元素检测
Element Testing

Test Report

Applicant:	Shenzhen Flame Technology Co., Ltd
Address:	Plant 3002, West Block, Lao-Bing Building, Xing Ye Road, Bao 'An District, ShenZhen City, GuangDong Province,P.R China

The following sample was submitted and identified by/on behalf of the client as:

Product Name:	MOTI × VAPORESSO·X MINI, MOTI·X MINI
Model No.:	MOTI × VAPORESSO·X MINI, MOTI·X MINI
Trade Mark:	MOTI × VAPORESSO·X MINI, MOTI
Sample Received Date:	2022.3.18
Testing Period:	2022.3.18—2022.4.12
Test Method:	Please refer to the following page(s).
Test Result(s):	Please refer to the following page(s).

Test Requested	**Result**
As specified by client, according to RoHS Directive 2011/65/EU with amendment (EU) 2015/863, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr (VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP) in the tested materials of the submitted sample(s).	Pass

Signed for and on behalf of

Shenzhen Element Testing Co., Ltd.

Kim Zhang

Technical Manager

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Tested Result:

1. Screening Result

Spec. No.	Specimen Description:	Results						Date of sample submission /Resubmission
		Pb	Cd	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
1	Light grey translucent plastic	BL	BL	BL	BL	BL	BL	2022-3-22
2	Orange red plastic	BL	BL	BL	BL	BL	BL	2022-3-22
3	Black soft plastic	BL	BL	BL	BL	BL	BL	2022-3-22
4	Dark silvery color magnet	BL	BL	BL	BL	NA	NA	2022-3-22
5	White soft plastic	BL	BL	BL	BL	BL	BL	2022-3-22
6(R)	Golden metal with silvery plating	BL	BL	BL	BL	NA	NA	2022-3-31
7	Black soft plastic gasket	BL	BL	BL	BL	BL	BL	2022-3-22
8(R)	Golden metal contactor	BL	BL	BL	BL	NA	NA	2022-3-31
9	Dark silvery color metal rivet	BL	BL	BL	BL	NA	NA	2022-3-22
10	White nonwovens	BL	BL	BL	BL	BL	BL	2022-3-22
11	Silvery color metal pin	BL	BL	BL	**X**	NA	NA	2022-3-22
12	Transparent/black plastic shell	BL	BL	BL	BL	BL	BL	2022-3-22
13	Silvery color metal with black plating	BL	BL	BL	BL	NA	NA	2022-3-22
14	White soft plastic	BL	BL	BL	BL	BL	BL	2022-3-22
15	Black soft plastic cushion	BL	BL	BL	BL	BL	BL	2022-3-22
16	Orange red plastic button	BL	BL	BL	BL	BL	BL	2022-3-22
17	Silvery color screw	BL	BL	BL	BL	BL	BL	2022-3-22
18	Transparent plastic frame	BL	BL	BL	BL	BL	BL	2022-3-22
19	Translucent soft plastic gasket	BL	BL	BL	BL	BL	BL	2022-3-22
20	Silvery color magnet	BL	BL	BL	BL	NA	NA	2022-3-22

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Spec. No.	Specimen Description:	Results						Date of sample submission /Resubmission
		Pb	Cd	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
21	Golden metal shell	BL	BL	BL	BL	NA	NA	2022-3-22
22	Golden metal contactor	BL	BL	BL	BL	NA	NA	2022-3-22
23	Silvery color metal with golden plating	BL	BL	BL	X	NA	NA	2022-3-22
24	Solder	BL	BL	BL	BL	NA	NA	2022-3-22
25	Black plastic with multicolor printing	BL	BL	BL	BL	BL	BL	2022-3-22
26	Black adhesive foam	BL	BL	BL	BL	BL	BL	2022-3-22
27	Red adhesive plastic tape	BL	BL	BL	BL	BL	BL	2022-3-22
28	Black adhesive plastic tape	BL	BL	BL	BL	BL	BL	2022-3-22
29	Light brown adhesive plastic tape	BL	BL	BL	BL	BL	BL	2022-3-22
30	Red adhesive paper	BL	BL	BL	BL	BL	BL	2022-3-22
31	Dark cyan adhesive paper	BL	BL	BL	BL	BL	BL	2022-3-22
32	Red soft plastic jacket	BL	BL	BL	BL	BL	BL	2022-3-22
33	Black soft plastic jacket	BL	BL	BL	BL	BL	BL	2022-3-22
34	Silvery color metal wire	BL	BL	BL	BL	NA	NA	2022-3-22
35	Beige plastic switch button	BL	BL	BL	BL	BL	BL	2022-3-22
36	Silvery color metal switch shell	BL	BL	BL	X	NA	NA	2022-3-22
37	Beige plastic switch bottom	BL	BL	BL	BL	BL	BL	2022-3-22
38	Silvery color metal switch contactor	BL	BL	BL	BL	NA	NA	2022-3-22
39	Black PCB	BL	BL	BL	BL	X	X	2022-3-22
40	Solder	BL	BL	BL	BL	NA	NA	2022-3-22
41	Black resistor with white printing	BL	BL	BL	BL	BL	BL	2022-3-22

