



中国认可
国际互认
检测
TESTING
CNAS L3428

Test Report

Date : 2020-03-30

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No. : DM20030131R1

- Applicant** : MGL Global Solutions Limited
72 Puxing East Road, Qingxi, Dongguan, Guangdong, 523649,
China
- Description of Samples** : One item of submitted sample(s) said to be :
Item name: Infrared Thermometer (see the attached photo)
Style/Item No.:MS6590P, MS6591P, MS6592P, MS6595P,
MS6596P, MS6561, MS6522A, MS6522A, MS6522B,
MS6522C, MS6530T, MS6541, MS6531A, MS6531B,
MS6531C, MS6541
Supplier: MGL Global Solutions (China) Company Limited
- Date Samples Received** : 2020-03-19
- Date Tested** : 2020-03-19 to 2020-03-25
- Investigation Requested** : European Union's Directive 2011/65/EU and (EU) 2015/863:
Restrictive use of certain hazardous substance(ROHS)
- Heavy metals contents
- Phthalates content
- Polybrominated biphenyls (PBBs) and Polybrominated
diphenylethers (PBDEs) contents
- Conclusion(s)** : European Union's Directive 2011/65/EU and (EU) 2015/863
The partial submitted sample(s) **complied** with the test requirement.

Remark: This test report DM20030131R1 supersedes our previous test report DM20030131 issued on 2020-03-27 which is hereby deemed null and



Shanny Huang

HUANG Qi-yin, Shanny
Authorized Signatory

STC (Dongguan) Company Limited

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Test Results:

1. Restrictive use of certain hazardous substances (RoHS) *³

- 1.1 Ref.: European Union's Directive 2011/65/EU and (EU)2015 /863
Method: IEC 62321-1: 2013
Determined by : High Definition X-Ray Fluorescence

No	Parts description	Pb	Cd	Cr	Hg	Br	Conclusion
1	Thermometer : white plastic with black/red printing	NEG	NEG	NEG	NEG	NEG	Fulfilled
2	Key : grey/yellow/black soft plastic with black/white printing	NEG	NEG	NEG	NEG	NEG	Fulfilled
3	Film of Screen : transparent soft plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
4	Screen : transparent plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
5	Inside of screen : grey/black soft plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
6	Inside of screen : silver soft plastic with adhesive	NEG	NEG	NEG	NEG	NEG	Fulfilled
7	Inside of screen : white soft plastic with adhesive	NEG	NEG	NEG	NEG	NEG	Fulfilled
8	Film of screen frame : silver soft plastic with adhesive	NEG	NEG	NEG	NEG	NEG	Fulfilled
9	Screen frame : transparent plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
10	Inside of button : beige plastic	NEG	NEG	NEG	NEG	* ¹	Fulfilled
11	Cover/steady of sensor : grey black plastic	NEG	NEG	NEG	NEG	* ¹	Fulfilled
12	Inside of sensor : transparent white soft plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
16	Wire : yellow soft plastic with black printing	NEG	NEG	NEG	NEG	NEG	Fulfilled
17	Wire : orange red soft plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
18	LED : yellow plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
19	Base of LED : grey plastic with white coating	NEG	NEG	NEG	NEG	* ¹	Fulfilled
21	BUZ of PCB : black plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
22	SCAN of PCB : black plastic	NEG	NEG	NEG	NEG	165	Fulfilled
23	J3 of PCB : white plastic	NEG	NEG	NEG	NEG	NEG	Fulfilled
24	PCB : transparent white plastic	NEG	NEG	NEG	NEG	* ¹	Fulfilled
25	Connect of Rivet : dark red paper	NEG	NEG	NEG	NEG	NEG	Fulfilled
26	Screw/Small screw : silver metal with black coating	NEG	NEG	418	NEG	NA	Fulfilled
27	Cover of Screw : copper metal	*	NEG	NEG	NEG	NA	Fulfilled
28	Screw : silver metal	NEG	NEG	184	NEG	NA	Fulfilled
29	Rivet : silver metal	NEG	NEG	NEG	NEG	NA	Fulfilled
30	Inside of screen : transparent black glass	NEG	NEG	NEG	NEG	NA	Fulfilled

