Test Report

Applicant:	Guangzhou Hongyun Optoelectronic Equipment Co.,Ltd
Address:	No. 10-1, 3rd Street, Chatang Xincun, Tanbu Town, Huadu District, Guangzhou, China 510800
Manufacturer:	Guangzhou Hongyun Optoelectronic Equipment Co.,Ltd
Address:	No. 10-1, 3rd Street, Chatang Xincun, Tanbu Town, Huadu District, Guangzhou, China 510800

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

Trade Mark:	LK
Sample Name:	LED Dance Floor
Sample Model:	LK-I01,LK-I01I,LK-I02,LK-I03,LK-I04,LK-I05,LK-DI01,LK-DI02,LK-DI03I, LK-DI04,LK-DI05,LK-C01,LK-C02,LK-C03,LK-C04,LK-N01,LK-N02,LK-N03, LK-N04,LK-D36,LK-D64,LK-D144,LK-D255,LK-D256,LK-D64I,LK-S01, LK-S02,LK-S03,LK-S04,LK-CH01,LK-CH02,LK-CH01I,LK-CH02I,LK-CH03, LK-P80,LK-P100,LK-P01,LK-R01,LK-R02,LK-R03,LK-L01I,LK-L02,LK-L03, LK-F01,LK-F02,LK-F03,LK-F04,LK-TW01,LK-TW02,LK-TW03,LK-L01, LK-L02,LK-L03,LK-DA01,LK-DA02,LK-DA03,LK-IS01,LK-IS02,LK-IS03, LK-DU01,LK-DU02,LK-DU03,LK-T60,LK-T70,LK-T80,LK-T90,LK-PH100, LK-PH115,LK-PH120,LK-PH01C,LK-G01,LK-G02,LK-G03,LK-G04,LK-G05, LK-G06,LK-G07,LK-G08,LK-G09,LK-G10,LK-G11,LK-G12,LK-G13,LK-G14, LK-G15,LK-G16.
Sample Received Date:	Jul. 22, 2025
Testing Period:	Jul. 23, 2025 to Jul. 25, 2025
Test Requested:	Selected test(s) in the selected parts as requested by client.
Test Result:	Please refer to next page(s).

Approved by:

KEYS Testing Technology Co., Ltd. Guangdong

Tony Qian/ Technical Manager

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Guangdong KEYS Testing Technology Co., Ltd.
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Test Requested and Conclusion

Test Request	Conclusion
RoHS Directive 2011/65/EU, Directive (EU) 2015/863, and Regulation (EU) 2017/2102	
1. To determine Lead (Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyls (PBBs) and Polybrominated DiphenylEthers (PBDEs)content by screening test and chemical test.	Pass
2. To determine Phthalates (DBP, BBP, DEHP, DIBP) content by chemical test.	Pass

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Test Result(s):

1. Screening Test

Test Method: IEC 62321-3-1: 2013, analyzed Inductively X-ray fluorescence Spectrometry (XRF).

No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
1	BL	BL	BL	BL	BL	--	Pass
2	BL	BL	BL	BL	BL	--	Pass
3	BL	BL	BL	BL	BL	--	Pass
4	BL	BL	BL	BL	BL	--	Pass
5	BL	BL	BL	BL	--	--	Pass
6	BL	BL	BL	BL	--	--	Pass
7	BL	BL	BL	BL	BL	--	Pass
8	BL	BL	BL	BL	BL	--	Pass
9	BL	BL	BL	BL	BL	--	Pass
10	BL	BL	BL	BL	BL	--	Pass
11	BL	BL	BL	BL	BL	--	Pass
12	BL	BL	BL	BL	BL	--	Pass
13	BL	BL	BL	BL	--	--	Pass
14	BL	BL	BL	X	--	Cr: Negative	Pass
15	BL	BL	BL	X	--	Cr: Negative	Pass
16	BL	BL	BL	BL	--	--	Pass
17	BL	BL	BL	BL	BL	--	Pass
18	BL	BL	BL	BL	BL	--	Pass
19	BL	BL	BL	BL	BL	--	Pass
20	BL	BL	BL	BL	BL	--	Pass
21	BL	BL	BL	BL	BL	--	Pass
22	BL	BL	BL	BL	--	--	Pass
23	BL	BL	BL	BL	BL	--	Pass
24	BL	BL	BL	BL	BL	--	Pass