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Spec. No.	Specimen Description:	Results						Date of sample submission /Resubmission
		Pb	Cd	Hg	Cr▼	Br▼		
						PBBs	PBDEs	
42	Black IC	BL	BL	BL	BL	BL	BL	2022-3-22
43	Black resistor	BL	BL	BL	BL	BL	BL	2022-3-22
44	Brown capacitor	BL	BL	BL	BL	BL	BL	2022-3-22
45	Black triode	BL	BL	BL	BL	BL	BL	2022-3-22
46	Silvery color metal	BL	BL	BL	X	NA	NA	2022-3-22
47	Silvery color metal with golden plating	BL	BL	BL	BL	NA	NA	2022-3-22
48	Black plastic	BL	BL	BL	BL	BL	BL	2022-3-22
49	Black PCB	BL	BL	BL	BL	X	X	2022-3-22
50	Solder	BL	BL	BL	BL	NA	NA	2022-3-22
51	Transparent LED	BL	BL	BL	BL	BL	BL	2022-3-22
52	Bright silvery color metal	BL	BL	BL	BL	NA	NA	2022-3-22
53	lightgrey translucent plastic	BL	BL	BL	BL	BL	BL	2022-4-11
54	Black plastic with green/white printing	BL	BL	BL	BL	BL	BL	2022-4-11
55	Black plastic with blue/white printing	BL	BL	BL	BL	BL	BL	2022-4-11
56	Black plastic with olive/white printing	BL	BL	BL	BL	BL	BL	2022-4-11
57	Black plastic with purple/white printing	BL	BL	BL	BL	BL	BL	2022-4-11
58	Silvery color metal with green plating	BL	BL	BL	BL	NA	NA	2022-4-11
59	Silvery color metal with blue plating	BL	BL	BL	BL	NA	NA	2022-4-11
60	Silvery color metal with darkgolden plating	BL	BL	BL	BL	NA	NA	2022-4-11
61	Silvery color metal with purple plating	BL	BL	BL	BL	NA	NA	2022-4-11

2. Test result for Chemical Confirmation

(1) The test results of Hexavalent Chromium (Cr (VI))

With reference to IEC 62321-7-1:2015, by visible spectrophotometer (Vis)

Item	Unit	MDL	Results				Limit
			11	23	36	46	
Hexavalent Chromium (Cr (VI)) #	ug/cm^2	0.10	ND	ND	ND	ND	-

(2) The test results of PBBs & PBDEs

With reference to IEC 62321-6:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

Item	Unit	MDL	Results		Limit
			39	49	
Polybrominated Biphenyls (PBBs)					
Monobromobiphenyl	mg/kg	5	ND	ND	
Dibromobiphenyl	mg/kg	5	ND	ND	
Tribromobiphenyl	mg/kg	5	ND	ND	
Tetrabromobiphenyl	mg/kg	5	ND	ND	
Pentabromobiphenyl	mg/kg	5	ND	ND	
Hexabromobiphenyl	mg/kg	5	ND	ND	
Heptabromobiphenyl	mg/kg	5	ND	ND	
Octabromobiphenyl	mg/kg	5	ND	ND	
Nonabromodiphenyl	mg/kg	5	ND	ND	
Decabromodiphenyl	mg/kg	5	ND	ND	
Total content	mg/kg	/	ND	ND	1000
Polybrominated Diphenyl Ethers (PBDEs)					
Monobromodiphenyl ether	mg/kg	5	ND	ND	
Dibromodiphenyl ether	mg/kg	5	ND	ND	
Tribromodiphenyl ether	mg/kg	5	ND	ND	
Tetrabromodiphenyl ether	mg/kg	5	ND	ND	
Pentabromodiphenyl ether	mg/kg	5	ND	ND	
Hexabromodiphenyl ether	mg/kg	5	ND	ND	
Heptabromodiphenyl ether	mg/kg	5	ND	ND	
Octabromodiphenyl ether	mg/kg	5	ND	ND	
Nonabromodiphenyl ether	mg/kg	5	ND	ND	
Decabromodiphenyl ether	mg/kg	5	ND	ND	
Total content	mg/kg	/	ND	ND	1000

