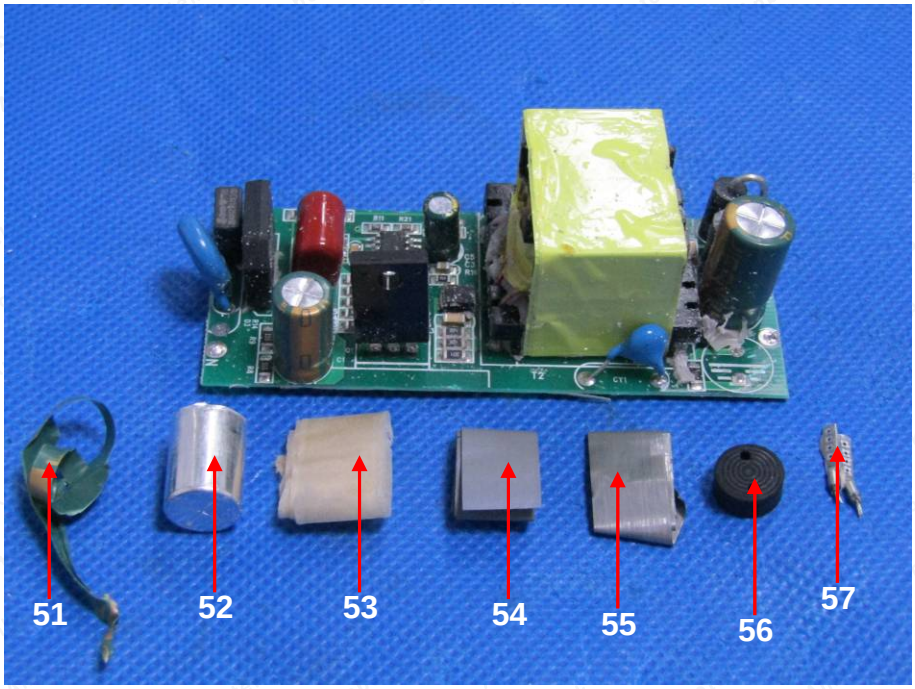

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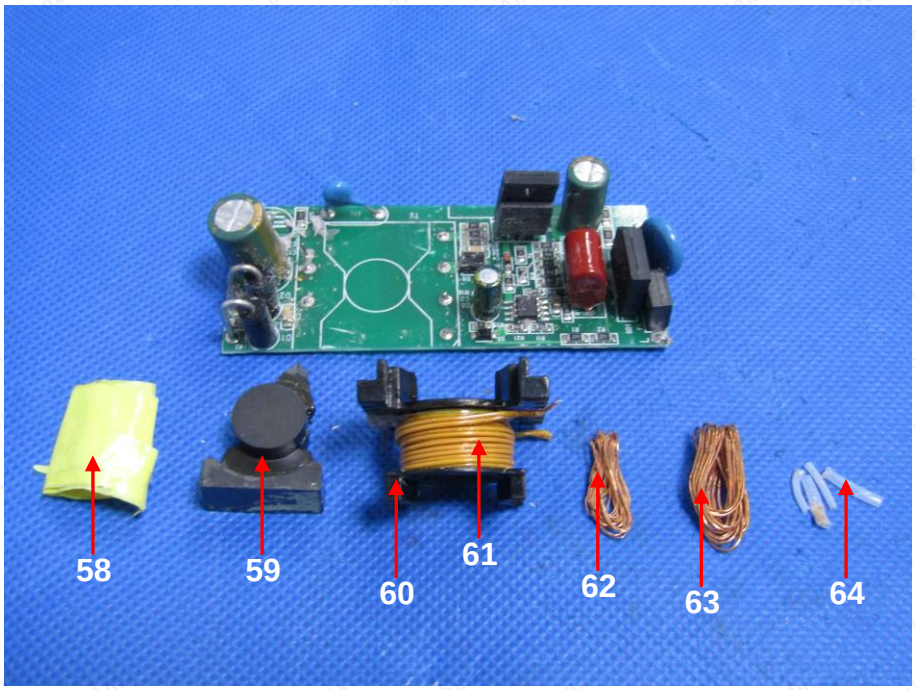