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No.	XRF Result(mg/kg)					Chemical Test (mg/kg)	Conclusion
	Pb	Cd	Hg	Cr	Br		
25	BL	BL	BL	BL	BL	--	Pass
26	BL	BL	BL	BL	--	--	Pass
27	BL	BL	BL	BL	X	PBBs/PBDEs: N.D.	Pass
28	BL	BL	BL	BL	BL	--	Pass
29	BL	BL	BL	BL	--	--	Pass
30	BL	BL	BL	BL	BL	--	Pass
31	BL	BL	BL	BL	BL	--	Pass
32	BL	BL	BL	BL	--	--	Pass
33	BL	BL	BL	BL	--	--	Pass
34	BL	BL	BL	BL	--	--	Pass
35	BL	BL	BL	BL	--	--	Pass
36	BL	BL	BL	BL	--	--	Pass
37	BL	BL	BL	BL	--	--	Pass
38	BL	BL	BL	BL	--	--	Pass
39	BL	BL	BL	BL	--	--	Pass
40	BL	BL	BL	BL	--	--	Pass
41	BL	BL	BL	BL	--	--	Pass
42	BL	BL	BL	BL	--	--	Pass
43	BL	BL	BL	BL	--	--	Pass
44	BL	BL	BL	BL	BL	--	Pass
45	BL	BL	BL	BL	--	--	Pass
46	BL	BL	BL	BL	--	--	Pass
47	BL	BL	BL	BL	--	--	Pass

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Note: 1. BL = Under the XRF screening limit

2. OL = Future chemical test will be conducted while result is above the screening limit

3. X =The symbol“X”marks the region where further investigation in necessary

4. 3σ=The reproducibility of analytical instruments

5. LOD=Detection limit

6. --=No Test

7. When Cr (VI) in a sample is detected below the 0.10 μg/cm^2 LOQ (limit of quantification), the sample is considered to be negative for Cr (VI). Since Cr (VI) may not be uniformly distributed in the coating even within the same sample batch, a "grey zone" between 0.10 μg/cm^2 and 0.13 μg/cm^2 has been established as "inconclusive" to reduce inconsistent results due to unavoidable coating variations. In this case, additional testing may be necessary to confirm the presence of Cr (VI). When Cr (VI) is detected above 0.13 μg/cm^2, the sample is considered to be positive for the presence of Cr (VI) in the coating layer. Unavoidable coating variations may influence the determination Information on storage conditions and production date of the tested sample is unavailable and thus Cr (VI) results represent status of the sample at the time of testing.

Remark: 1. It is the result on total Br while test item on restricted substances in PBBs/PBDEs. It is the result on total Cr while test item on restricted substances is Cr(VI).

2. Screening test by XRF spectroscopy. XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1: 2013Annex A.

Element	Polymer Material	Metallic Material	Composite Material
Pb	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤500-3σ≤X＜1500+3σ≤OL
Cd	BL≤70-3σ≤X＜130+3σ≤OL	BL≤70-3σ≤X＜130+3σ≤OL	LOD＜X＜150+3σ≤OL
Hg	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤700-3σ≤X＜1300+3σ≤OL	BL≤500-3σ≤X＜1500+3σ≤OL
Cr	BL≤700-3σ＜X	BL≤700-3σ＜X	BL≤500-3σ＜X
Br	BL≤300-3σ＜X	--	BL≤250-3σ＜X

XRF Detection Limits in mg/kg for Regulated Elements in Various Material

Element	Polymer Material	Metallic Material	Composite Material
Pb	10	50	50
Cd	10	50	50
Hg	10	50	50
Cr	10	50	50
Br	10	50	50

