



TEST REPORT

Applicant : AOK Industrial Company Limited

Address : 1/F of 1#Building, East Block of 3/F of Building 1, And 2/F of Building 4, ST George's Science and Technology Industrial Park, Northside of Xinyu Road, Xiangshan Community, Xinqiao Street Baoan District, 518000 Shenzhen, Guangdong, CHINA

Report on the submitted samples said to be:

Sample Name(s) : LED Street Light

Trade Mark : 
Quality, Honesty, Service and Innovation

Tested Model No. : AOK-50WiLH(S)-NV-A5-BB-XXYY-BN-P

Model List : See appendix (See page 16)

Sample Received Date : May 22, 2026

Testing Period : May 25, 2026 ~ June 02, 2026

Date of Report : June 08, 2026

Testing Location : 901, No.40 Building, Xialang Industrial Zone, Heshuikou Community, Matian Street, Guangming District, Shenzhen, Guangdong, China

Results : Please refer to next page(s).

TEST REQUEST	CONCLUSION
As specified by the client, the designated components of the submitted sample were tested. The detected contents of Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), PBBs, PBDEs, Dibutyl Phthalate (DBP), Butylbenzyl Phthalate (BBP), Di-2-ethylhexyl Phthalate (DEHP) and Diisobutyl Phthalate (DIBP) are in compliance with the limit requirements specified in RoHS Directive 2011/65/EU as amended by (EU) 2015/863.	PASS

Signed for and on behalf of LCS

Yin Dong

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Shenzhen LCS Compliance Testing Laboratory Ltd.
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**A. EU RoHS Directive 2011/65/EU and its amendment directives**

Test method: Refer to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF).

Test result(s):

Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
1	Silver metal	BL	X	BL	BL	/	/	2026-05-25
2	Glass	BL	BL	BL	BL	BL	BL	2026-05-25
3	Label paper	BL	BL	BL	BL	BL	BL	2026-05-25
4	Label paper	BL	BL	BL	BL	BL	BL	2026-05-25
5	Silver metal	BL	BL	BL	X	/	/	2026-05-25
6	Silver metal	BL	BL	BL	X	/	/	2026-05-25
7	White soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
8	Transparent hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
9	Metal Printed Circuit Board	X	BL	BL	BL	/	/	2026-05-25
10	Yellow lamp bead	BL	BL	BL	BL	BL	BL	2026-05-25
11	Solder	BL	X	BL	BL	/	/	2026-05-25
12	Silver metal	BL	BL	BL	BL	/	/	2026-05-25
13	Silver metal	BL	OL	BL	BL	/	/	2026-05-25
14	Silver metal screw	BL	X	BL	BL	/	/	2026-05-25
15	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
16	Transparent hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
17	Liquid	BL	BL	BL	BL	BL	BL	2026-05-25
18	Silver metal	BL	X	BL	BL	/	/	2026-05-25
19	Silver metal	BL	BL	BL	BL	/	/	2026-05-25
20	Silver metal	X	BL	BL	X	/	/	2026-05-25
21	Black plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
22	Silver metal wire core	OL	X	BL	BL	/	/	2026-05-25
23	Red plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
24	Silver metal	BL	BL	BL	BL	/	/	2026-05-25
25	Silver metal screw	BL	BL	BL	BL	/	/	2026-05-25
26	White hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
27	Colored plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25

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Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
28	Brown plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
29	Blue plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
30	Copper-colored metal wire core	BL	BL	BL	BL	/	/	2026-05-25
31	Black plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
32	Silver metal	BL	BL	BL	BL	/	/	2026-05-25
33	Black plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
34	Black plastic heat shrink tube	BL	BL	BL	BL	BL	BL	2026-05-25
35	Black plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
36	Pink plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
37	Purple plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
38	Colored plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
39	Silver metal wire core	BL	BL	BL	BL	/	/	2026-05-25
40	Grey soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
41	Label paper	BL	BL	BL	BL	BL	BL	2026-05-25
42	Transparent soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
43	Thermal conductive adhesive	BL	BL	BL	BL	BL	BL	2026-05-25
44	Black soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
45	Transparent soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
46	Transparent plastic tape	BL	BL	BL	BL	BL	BL	2026-05-25
47	Diode	BL	BL	BL	BL	BL	BL	2026-05-25
48	Transistor	BL	BL	BL	BL	BL	BL	2026-05-25
49	Black soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
50	Silver metal	BL	BL	BL	BL	/	/	2026-05-25
51	White hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
52	Copper-colored metal	BL	BL	BL	BL	/	/	2026-05-25
53	Surface-mount capacitor	BL	BL	BL	BL	BL	BL	2026-05-25
54	IC body	BL	BL	BL	BL	BL	BL	2026-05-25

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Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
55	Surface-mount resistor	BL	BL	BL	BL	BL	BL	2026-05-25
56	Solder	BL	BL	BL	BL	/	/	2026-05-25
57	IC body	BL	BL	BL	BL	BL	BL	2026-05-25
58	Surface-mount capacitor	BL	BL	BL	BL	BL	BL	2026-05-25
59	Surface-mount resistor	BL	BL	BL	BL	BL	BL	2026-05-25
60	Diode	BL	BL	BL	BL	BL	BL	2026-05-25
61	Green Printed Circuit Board	BL	BL	BL	BL	X	X	2026-05-25
62	Surface-mount resistor	BL	BL	BL	BL	BL	BL	2026-05-25
63	Transistor	BL	BL	BL	BL	BL	BL	2026-05-25
64	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
65	Label paper	BL	BL	BL	BL	BL	BL	2026-05-25
66	Copper-colored metal wire core	OL	BL	BL	BL	/	/	2026-05-25
67	Green hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
68	Transparent plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
69	Yellow plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
70	Metal pin	OL	BL	BL	BL	/	/	2026-05-25
71	Yellow hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
72	Plastic sheath of capacitor	BL	BL	BL	BL	BL	BL	2026-05-25
73	Metal case of the capacitor	BL	BL	BL	BL	/	/	2026-05-25
74	Metal pin	BL	BL	BL	BL	/	/	2026-05-25
75	Metal pin	OL	BL	BL	BL	/	/	2026-05-25
76	Black soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
77	Transparent plastic tape	BL	BL	BL	BL	BL	BL	2026-05-25
78	Grey metal	BL	BL	BL	BL	/	/	2026-05-25
79	Silver metal	OL	BL	BL	BL	/	/	2026-05-25
80	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
81	Beige hard plastic	BL	BL	BL	BL	X	X	2026-05-25
82	Magnetic core	X	BL	BL	BL	/	/	2026-05-25
83	Transparent plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
84	Enameled wire	BL	BL	BL	BL	/	/	2026-05-25