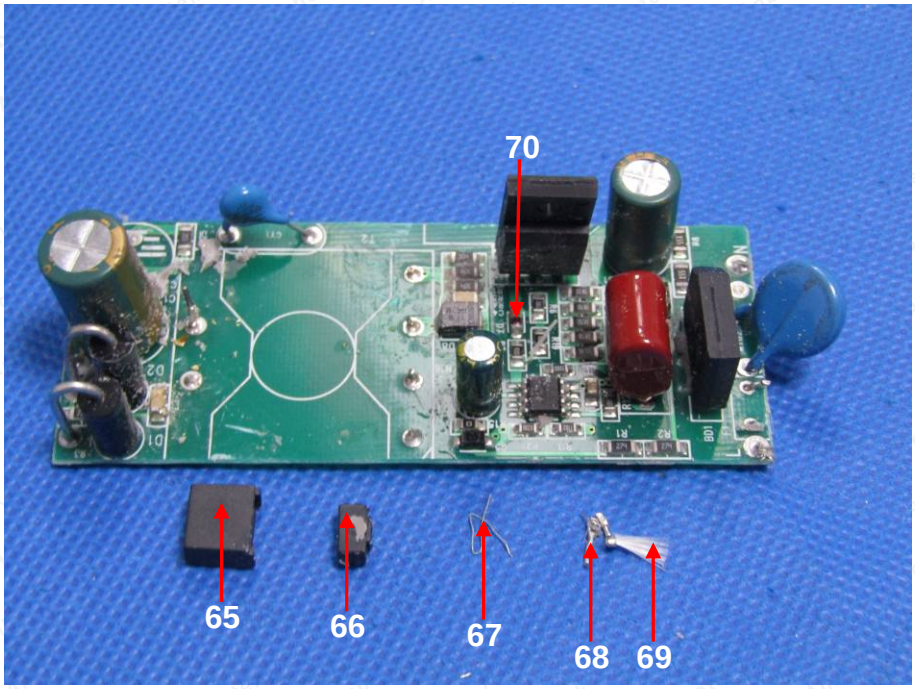

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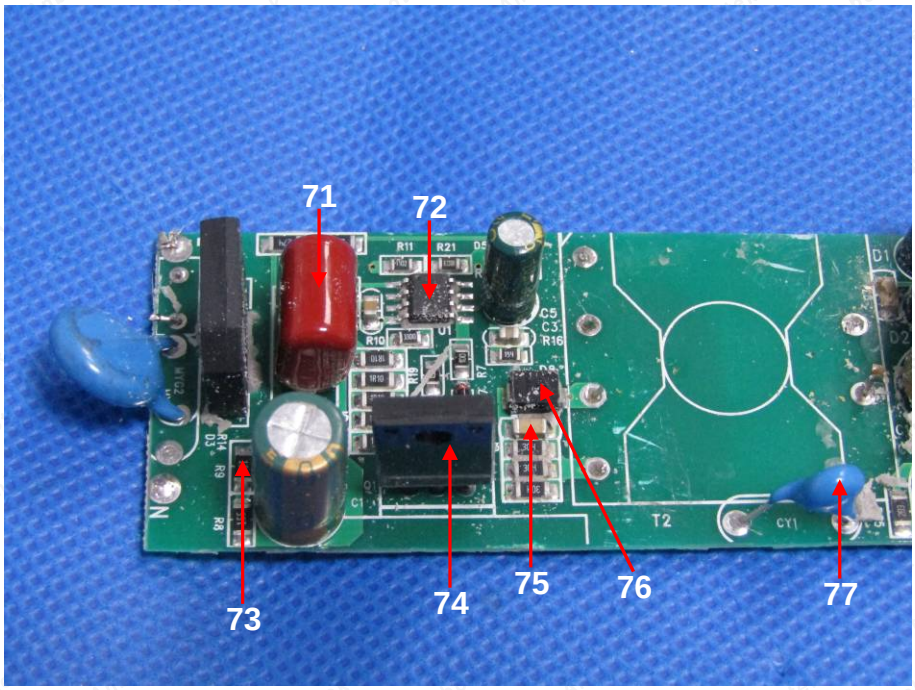

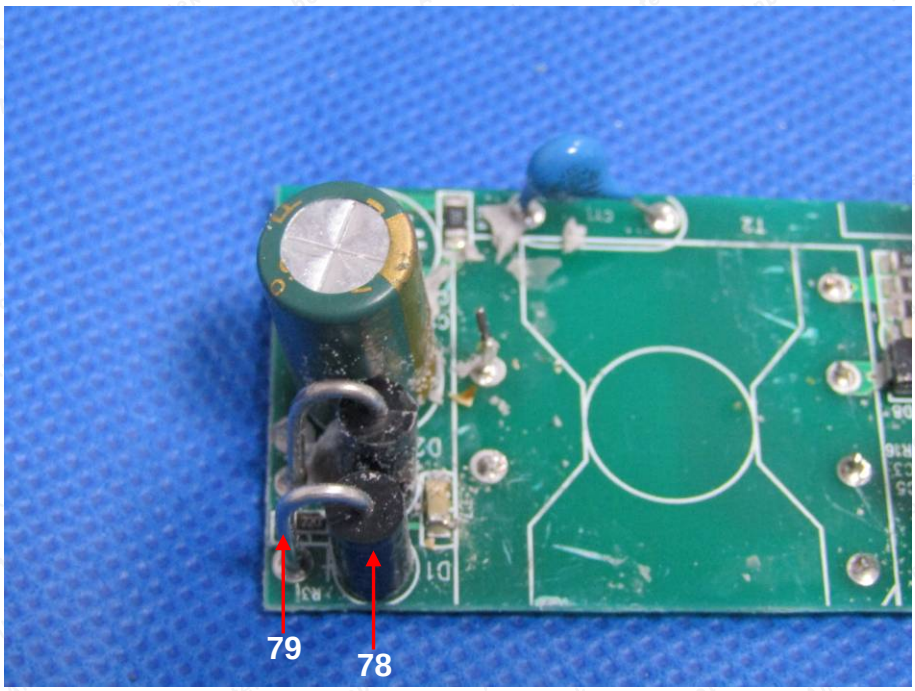

***** End of Report *****

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