2. Wet Chemical Test

Test Item(s)	Test Method/ Test Equipment	Unit	Limit	MDL
Cadmium(Cd)	IEC 62321-5:2013, ICP-OES	mg/kg	100	2
Lead(Pb)	IEC 62321-5:2013, ICP-OES	mg/kg	1000	2
Mercury(Hg)	IEC 62321-4:2013+AMD1:2017, ICP-OES	mg/kg	1000	2
Hexavalent Chromium(CrVI) (Metal)	IEC 62321-7-1:2015, UV-Vis	$\mu g/cm^2$	0.13	0.1
Hexavalent Chromium(CrVI) (Nonmetal)	IEC 62321-7-2:2017, UV-Vis	mg/kg	1000	8
PBBs (Next form)	IEC 62321-6:2015, GC-MS	mg/kg	1000	5
PBDEs (Next form)	IEC 62321-6:2015, GC-MS	mg/kg	1000	5
Dibutyl Phthalate(DBP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30
Butyl benzyl phthalate (BBP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30
Di-(2-ethylhexyl) Phthalate(DEHP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30
Diisobutyl phthalate (DIBP)	IEC 62321-8:2017, GC-MS	mg/kg	1000	30

PBBs		PBDEs	
Monobromobiphenyl	Hexabromobiphenyl	Monobromodiphenyl ether	Hexabromodiphenyl ether
Dibromobiphenyl	Heptabromobiphenyl	Dibromodiphenyl ether	Heptabromodiphenyl ether
Tribromobiphenyl	Octabromobiphenyl	Tribromodiphenyl ether	Octabromodiphenyl ether
Tetrabromobiphenyl	Nonabromobiphenyl	Tetrabromodiphenyl ether	Nonabromodiphenyl ether
Pentabromobiphenyl	Decabromobiphenyl	Pentabromodiphenyl ether	Decabromodiphenyl ether

3. Phthalate Test Result.

Test No.	Test Item(s)				Conclusion
	Dibutyl Phthalate (DBP)	Butyl benzyl phthalate (BBP)	Di-(2-ethylhexyl) Phthalate (DEHP)	Diisobutyl phthalate (DIBP)	
1	N.D.	N.D.	N.D.	N.D.	Pass
2	N.D.	N.D.	N.D.	N.D.	Pass
3	N.D.	N.D.	N.D.	N.D.	Pass
4	N.D.	N.D.	N.D.	N.D.	Pass
7	N.D.	N.D.	N.D.	N.D.	Pass
8	N.D.	N.D.	N.D.	N.D.	Pass
9	N.D.	N.D.	N.D.	N.D.	Pass
10	N.D.	N.D.	N.D.	N.D.	Pass
11	N.D.	N.D.	N.D.	N.D.	Pass
12	N.D.	N.D.	N.D.	N.D.	Pass
17	N.D.	N.D.	N.D.	N.D.	Pass
18	N.D.	N.D.	N.D.	N.D.	Pass
19	N.D.	N.D.	N.D.	N.D.	Pass
20	N.D.	N.D.	N.D.	N.D.	Pass
21	N.D.	N.D.	N.D.	N.D.	Pass
23	N.D.	N.D.	N.D.	N.D.	Pass
24	N.D.	N.D.	N.D.	N.D.	Pass
25	N.D.	N.D.	N.D.	N.D.	Pass
27	N.D.	N.D.	N.D.	N.D.	Pass
28	N.D.	N.D.	N.D.	N.D.	Pass
30	N.D.	N.D.	N.D.	N.D.	Pass
31	N.D.	N.D.	N.D.	N.D.	Pass
44	N.D.	N.D.	N.D.	N.D.	Pass