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Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
85	Yellow plastic tape	BL	BL	BL	BL	BL	BL	2026-05-25
86	Yellow plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
87	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
88	Silver metal	X	BL	BL	BL	/	/	2026-05-25
89	Black plastic heat shrink tube	BL	BL	BL	BL	BL	BL	2026-05-25
90	Metal pin	OL	BL	BL	BL	/	/	2026-05-25
91	Colored ceramic	BL	BL	BL	BL	BL	BL	2026-05-25
92	Silver metal	BL	BL	BL	X	/	/	2026-05-25
93	Label paper	BL	BL	BL	BL	BL	BL	2026-05-25
94	Magnetic core	BL	BL	BL	BL	/	/	2026-05-25
95	Yellow plastic tape	BL	BL	BL	BL	BL	BL	2026-05-25
96	Beige hard plastic	BL	BL	BL	BL	X	X	2026-05-25
97	Enameled wire	BL	BL	BL	BL	/	/	2026-05-25
98	Grey hard plastic	BL	BL	BL	BL	X	X	2026-05-25
99	Metal pin	BL	BL	BL	BL	/	/	2026-05-25
100	Silver plastic film	BL	BL	BL	BL	BL	BL	2026-05-25
101	Plastic sheath of capacitor	BL	BL	BL	BL	BL	BL	2026-05-25
102	Plastic sheath of capacitor	BL	BL	BL	BL	BL	BL	2026-05-25
103	Red hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
104	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
105	Light red hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
106	Surface-mount capacitor	BL	BL	BL	BL	BL	BL	2026-05-25
107	IC body	BL	BL	BL	BL	BL	BL	2026-05-25
108	Surface-mount resistor	BL	BL	BL	BL	BL	BL	2026-05-25
109	Transistor	BL	BL	BL	BL	BL	BL	2026-05-25
110	Diode	BL	BL	BL	BL	BL	BL	2026-05-25
111	White hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
112	Silver metal	BL	BL	BL	X	/	/	2026-05-25
113	Black plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
114	Brown plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
115	Blue plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25

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Sample No.	Sample Description	Screening Result(s)						Date of sample submission/ Resubmission
		Cd	Pb	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
116	Colored plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
117	Copper-colored metal wire core	BL	BL	BL	BL	/	/	2026-05-25
118	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
119	Thermal conductive adhesive	BL	BL	BL	BL	BL	BL	2026-05-25
120	Black soft plastic	BL	BL	BL	BL	BL	BL	2026-05-25
121	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
122	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
123	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
124	Label paper	BL	BL	BL	BL	BL	BL	2026-05-25
125	Silver metal	X	OL	BL	X	/	/	2026-05-25
126	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25
127	Silver metal	OL	X	BL	X	/	/	2026-05-25
128	Black hard plastic	BL	BL	BL	BL	BL	BL	2026-05-25
129	Blue plastic wire covering	BL	BL	BL	BL	BL	BL	2026-05-25
130	Silver metal wire core	BL	BL	BL	BL	/	/	2026-05-25
131	Silver metal nut	BL	BL	BL	BL	/	/	2026-05-25
132	Silver metal	BL	BL	BL	X	/	/	2026-05-25
133	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25
134	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25
135	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25
136	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25
137	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25
138	Silver metal screw	BL	BL	BL	X	/	/	2026-05-25

Note:

- Results were obtained by XRF for primary screening, and further chemical testing by ICP(for Cd, Pb, Hg), UV-Vis(for Cr(VI)) and GC-MS(for PBBs, PBDEs) are recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013(Unit: mg/kg).

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Element	Polymers	Metals	Composite material
Cd	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$BL \leq (70-3\sigma) < X < (130+3\sigma) \leq OL$	$LOD < X < (150+3\sigma) \leq OL$
Pb	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Hg	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (700-3\sigma) < X < (1300+3\sigma) \leq OL$	$BL \leq (500-3\sigma) < X < (1500+3\sigma) \leq OL$
Cr	$BL \leq (700-3\sigma) < X$	$BL \leq (700-3\sigma) < X$	$BL \leq (500-3\sigma) < X$
Br	$BL \leq (300-3\sigma) < X$	N/A	$BL \leq (250-3\sigma) < X$

Remark:

- BL= Below Limit
 - OL= Over Limit
 - X= The range of needing to do further testing
 - 3σ = The reproducibility of analytical instruments
 - N/A= Not applicable
 - LOD= Detection limit
2. The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.
 3. The maximum permissible limit is quoted from the document RoHS Directive 2011/65/EU with amendment (EU) 2015/863.
 4. ▼=For restricted substances PBBs and PBDEs, the results show the total Br content, the restricted substance was Cr(VI), and the results showed the total Cr content.





RoHS Restricted Substances	Maximum Concentration Value (mg/kg) (by weight in homogenous materials)
Cadmium(Cd)	100
Lead(Pb)	1000
Mercury(Hg)	1000
Hexavalent Chromium(Cr(VI))	1000
Polybrominated biphenyls(PBBs)	1000
Polybrominated diphenylethers(PBDEs)	1000
Dibutyl Phthalate(DBP)	1000
Butylbenzyl Phthalate(BBP)	1000
Di-(2-ethylhexyl) Phthalate(DEHP)	1000
Diisobutyl phthalate(DIBP)	1000

Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes. The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.



**B. EU RoHS Directive 2011/65/EU with amendment (EU) 2015/863 on Lead(Pb), Cadmium(Cd), Hexavalent Chromium(Cr(VI)), PBBs, PBDEs, DBP, BBP, DEHP & DIBP content**

Test method:

Lead(Pb) & Cadmium(Cd) Content:

Refer to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma optical emission spectrometer (ICP-OES) or atomic absorption spectrometer (AAS).