(3) The test results of DBP, BBP, DEHP and DIBP

With reference to IEC 62321-8:2017, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

Item	Unit	MDL	Results		Limit
			1+2+12+16+18	3+7+15+25+26	
Dibuyl Phthalate (DBP)	mg/kg	250	ND	ND	1000
Benzylbutyl Phthalate (BBP)	mg/kg	250	ND	ND	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	mg/kg	250	ND	ND	1000
Diispbutyl phthalate (DIBP)	mg/kg	250	ND	ND	1000

Item	Unit	MDL	Results		Limit
			5+10+14+19+48	27+28+29+30+31	
Dibuyl Phthalate (DBP)	mg/kg	250	ND	ND	1000
Benzylbutyl Phthalate (BBP)	mg/kg	250	ND	ND	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	mg/kg	250	ND	ND	1000
Diispbutyl phthalate (DIBP)	mg/kg	250	ND	ND	1000

Item	Unit	MDL	Results		Limit
			32+33	35+37+39+49+51	
Dibuyl Phthalate (DBP)	mg/kg	250	380	ND	1000
Benzylbutyl Phthalate (BBP)	mg/kg	250	ND	ND	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	mg/kg	250	ND	ND	1000
Diispbutyl phthalate (DIBP)	mg/kg	250	ND	ND	1000

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Item	Unit	MDL	Results	Limit
			53+54+55+56+57	
Dibuyl Phthalate (DBP)	mg/kg	250	ND	1000
Benzylbutyl Phthalate (BBP)	mg/kg	250	ND	1000
Bis(2-ethylhexyl) Phthalate (DEHP)	mg/kg	250	ND	1000
Diispbutyl phthalate (DIBP)	mg/kg	250	ND	1000

Note:

(1) Results were obtained by XRF for primary screening, and further chemical testing by ICP (for Cd, Pb, Hg), 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.

Element	Unit	Non-metal	Metal	Composite Material
Cd	mg/kg	BL≤70-3σ<X <130+3σ≤OL	BL≤70-3σ<X <130+3σ≤OL	BL≤50-3σ<X <150+3σ≤OL
Pb	mg/kg	BL≤700-3σ<X <1300+3σ≤OL	BL≤700-3σ<X <1300+3σ≤OL	BL≤500-3σ<X <1500+3σ≤OL
Hg	mg/kg	BL≤700-3σ<X <1300+3σ≤OL	BL≤700-3σ<X <1300+3σ≤OL	BL≤500-3σ<X <1500+3σ≤OL
Cr	mg/kg	BL≤700-3σ<X	BL≤700-3σ<X	BL≤500-3σ<X
Br	mg/kg	BL≤300-3σ<X	N/A	BL≤250-3σ<X

(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) 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 is required to obtain quantitative data.

(4) The maximum permissible limit is quoted from the document 2015/863/EC amending RoHS directive 2011/65/EU:

(5) ▼=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

(6) BL =Below Limit
OL =Over Limit
X =Inconclusive
3σ= The reproducibility of analytical instruments
N/A= Not applicable
MDL = Method Detection Limit
mg/kg = ppm=parts per million
ND=Not Detected (<MDL or LOQ)

(7) # = a. The sample is positive for Cr (VI) if the Cr (VI) concentration is greater than 0.13ug/cm^2. The sample coating is considered to contain Cr (VI)
b. The sample is negative for Cr (VI) if Cr (VI) is ND (concentration less than 0.10ug/cm^2). The sample coating is considered a non- Cr (VI) based coating
c. The result between 0.10μg/cm^2 and 0.13μg/cm^2 is considered to be inconclusive, unavoidable coating variations may influence the determination