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No	Parts description	Pb	Cd	Cr	Hg	Br	Conclusion
31	Cover of sensor : silver metal with black coating	NEG	NEG	361	NEG	NA	Fulfilled
32	Sensor : silver/copper metal	NEG	NEG	NEG	NEG	NA	Fulfilled
33	Wire : silver metal	NEG	NEG	NEG	NEG	NA	Fulfilled
34	Magnet of BUZ : black ceramic	NEG	NEG	NEG	NEG	NA	Fulfilled
35	Inside of BUZ : copper metal	NEG	NEG	NEG	NEG	NA	Fulfilled
36	Base of BUZ/Circle : silver metal	NEG	NEG	350	NEG	NA	Fulfilled
37	Square of SCAN : silver metal	NEG	NEG	NEG	NEG	NA	Fulfilled
38	Circle of SCAN : silver metal	NEG	NEG	*	NEG	NA	Fulfilled
39	R12 : silver metal with multicolor printing	NEG	NEG	*	NEG	NA	Fulfilled
40	Resistance : black ceramic	*	NEG	*	NEG	NA	Fulfilled
41	Capacitance : brown ceramic	171	NEG	NEG	NEG	NA	Fulfilled
42	U4 : black ceramic	371	NEG	NEG	NEG	NA	Fulfilled
43	Film of small PCB : copper metal	119	NEG	NEG	NEG	NA	Fulfilled
44	IC : black ceramic	NEG	NEG	NEG	NEG	NA	Fulfilled
45	Q1/Q2 : black ceramic	*	NEG	NEG	NEG	NA	Fulfilled
46	C5/C6 : light yellow/dark red ceramic	174	NEG	513	NEG	NA	Fulfilled
47	Solder : silver metal	*2	NEG	NEG	NEG	NA	Fulfilled
48	PCB : green/white coating	NEG	NEG	NEG	NEG	*1	Fulfilled

Remark 1	In reference to European Unions Directive 2002/95/EC and 2010/65/EU limit for Cadmium is 100ppm, each limit for lead, Mercury, Hexavalent Chromium, Polybrominated biphenyls (PBBs) and Polybrominated diphenyl ethers (PBDEs) is 1000ppm
Remark 2	NEG-stands for below screening limit(Detectable Limit for chromium less than 15ppm for Mercury less than 4ppm, for others less than 5ppm) N.A.-stands for not applicable Result(s) report in ppm.
Remark 3	As from the technology of XRF screening, both Chromium and Bromine content are represented in a total level within their respective compound family.
Remark 4	For individual components, screening tests are performed separately for its integrated composition homogenous material. But for easy reference, it is represented as one unit under the above parts description column.
Remark 5	The sample was tested by screening method on behalf of the applicant as non-homogenous parts in one testing. The result in this report represents average of the whole sample. The result may deviate from the real data when tested in homogenous mode as specified in ROHS directive.
* =	Please see section 1.2 of this report for details.
*1 =	Please see section 1.4 of this report for details.
*2 =	According to the declaration from client, the source of lead in specimen could be from the high melting temperature type solder, while lead in high melting temperature type solders is exempted by RoHS regulatory (2011/65/EC).

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*³— As requested by the applicant, Restrictive use of certain hazardous substances (RoHS) test was conducted only on components listed in this report. Other components were not tested.

1.2 Heavy metals contents

Ref.: European Union's Directive 2011/65/EU and (EU)2015 /863.