Hexavalent Chromium(Cr(VI)) Content:

Refer to IEC 62321-7-1:2015 or IEC 62321-7-2:2017, analysis was performed by UV-visible spectrophotometer (UV-Vis).

PBBs & PBDEs Content:

Refer to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatography-mass spectrometer (GC-MS).

Phthalates(DBP, BBP, DEHP & DIBP) Content:

Refer to IEC 62321-8:2017, by solvent extraction and analysis was performed by gas chromatography-mass spectrometer (GC-MS).

Test result(s):

1) Lead(Pb) & Cadmium(Cd)

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		1	11	13	14	
Lead(Pb) Content	5	N.D.	104	31275 [#]	161	1000

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		18	22	125	127	
Lead(Pb) Content	5	N.D.	32	N.D.	N.D.	1000

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)						Limit (mg/kg)
		9	20	22	66	70	75	
Cadmium(Cd) Content	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	100

Tested Item	MDL (mg/kg)	Test Result(s) (mg/kg)						Limit (mg/kg)
		79	82	88	90	125	127	
Cadmium(Cd) Content	5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	100

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**2) Hexavalent Chromium(Cr(VI))(for coating on metal- water-extraction**)**

Tested Item	MDL ($\mu\text{g}/\text{cm}^2$)	Test Result(s)				
		5	6	20	92	112
Hexavalent Chromium(Cr(VI)) Content★	0.10 (LOQ)	Negative	Negative	Negative	Negative	Negative

Tested Item	MDL ($\mu\text{g}/\text{cm}^2$)	Test Result(s)				
		125	126	127	132	133
Hexavalent Chromium(Cr(VI)) Content★	0.10 (LOQ)	Negative	Negative	Negative	Negative	Negative

Tested Item	MDL ($\mu\text{g}/\text{cm}^2$)	Test Result(s)				
		134	135	136	137	138
Hexavalent Chromium(Cr(VI)) Content★	0.10 (LOQ)	Negative	Negative	Negative	Negative	Negative

3) Phthalates(DBP, BBP, DEHP & DIBP)

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		3	4	7	21	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		23	27	28	29	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000





Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		31	33	35	36	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		37	38	40	41	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		42	44	45	46	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		49	65	68	69	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

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Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		76	77	83	85	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		86	93	95	100	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		113	114	115	116	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)			Limit (mg/kg)
		120	124	129	
Dibutyl Phthalate(DBP) Content	50	N.D.	N.D.	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	N.D.	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	N.D.	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	N.D.	N.D.	1000

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Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		2+8+10+15+16+17	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		26+34+47+48+51+53	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		54+55+57+58+59+60	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		61+62+63+64+67+71	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000





Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		72+80+81+87+89+91	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		96+98+101+102+103+104	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		105+106+107+108+109+110	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)	Limit (mg/kg)
		111+118+121+122+123+128	
Dibutyl Phthalate(DBP) Content	50	N.D.	1000
Butylbenzyl Phthalate(BBP) Content	50	N.D.	1000
Di-(2-ethylhexyl) Phthalate(DEHP) Content	50	N.D.	1000
Diisobutyl phthalate(DIBP) Content	50	N.D.	1000

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**4) Polybrominated Biphenyls(PBBs) & Polybrominated Diphenyl Ethers(PBDEs)**

Tested Item(s)	MDL (mg/kg)	Test Result(s) (mg/kg)				Limit (mg/kg)
		61	81	96	98	
Polybrominated Biphenyls(PBBs) Content						
Monobromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Dibromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Tribromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Tetrabromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Pentabromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Hexabromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Heptabromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Octabromobiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Nonabromodiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl	5	N.D.	N.D.	N.D.	N.D.	/
Total content	/	N.D.	N.D.	N.D.	N.D.	1000
Polybrominated Diphenylethers(PBDEs) Content						
Monobromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Dibromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Tribromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Tetrabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Pentabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Hexabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Heptabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Octabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Nonabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Decabromodiphenyl ether	5	N.D.	N.D.	N.D.	N.D.	/
Total content	/	N.D.	N.D.	N.D.	N.D.	1000

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Note:

- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL or LOQ)
- mg/kg= milligram per kilogram=ppm
- $\mu\text{g}/\text{cm}^2$ = micrograms per square centimeter
- LOQ = Limit Of Quantification, The LOQ of Hexavalent chromium is $0.10 \mu\text{g}/\text{cm}^2$

**=Boiling-water-extraction:

- ★ = a. The sample is positive for Cr(VI) if the Cr(VI) concentration is greater than $0.13 \mu\text{g}/\text{cm}^2$. The sample coating is considered to contain Cr(VI).
- b. The sample is negative for Cr(VI) if Cr(VI) is N.D.(concentration less than $0.10 \mu\text{g}/\text{cm}^2$). The sample coating is considered a non- Cr(VI) based coating.
- c. The result between $0.10 \mu\text{g}/\text{cm}^2$ and $0.13 \mu\text{g}/\text{cm}^2$ is considered to be inconclusive, unavoidable coating variations may influence the determination.
- Information on storage conditions and production date of the tested samples is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.
- According to customer's requirement, only the appointed materials have been tested.
- # According to RoHS Directive 2011/65/EU and its amendments, Lead is exempted as an alloying element in Copper containing up to 4% (40000ppm) by weight.

APPENDIX :

According to client's declaration, tested material would be produced as relevant product(s).