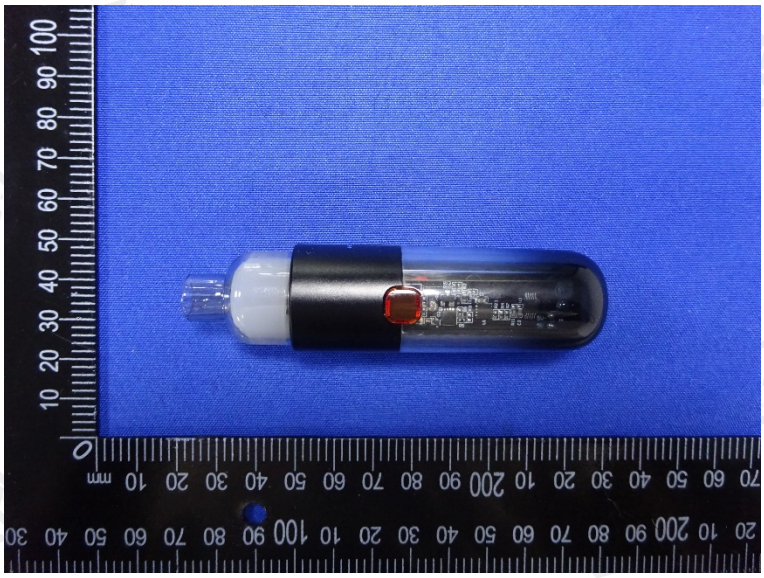
(8) Information on storage conditions and production date of the tested samples is unavailable and this Cr (VI) results represent status of the sample at the time of testing

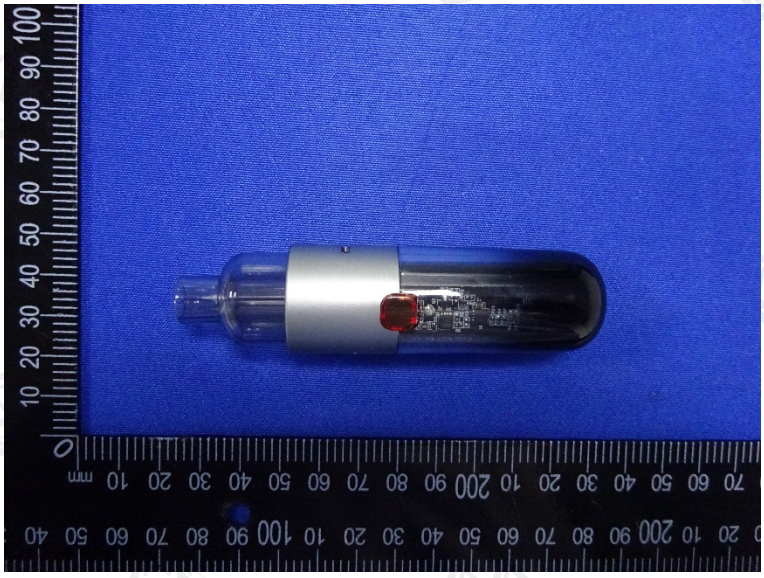
(9) According to the client's statement,
①RoHS Exemption: 6(a)-I an alloying element in steel for machining purposes containing up to 0.35 % lead by weight and in galvanized steel containing up to 0.20 % lead by weight.
②RoHS Exemption: 6(b)-II Aluminum alloy for machining purposes containing up to 0.4% lead by weight.
③RoHS Exemption: 6(c), Copper alloy containing up to 4 % lead by weight.
④RoHS Exemption: 7(c)-I, Electrical and electronic components containing lead in a glass or ceramic other than dielectric ceramic in capacitors, e.g., piezoelectronic devices, or in a glass or ceramic matrix compound