Method: IEC 62321-4: 2013+A1:2017& IEC 62321-5:2013 and IEC 62321-7-2:2017

Determined by: 1.Inductively Coupled Argon Plasma Atomic Emission Spectrophotometer
for Lead, Mercury, Cadmium, Chromium
2.UV/Vis spectrometry for Hexavalent chromium

Parameters	Result (%)			MDL (%)	Permitted Level (%)
	(27)	(38)	(39)		
Lead	1.96* ⁴	--	--	0.0005	0.1
Mercury	--	--	--	0.0002	0.1
Cadmium	--	--	--	0.0005	0.01
Hexavalent Chromium	--	ND	ND	0.0005	0.1

Parameters	Result (%)		MDL (%)	Permitted Level (%)
	(40)	(45)		
Lead	5.97* ⁵	1.52* ⁵	0.0005	0.1
Mercury	--	--	0.0002	0.1
Cadmium	--	--	0.0005	0.01
Hexavalent Chromium	ND	--	0.0005	0.1

- Note(s):
- (1) ND = Not detected (Below MDL)
 - (2) MDL =Method Detection limit
 - (3) % = percentage by weight
 - (4) *⁴=The source of lead in sample could be from alloying element,while lead in steel containing up to 0.35% by weight;lead in aluminium containing up to 0.4% by weight;lead in copper alloy up to 4% by weight,which are exempted by ROHS Directive (2011/65/EC).
 - (5) *⁵= The source of lead in sample could be from ceramic parts or glass parts,while lead in electronic parts and glass in cathode ray tubes,electronic components and fluorescent tubes are exempted by ROHS Directive(2011/65/EC).

1.3 Phthalates content*⁶

Ref.: European Union's Directive 2011/65/EU and (EU)2015/863.

Method: IEC 62321-8:2017

Determined by: Gas Chromatography Mass spectrometer

Parameters	Result(%)			MDL (%)	Permitted Level(%)
	(1)	(2)	(3+8+12)		
Bis(2-ethylhexyl)phthalate(DEHP)	ND	ND	ND	0.01	0.1
Butyl benzyl phthalate(BBP)	ND	ND	ND	0.01	0.1

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Parameters	Result(%)			MDL (%)	Permitted Level(%)
	(1)	(2)	(3+8+12)		
Dibutyl phthalate(DBP)	ND	ND	ND	0.01	0.1
Diisobutyl phthalate(DIBP)	ND	ND	ND	0.01	0.1

Parameters	Result(%)			MDL (%)	Permitted Level(%)
	(4+10+11)	(5+6+7)	(16+17)		
Bis(2-ethylhexyl)phthalate(DEHP)	ND	ND	ND	0.01	0.1
Butyl benzyl phthalate(BBP)	ND	ND	ND	0.01	0.1
Dibutyl phthalate(DBP)	ND	ND	ND	0.01	0.1
Diisobutyl phthalate(DIBP)	ND	ND	ND	0.01	0.1

Parameters	Result(%)		MDL (%)	Permitted Level(%)
	(24)	(48)		
Bis(2-ethylhexyl)phthalate(DEHP)	ND	ND	0.01	0.1
Butyl benzyl phthalate(BBP)	ND	ND	0.01	0.1
Dibutyl phthalate(DBP)	ND	ND	0.01	0.1
Diisobutyl phthalate(DIBP)	ND	ND	0.01	0.1

Note(s): (1) ND = Not detected (Below MDL)
 (2) MDL =Method Detection limit
 (3) % = percentage by weight
 (4) *6=As requested by the applicant, Phthalates content test was conducted only on components listed in this report. Other components were not tested.

1.4 Polybrominated biphenyls (PBBs) and Polybrominated diphenyl ethers (PBDEs) contents

Ref.: European Union's Directive 2011/65/EU and (EU)2015/863.