AOK-ZWiLH(S)-NV-A5-BB-XXYY-BN-P, AOK-ZWiLH(M)-NV-A5-BB-XXYY-BN-P,
AOK-ZWiLH(L)-NV-A5-BB-XXYY-BN-P, AOK-ZWiLH(XL)-NV-A5-BB-XXYY-BN-P,
AOK-ZWiLH(XXL)-NV-A5-BB-XXYY-BN-P, AOK-ZWiLH(S)-NV-L2-BB-XXYY-BN-P,
AOK-ZWiLH(M)-NV-L2-BB-XXYY-BN-P, AOK-ZWiLH(L)-NV-L2-BB-XXYY-BN-P,
AOK-ZWiLH(XL)-NV-L2-BB-XXYY-BN-P, AOK-ZWiLH(XXL)-NV-L2-BB-XXYY-BN-P,
AOK-ZWiLH(S)-NV-L3-BB-XXYY-BN-P, AOK-ZWiLH(M)-NV-L3-BB-XXYY-BN-P,
AOK-ZWiLH(L)-NV-L3-BB-XXYY-BN-P

Remark 1:

‘Z’ stands for Rated Power, can be 10-300, in steps of 1W, e.g. 10=10W, 300=300W;

‘BB’ stands for whether with NEMA socket & short-circuit cap and Zhaga socket & sealing cap, can be 00, PH and SN, 00=without NEMA socket & short-circuit cap and Zhaga socket & sealing cap, PH=with NEMA socket & short-circuit cap, SN=with Zhaga socket & sealing cap;

‘XX’ stands for CCT of LED, can be 27, 30, 40, 50, 57 and 65, 27=2700K, 30=3000K, 40=4000K, 50=5000K, 57=5700K, 65=6500K;

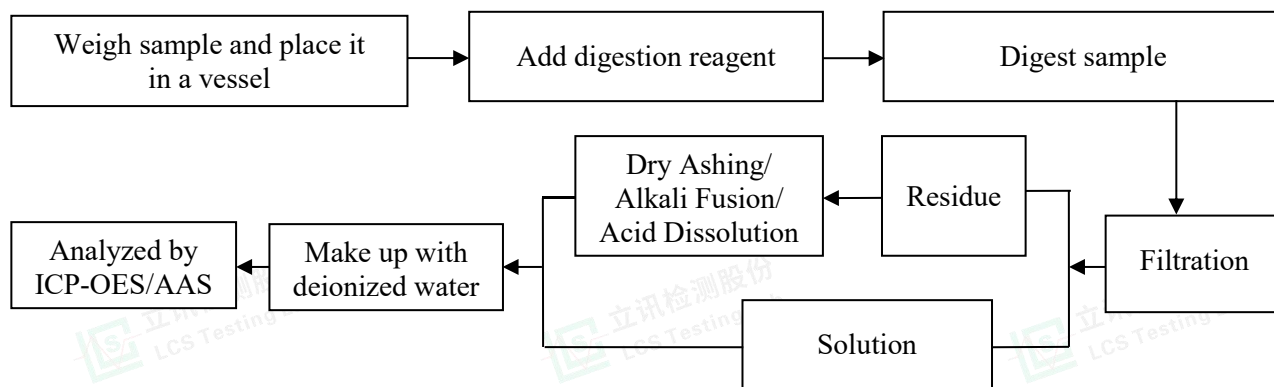
‘YY’ stands for CRI (color rendering index), can be 70, 80 and 90, 70=Ra: 70, 80=Ra: 80, 90=Ra: 90.