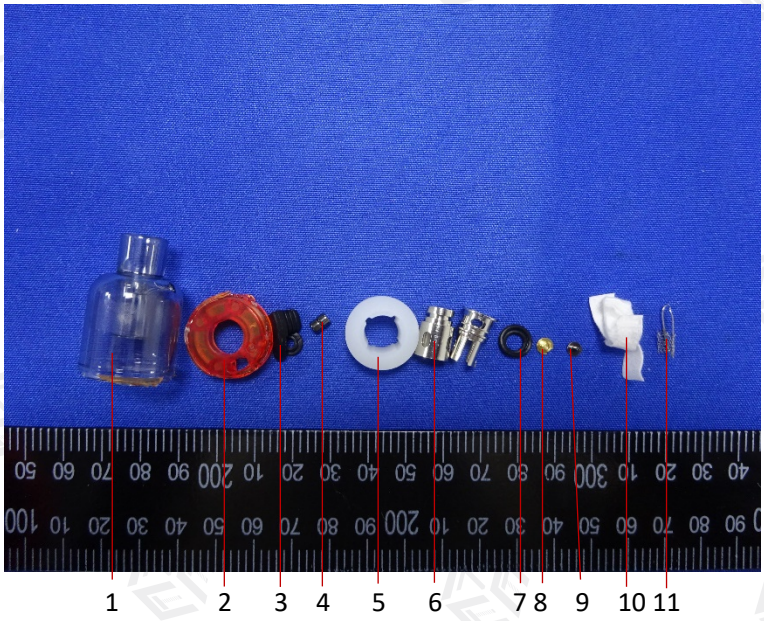
(10) (R)=Re-submitted sample.

(11) The test report is only used for the purpose of customer research, teaching, internal quality control, product development and other purposes, and is for internal reference only.

Photo(s) of the sample(s)