Method: IEC 62321-6:2015

Determined by: Gas Chromatography Mass spectrometer

Parameters	Result(%)			MDL(%)	Permitted Level(%)
	(10)	(11)	(19)		
Monobromobiphenyl	ND	ND	ND	0.003	--
Dibromobiphenyl	ND	ND	ND	0.003	--
Tribromobiphenyl	ND	ND	ND	0.003	--
Tetrabromobiphenyl	ND	ND	ND	0.003	--
Pentabromobiphenyl	ND	ND	ND	0.003	--
Hexabromobiphenyl	ND	ND	ND	0.003	--
Heptabromobiphenyl	ND	ND	ND	0.003	--
Octabromobiphenyl	ND	ND	ND	0.003	--
Nonabromobiphenyl	ND	ND	ND	0.003	--
Decabromobiphenyl	ND	ND	ND	0.003	--
Sum of PBBs	ND	ND	ND	0.003	0.1
Monobromodiphenyl ether	ND	ND	ND	0.003	--
Dibromodiphenyl ether	ND	ND	ND	0.003	--

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Parameters	Result(%)			MDL(%)	Permitted Level(%)
	(10)	(11)	(19)		
Tribromodiphenyl ether	ND	ND	ND	0.003	--
Tetrabromodiphenyl ether	ND	ND	ND	0.003	--
Pentabromodiphenyl ether	ND	ND	ND	0.003	--
Hexabromodiphenyl ether	ND	ND	ND	0.003	--
Heptabromodiphenyl ether	ND	ND	ND	0.003	--
Octabromodiphenyl ether	ND	ND	ND	0.003	--
Nonabromodiphenyl ether	ND	ND	ND	0.003	--
Decabromodiphenyl ether	ND	ND	ND	0.003	--
Sum of PBDEs	ND	ND	ND	0.003	0.1

Parameters	Result(%)		MDL(%)	Permitted Level(%)
	(24)	(48)		
Monobromobiphenyl	ND	ND	0.003	--
Dibromobiphenyl	ND	ND	0.003	--
Tribromobiphenyl	ND	ND	0.003	--
Tetrabromobiphenyl	ND	ND	0.003	--
Pentabromobiphenyl	ND	ND	0.003	--
Hexabromobiphenyl	ND	ND	0.003	--
Heptabromobiphenyl	ND	ND	0.003	--
Octabromobiphenyl	ND	ND	0.003	--
Nonabromobiphenyl	ND	ND	0.003	--
Decabromobiphenyl	ND	ND	0.003	--
Sum of PBBs	ND	ND	0.003	0.1
Monobromodiphenyl ether	ND	ND	0.003	--
Dibromodiphenyl ether	ND	ND	0.003	--
Tribromodiphenyl ether	ND	ND	0.003	--
Tetrabromodiphenyl ether	ND	ND	0.003	--
Pentabromodiphenyl ether	ND	ND	0.003	--
Hexabromodiphenyl ether	ND	ND	0.003	--
Heptabromodiphenyl ether	ND	ND	0.003	--
Octabromodiphenyl ether	ND	ND	0.003	--
Nonabromodiphenyl ether	ND	ND	0.003	--
Decabromodiphenyl ether	ND	ND	0.003	--
Sum of PBDEs	ND	ND	0.003	0.1

Note(s): (1) ND = Not detected (Below MDL)
(2) MDL =Method Detection limit
(3) % = percentage by weight