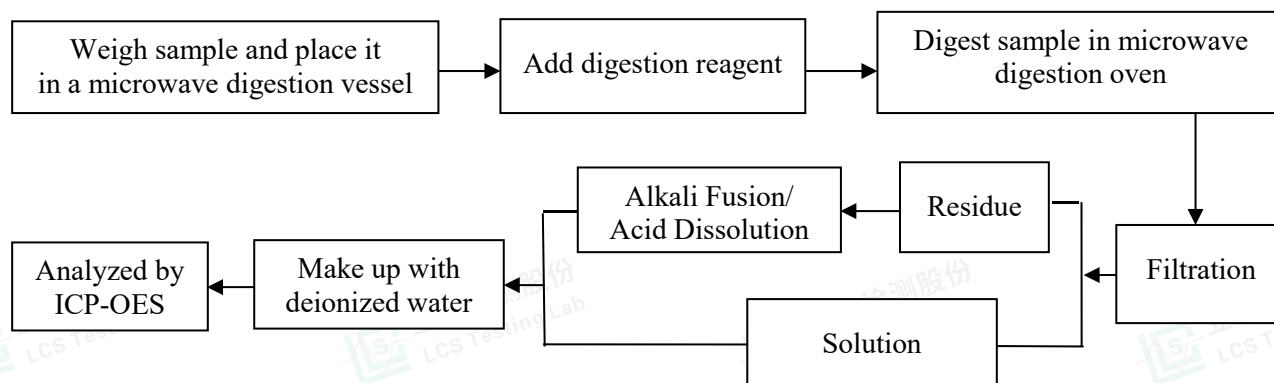


Test Process

1. Lead(Pb) & Cadmium(Cd): IEC 62321-5:2013

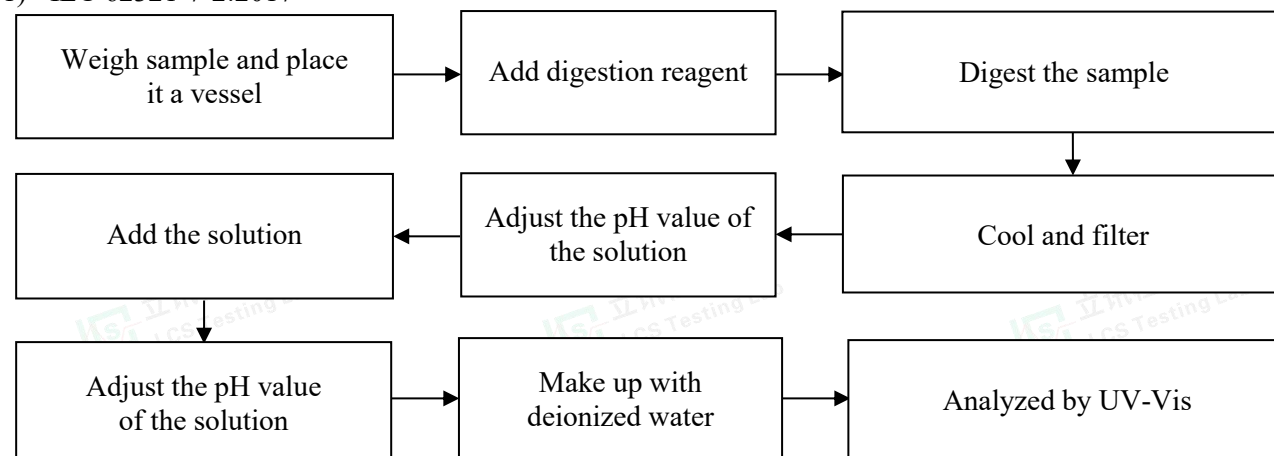


2. Mercury(Hg): IEC 62321-4:2013+AMD1:2017 CSV



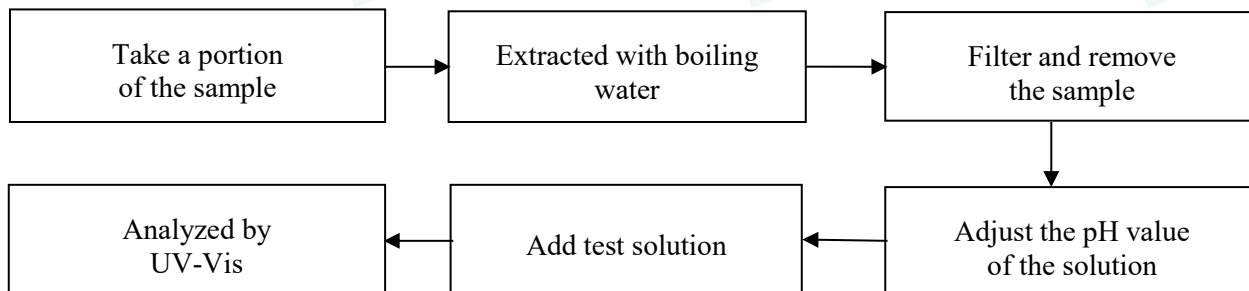
3. Hexavalent Chromium(Cr(VI))