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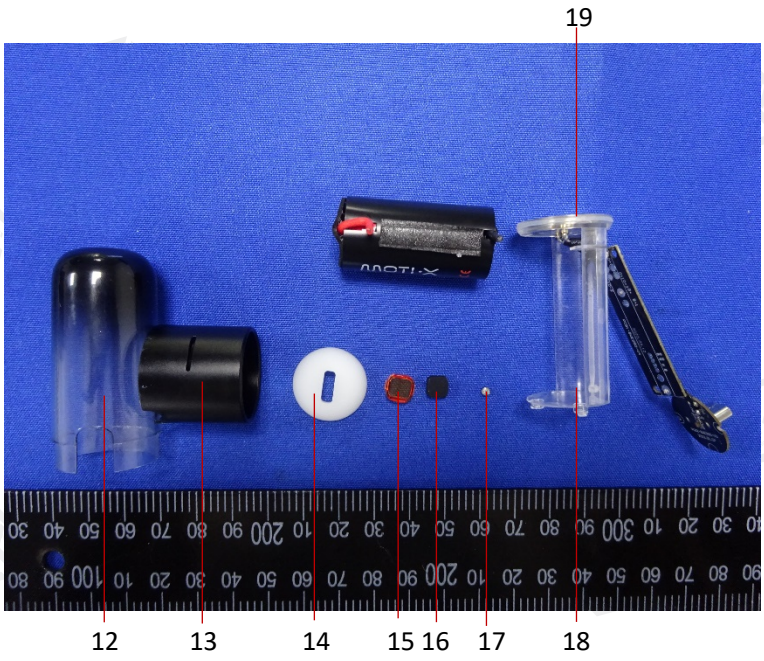
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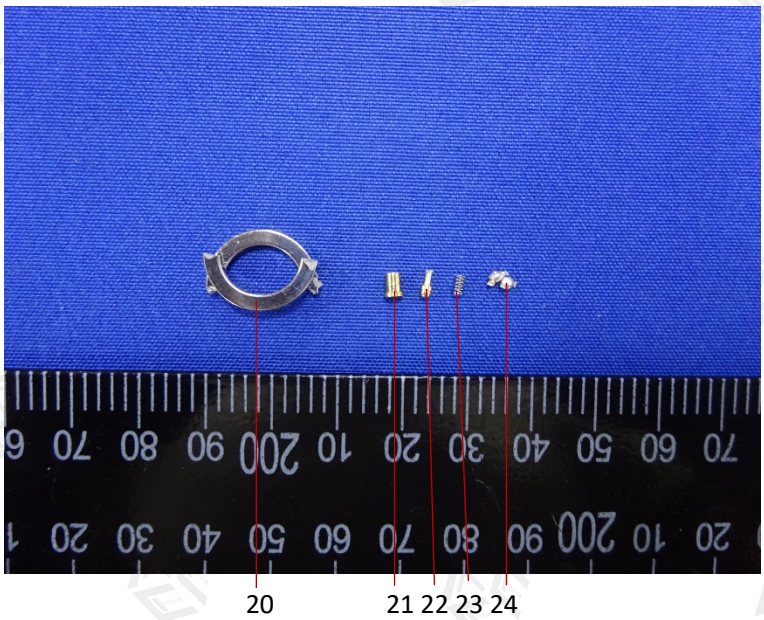
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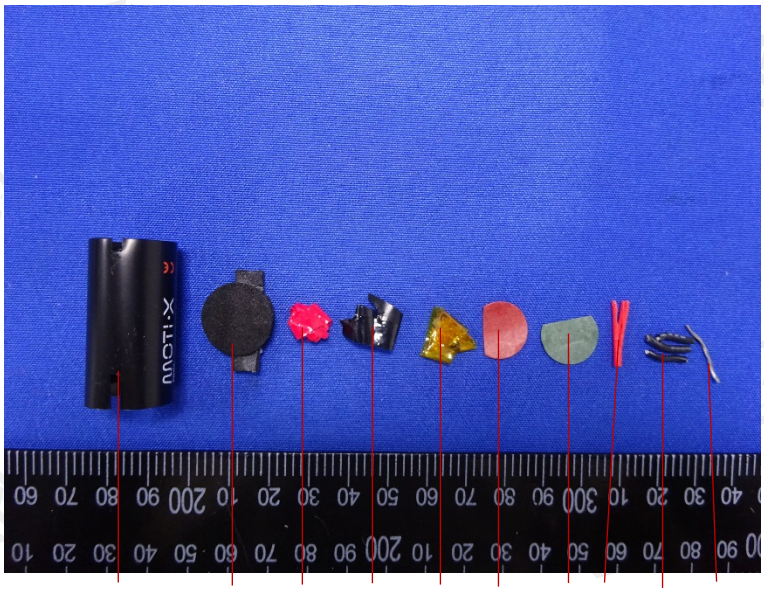
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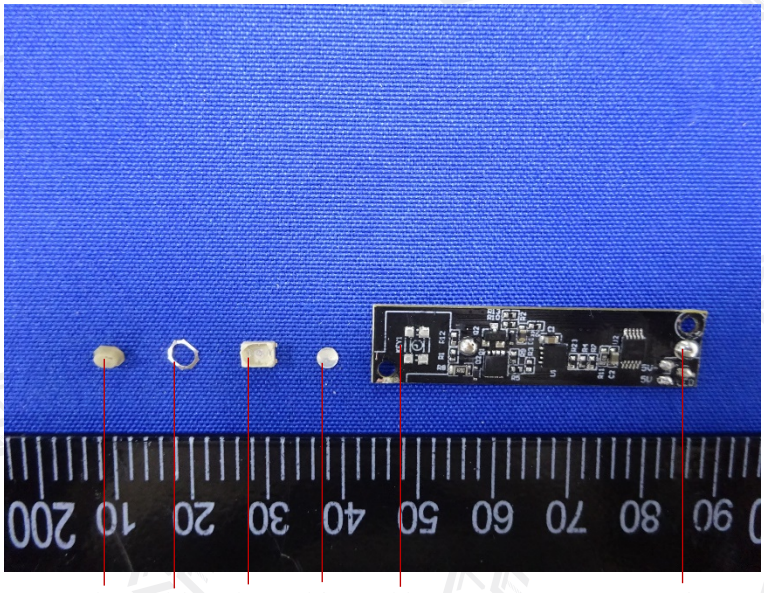
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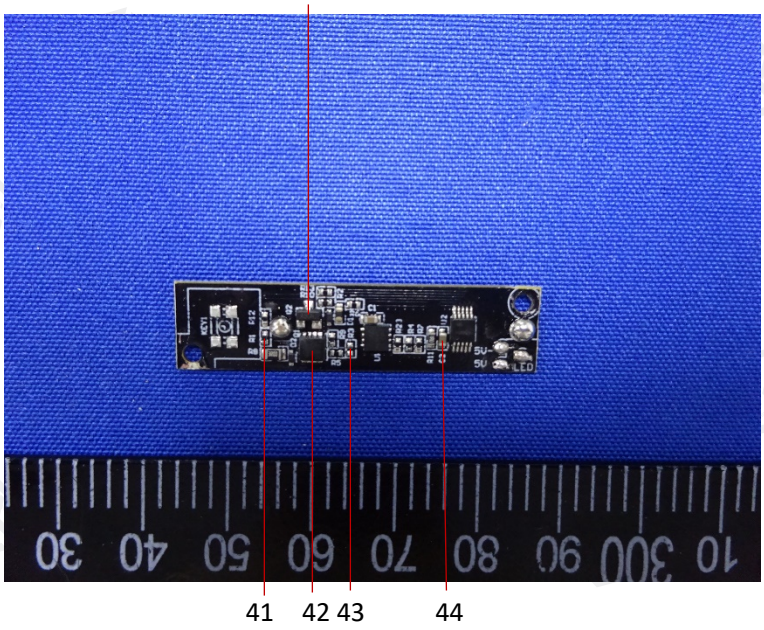
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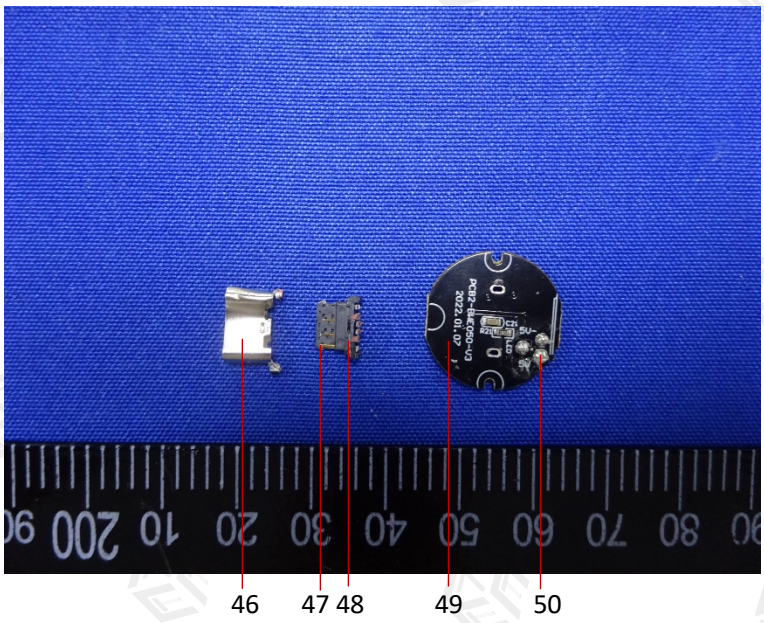
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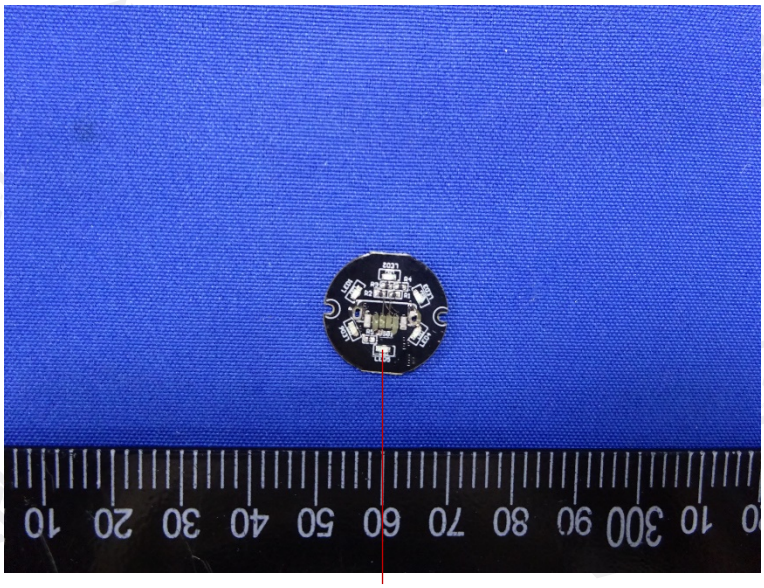