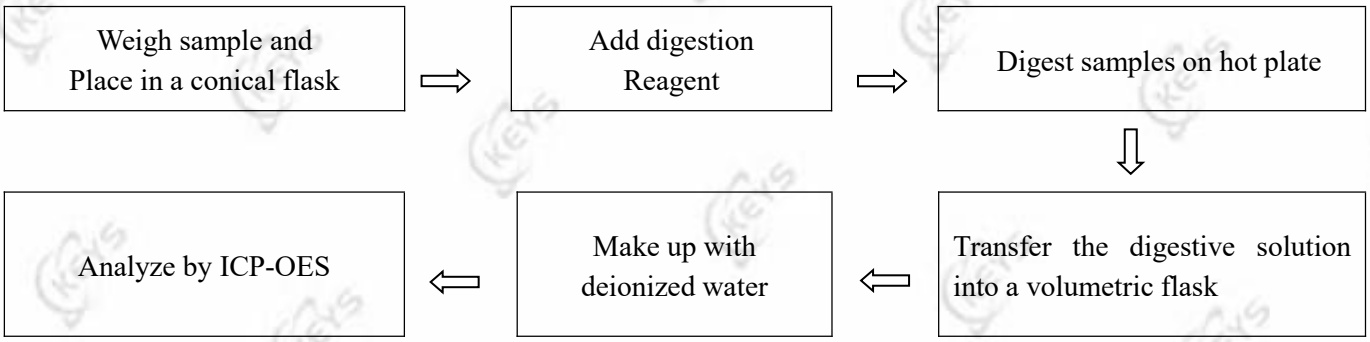
Note: 1. mg/kg= ppm=0.0001%

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

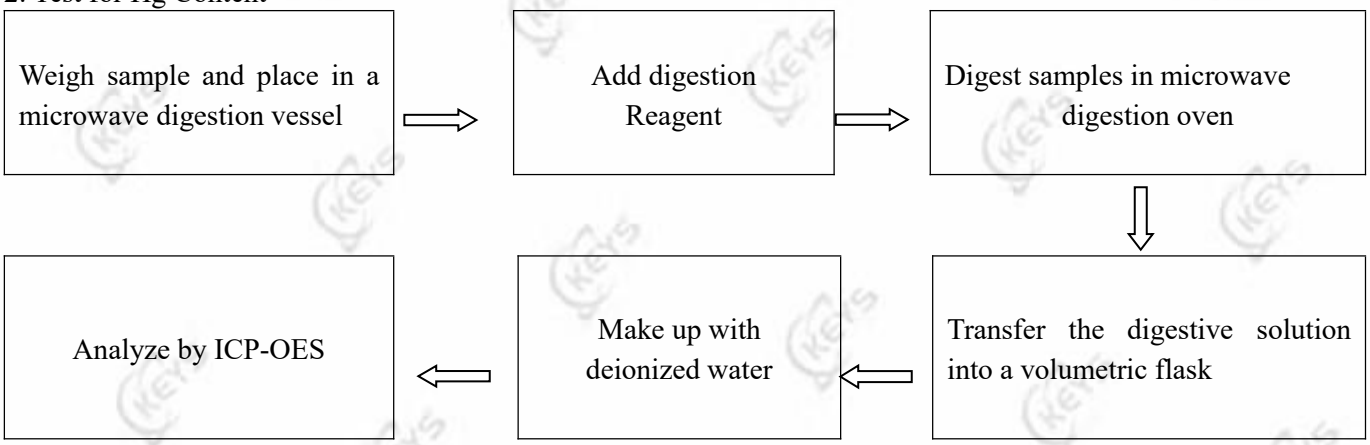
3. MDL = Method Detection Limit

Test Process:

1. Test for Cd/Pb Content

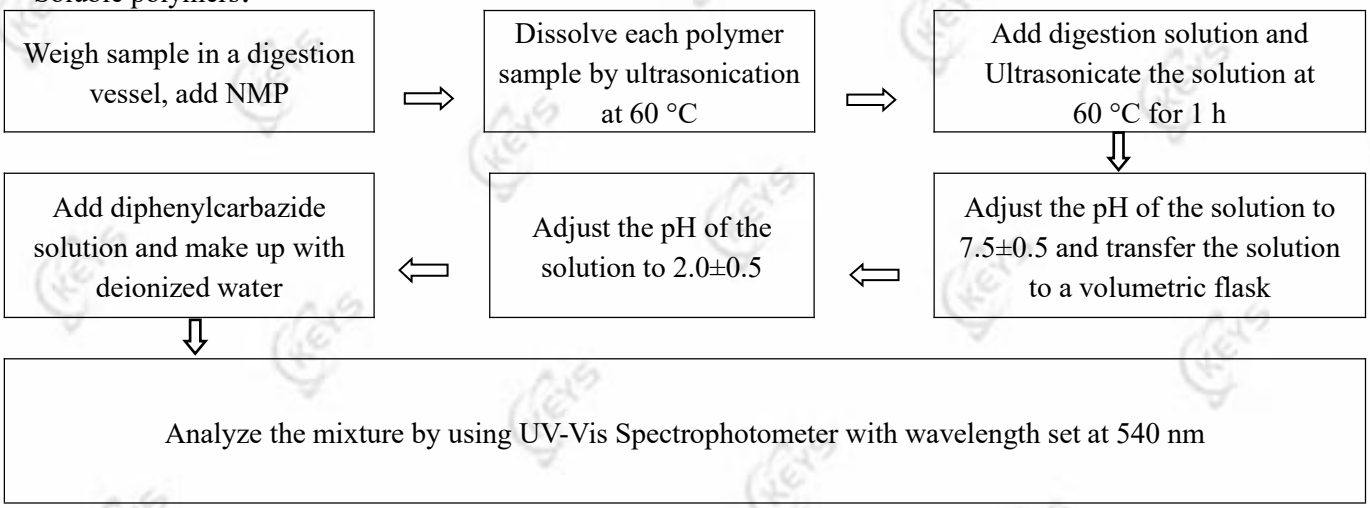


2. Test for Hg Content

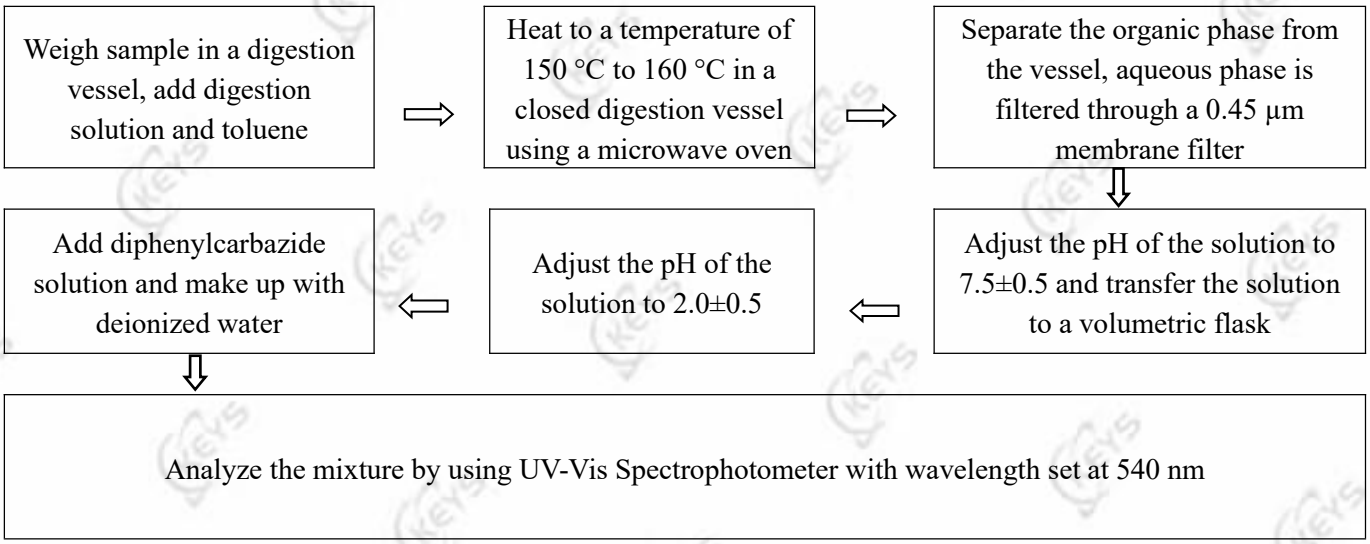


3. Test for Chromium (VI) Content

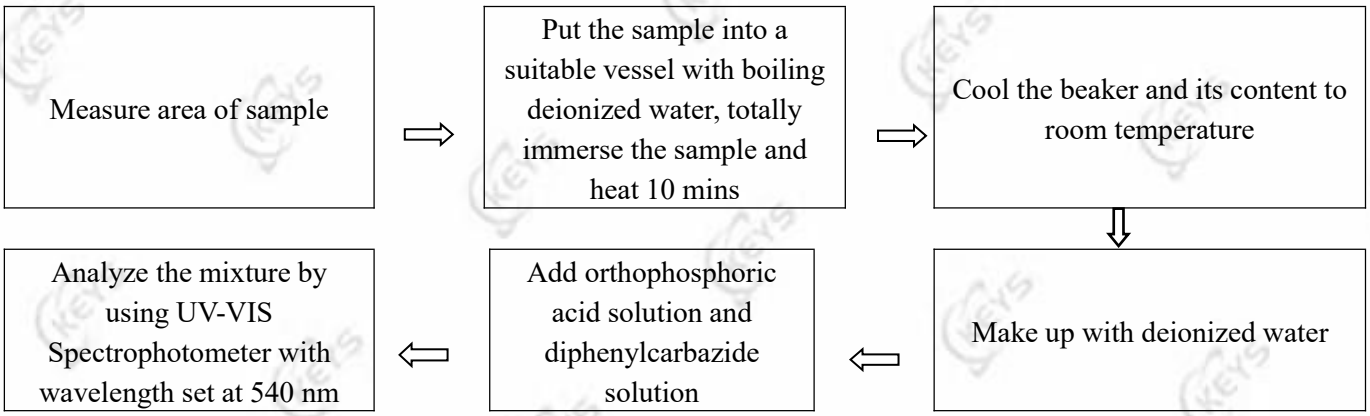
Soluble polymers:



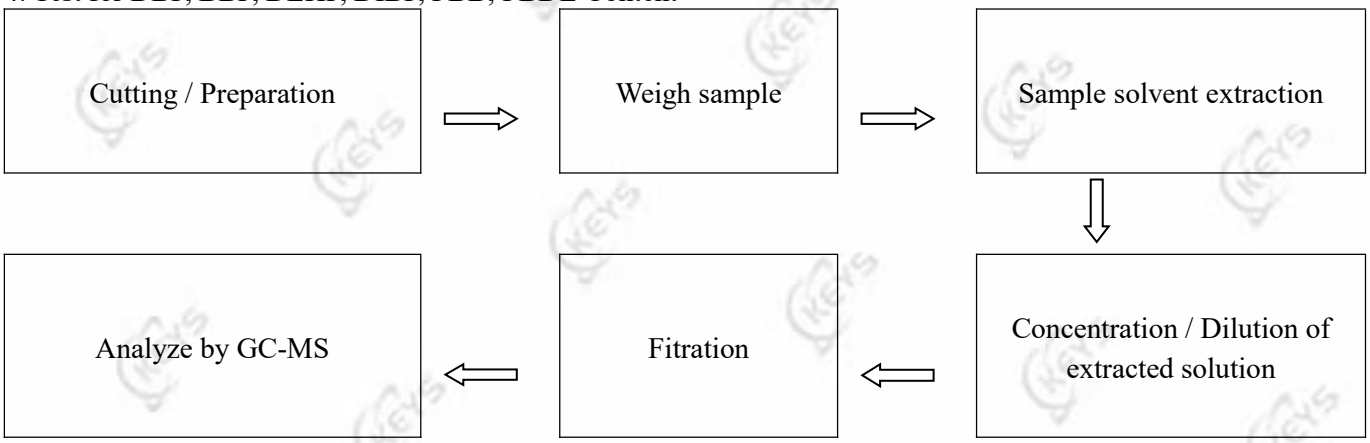
Insoluble/unknown polymers and electronics without Sb