1) IEC 62321-7-2:2017

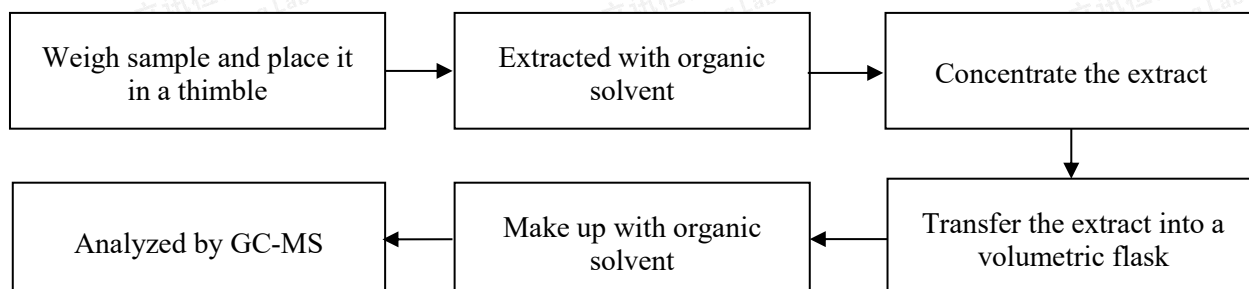




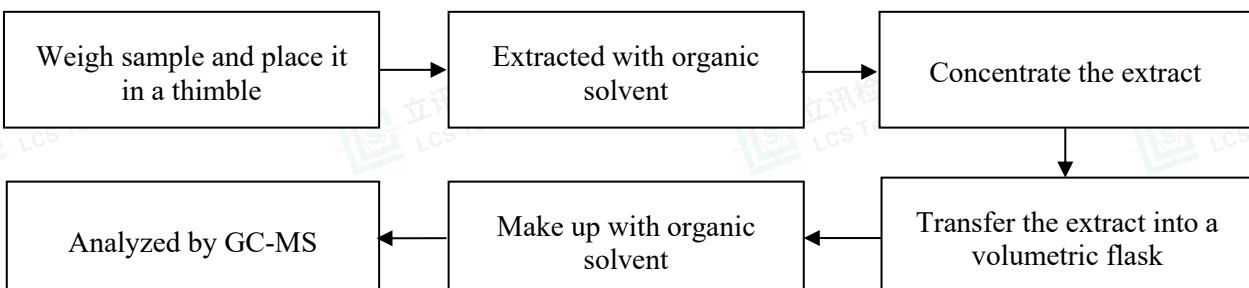
2) IEC 62321-7-1:2015



4. Polybrominated Biphenyls(PBBs) & Polybrominated Diphenyl Ethers(PBDEs) : IEC 62321-6:2015



5. Phthalates(DBP, BBP, DEHP & DIBP) : IEC 62321-8:2017





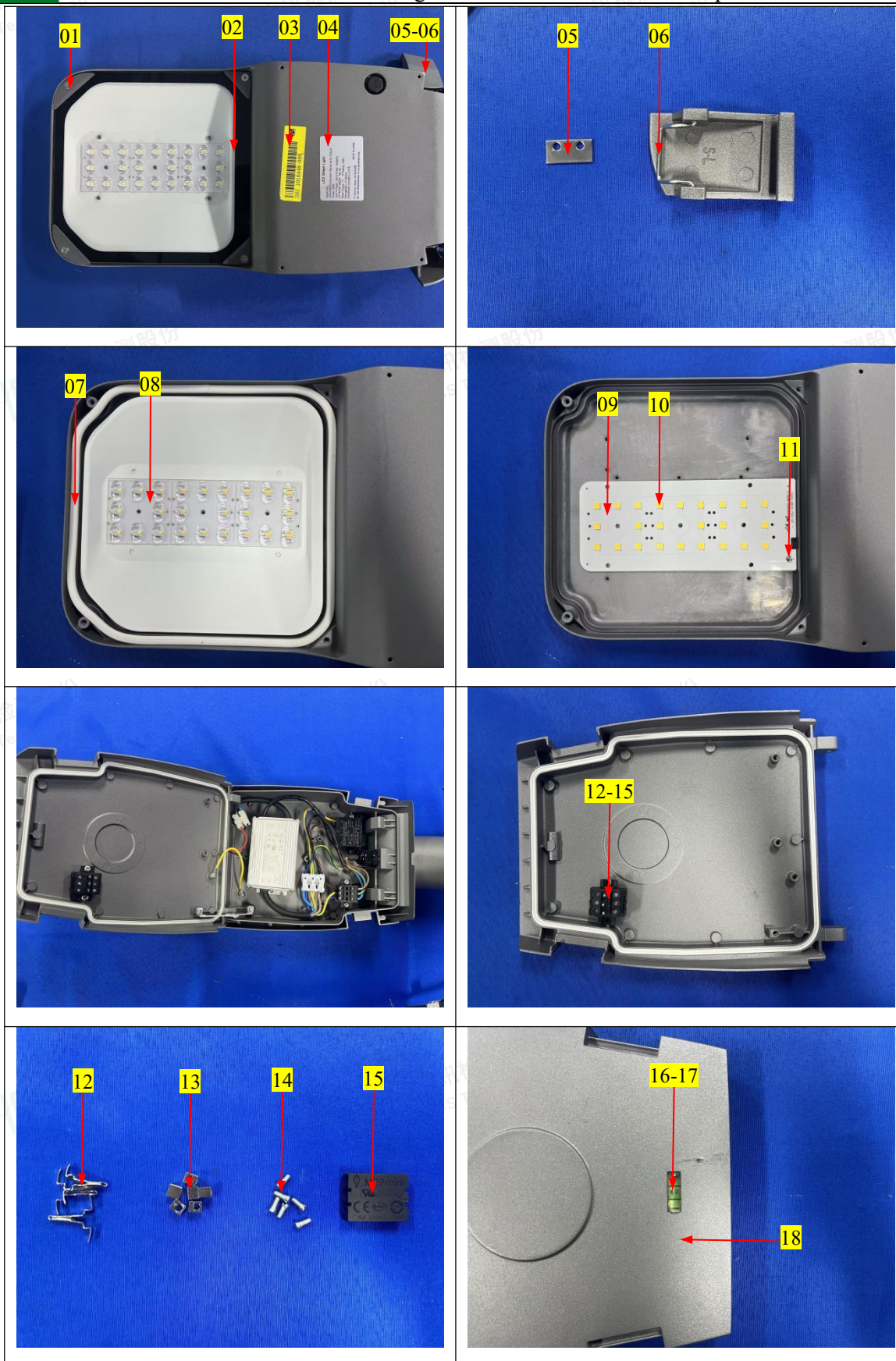