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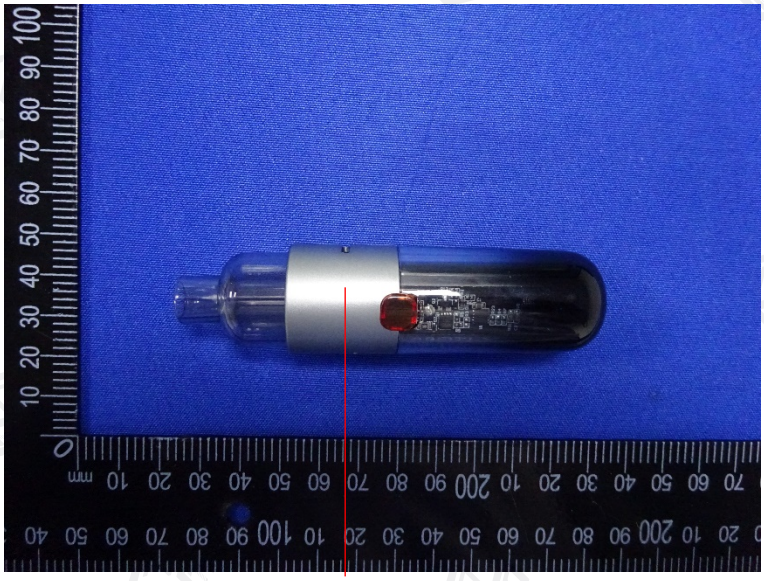