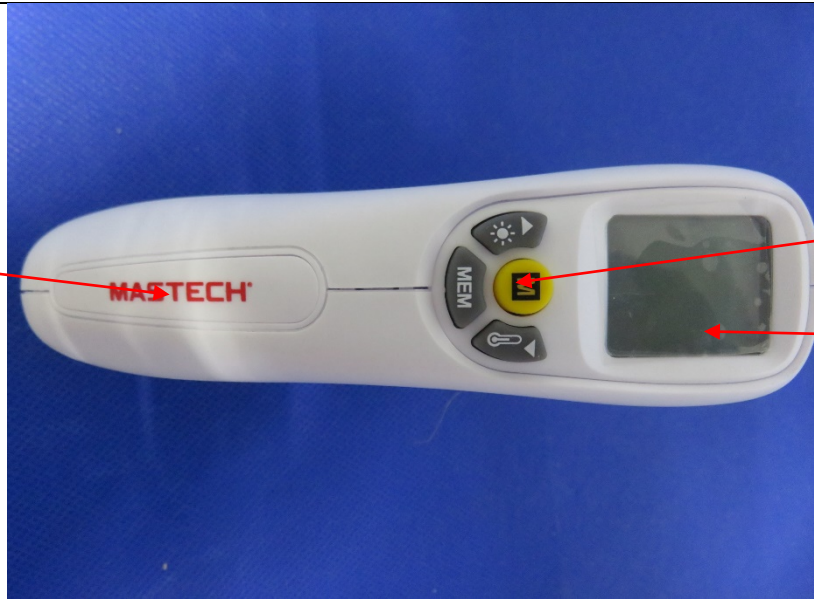

***** End of Test Report *****

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Product photographs

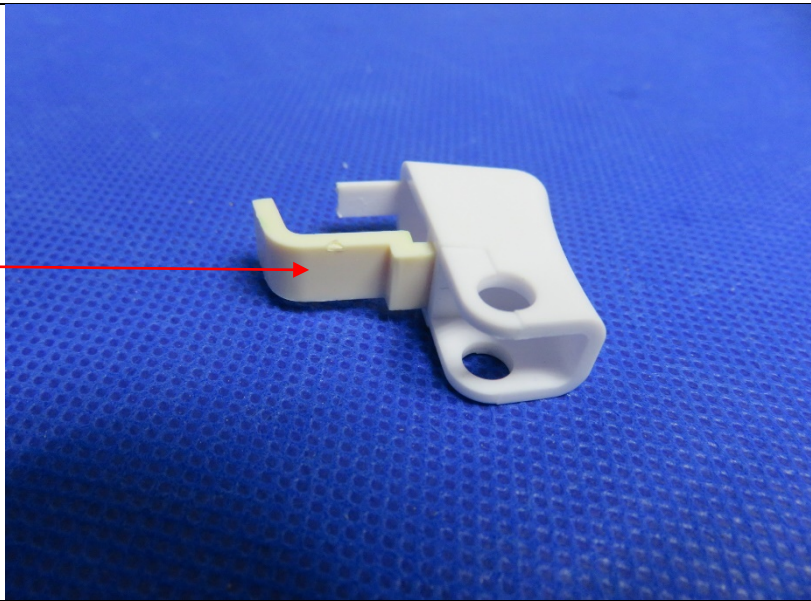

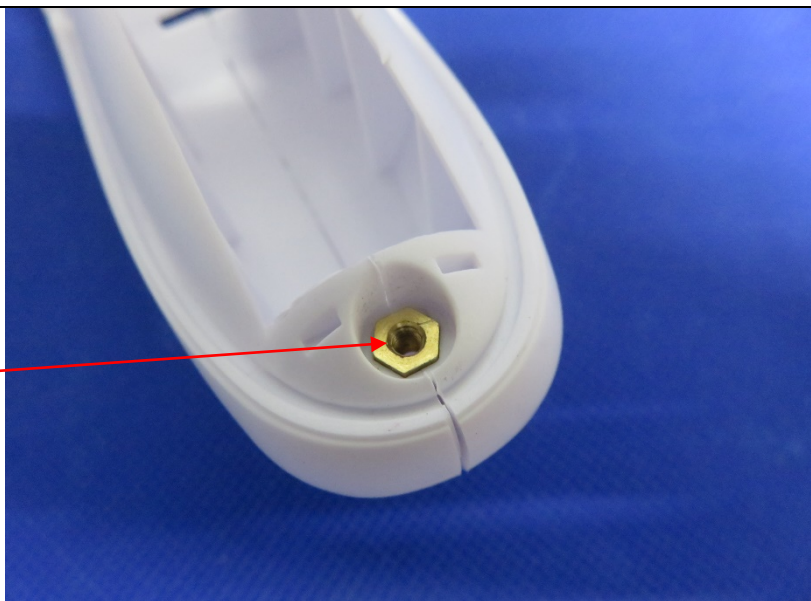