The photo(s) of the sample



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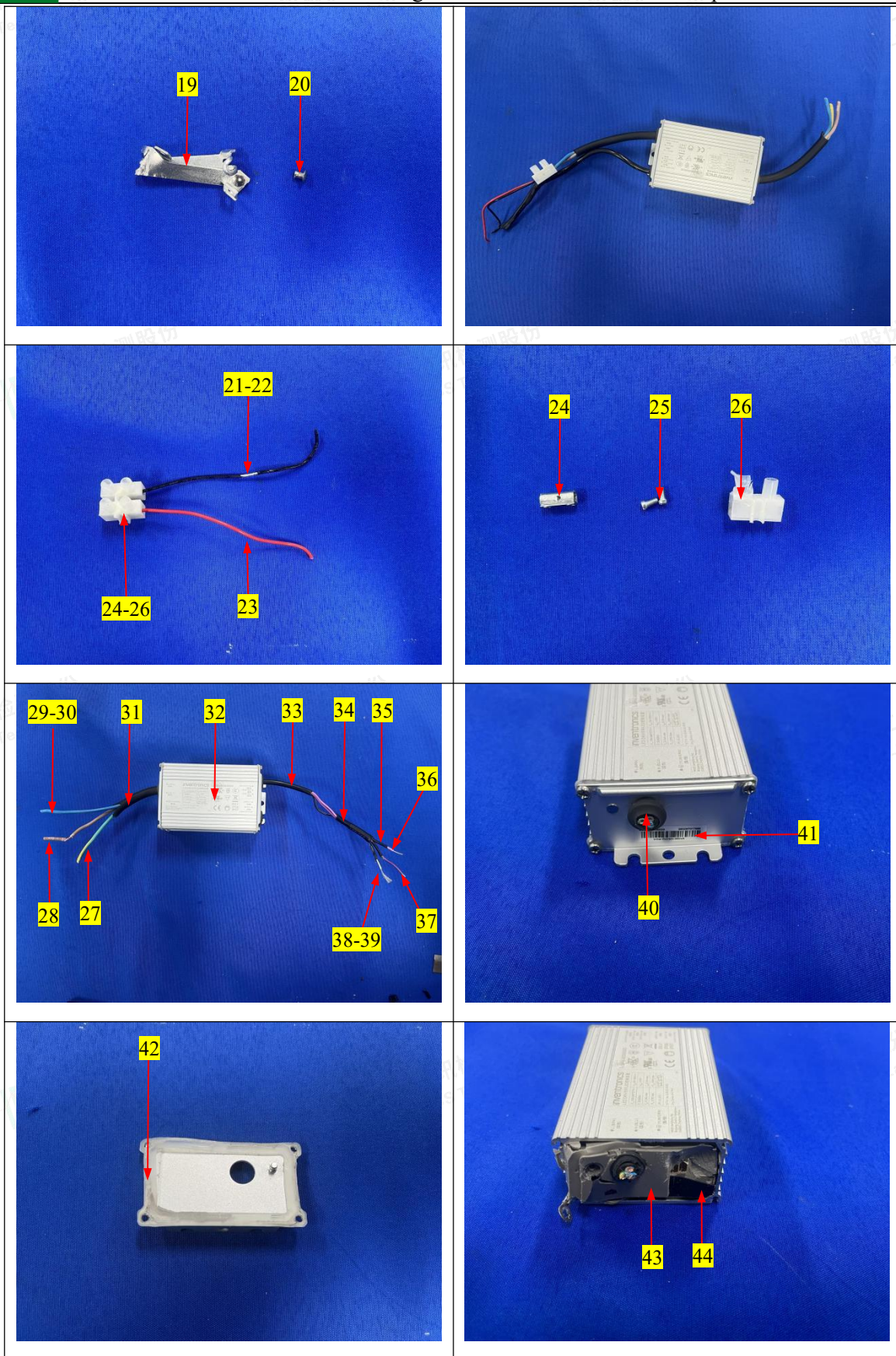
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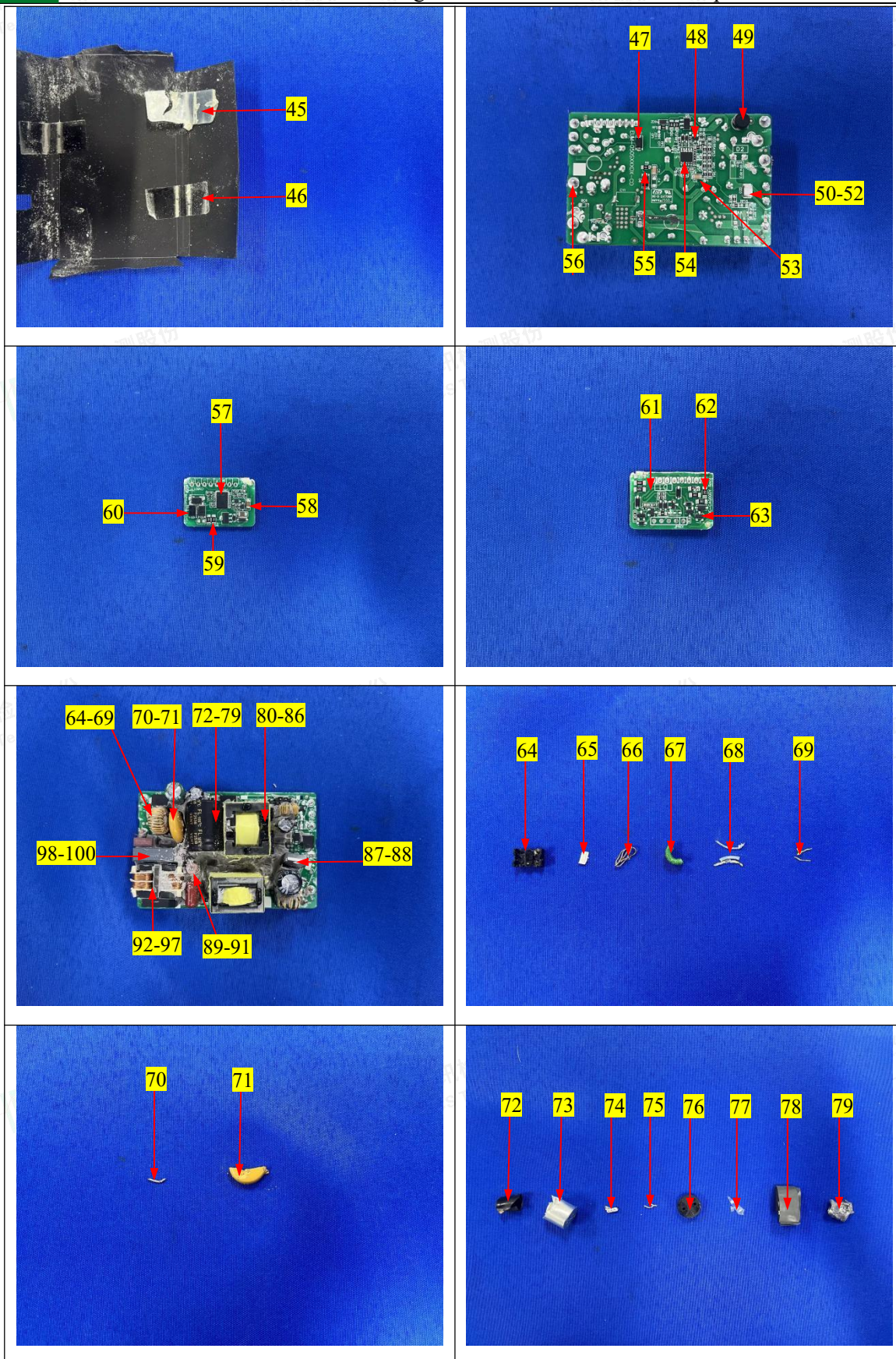
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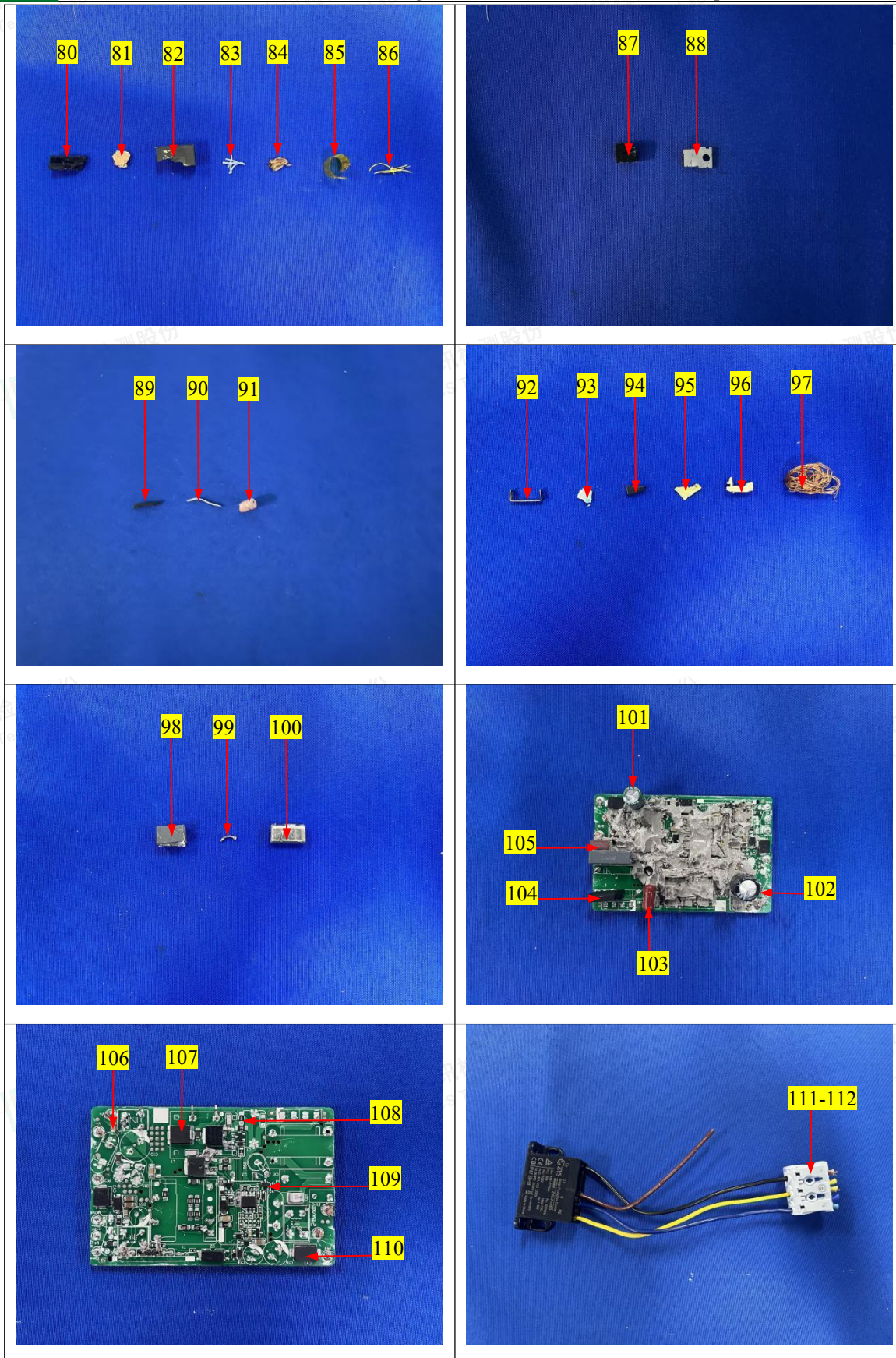