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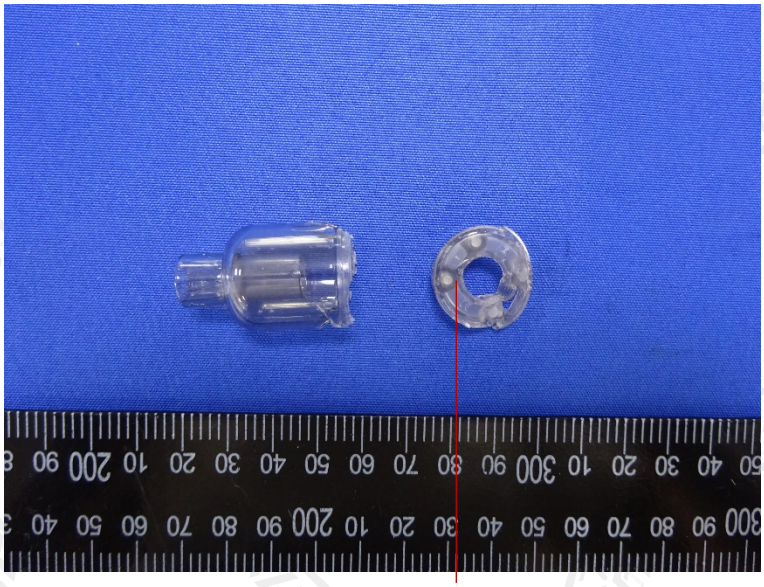

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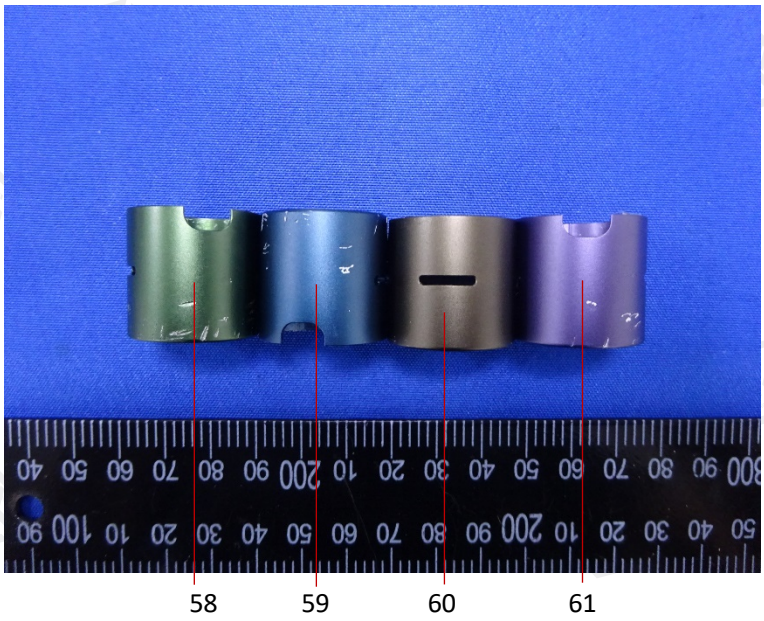

***** End of Report *****

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