Metal material



4. Test for DBP, BBP, DEHP, DIBP, PBB, PBDE Content



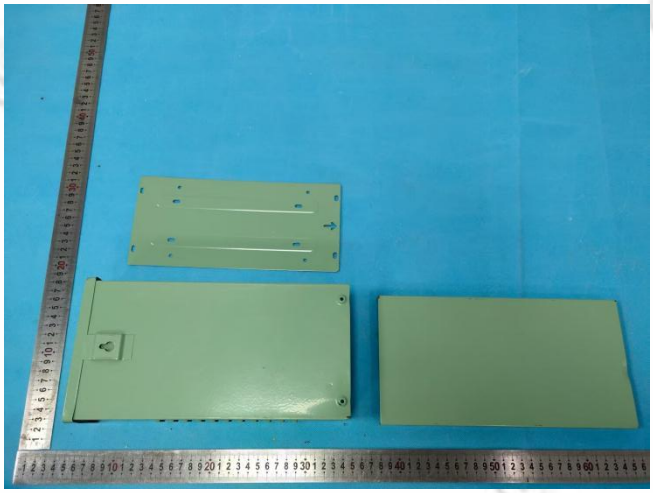
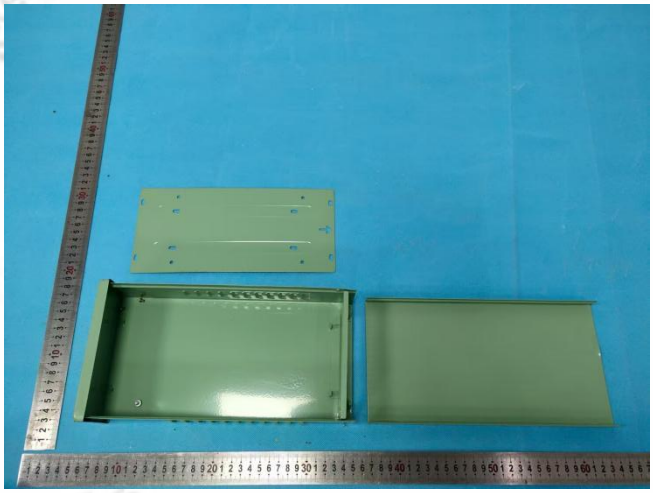
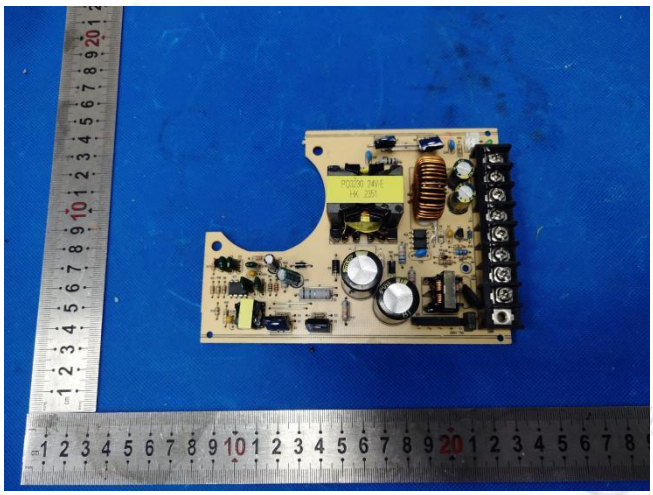
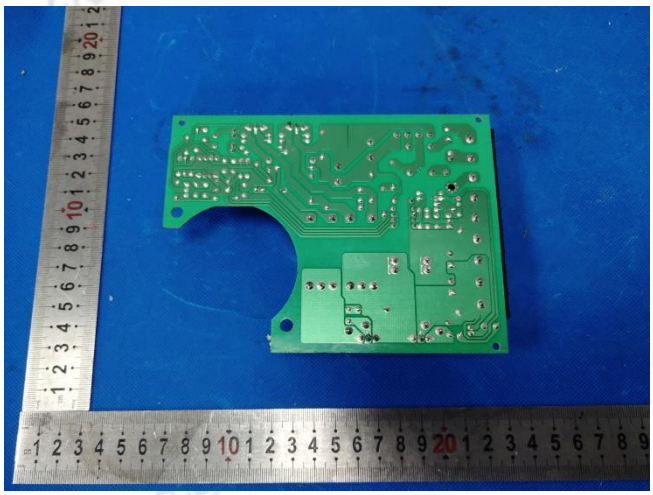
Sample Description:

No.	Description
1	Black Plastic Casing
2	Grey Plastic Cover
3	Black Plastic Base
4	Black Plastic Part
5	Golden Metal Shell
6	Golden Metal Cover
7	Black Plastic Cover
8	Black Plastic Mesh
9	Black Plastic Connector
10	Black Plastic Plug
11	White Plastic Plug
12	Blue Plastic Plug
13	Silver Metal Pins
14	Black Metal Screw
15	Silver Metal Screw
16	Silver Metal Fasteners
17	Black Outer Line Leather
18	Yellow Line Skin
19	Blue Line Skin
20	Brown Line Skin
21	Red Line Skin
22	Wire Core
23	Red Plastic Terminal
24	Black Plastic Connectors
25	Black Plastic Fan
26	Motor
27	PCB

No.	Description
28	Black Plastic Socket
29	Silver Metal Parts
30	Green Lamp Beads
31	White Plastic Socket
32	Silver Metal Socket
33	Electrolytic Capacitor
34	IC
35	Blue Capacitor
36	Yellow Capacitor
37	Green Capacitor
38	Color Ring Resistor
39	Bridge Stack
40	Magnetic Ring Inductor
41	Insurance Tube
42	Diode
43	Filter
44	Yellow Adhesive Tape
45	Transformer
46	Photoresistor
47	Soldering

Sample Photos:

Test Report

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