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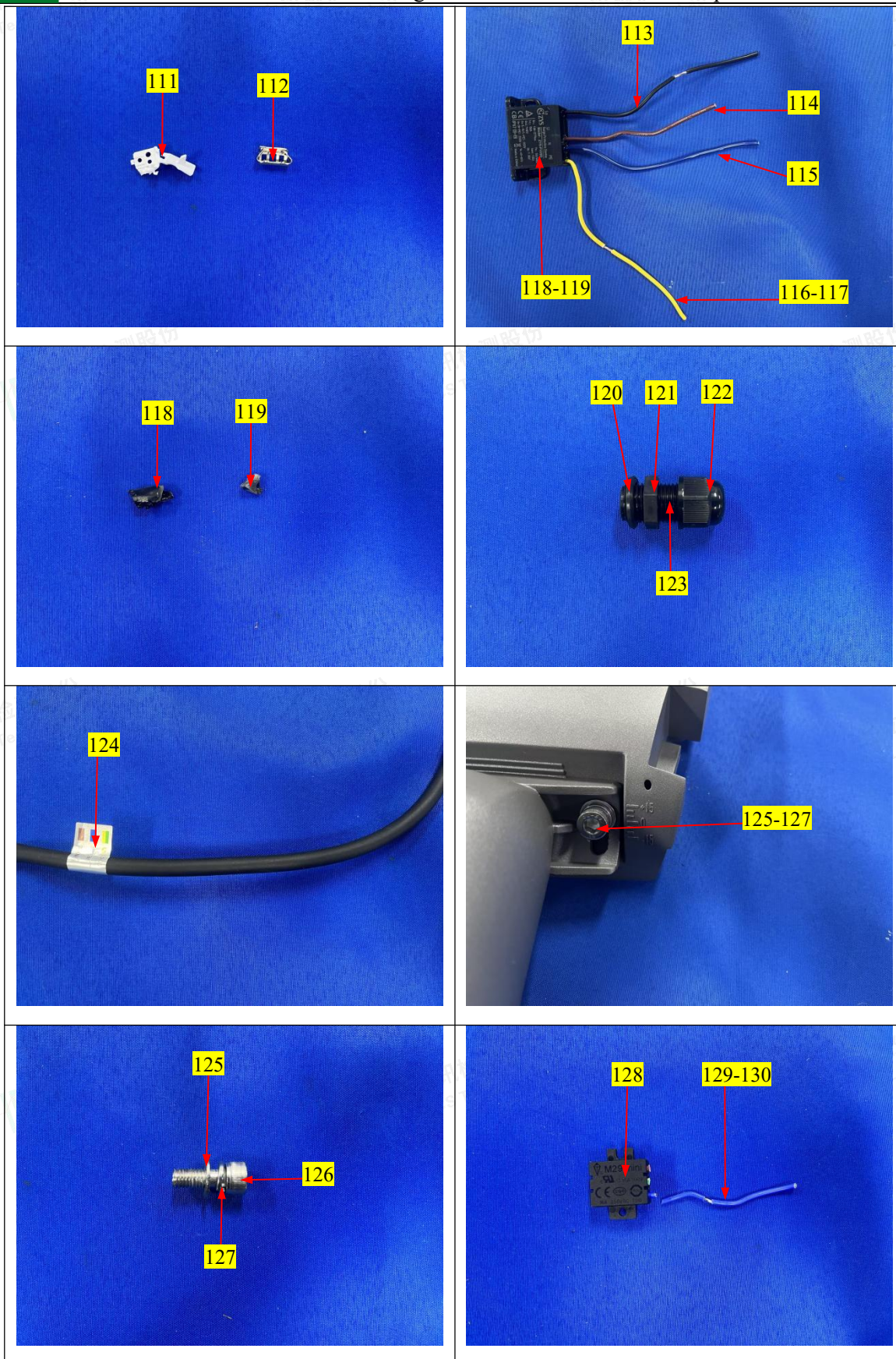




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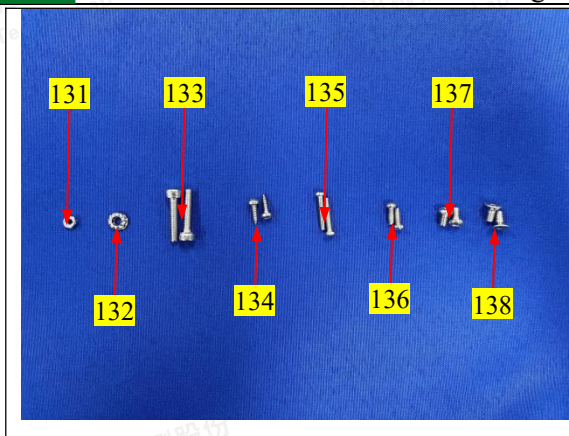
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