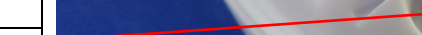
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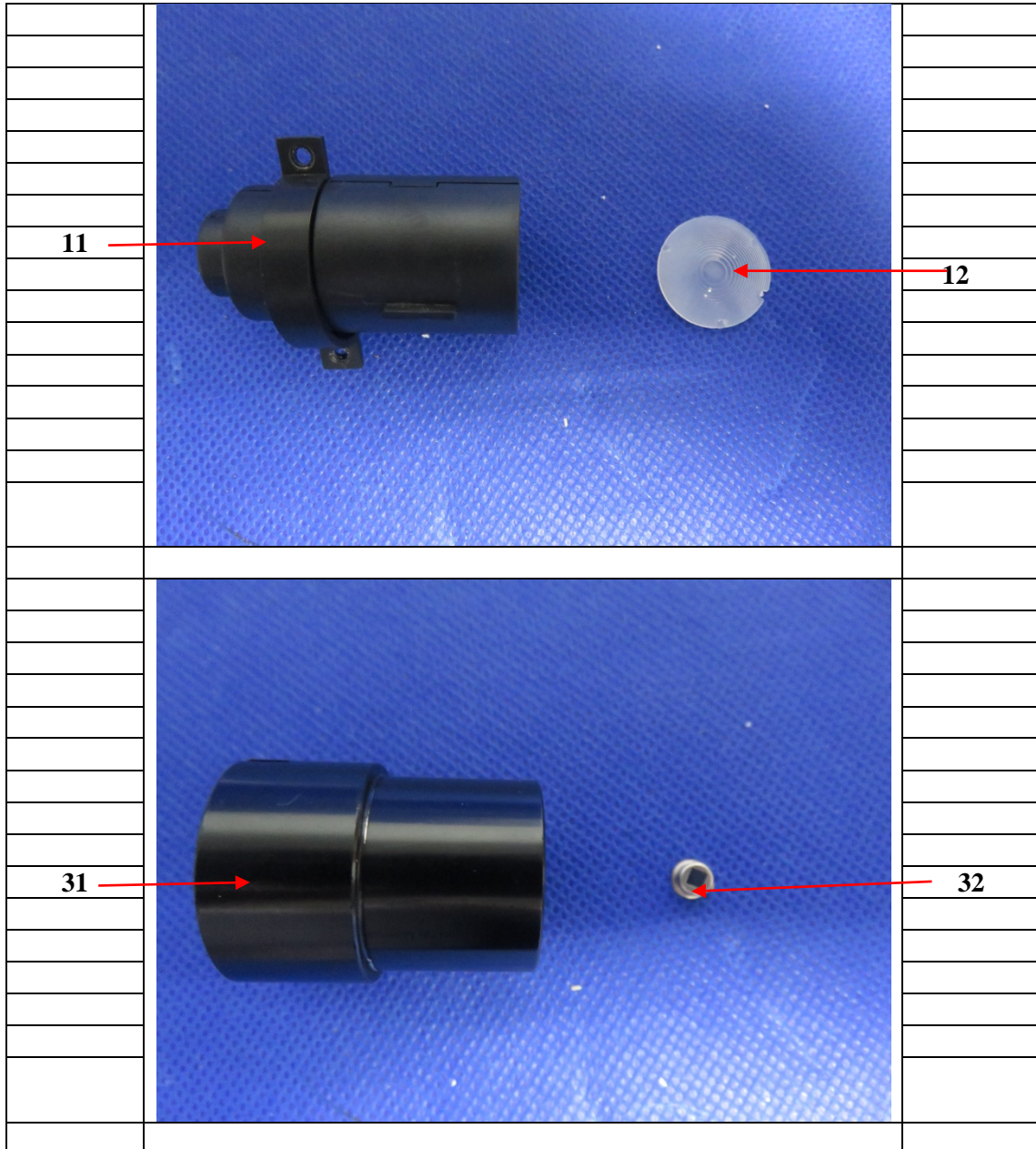
		
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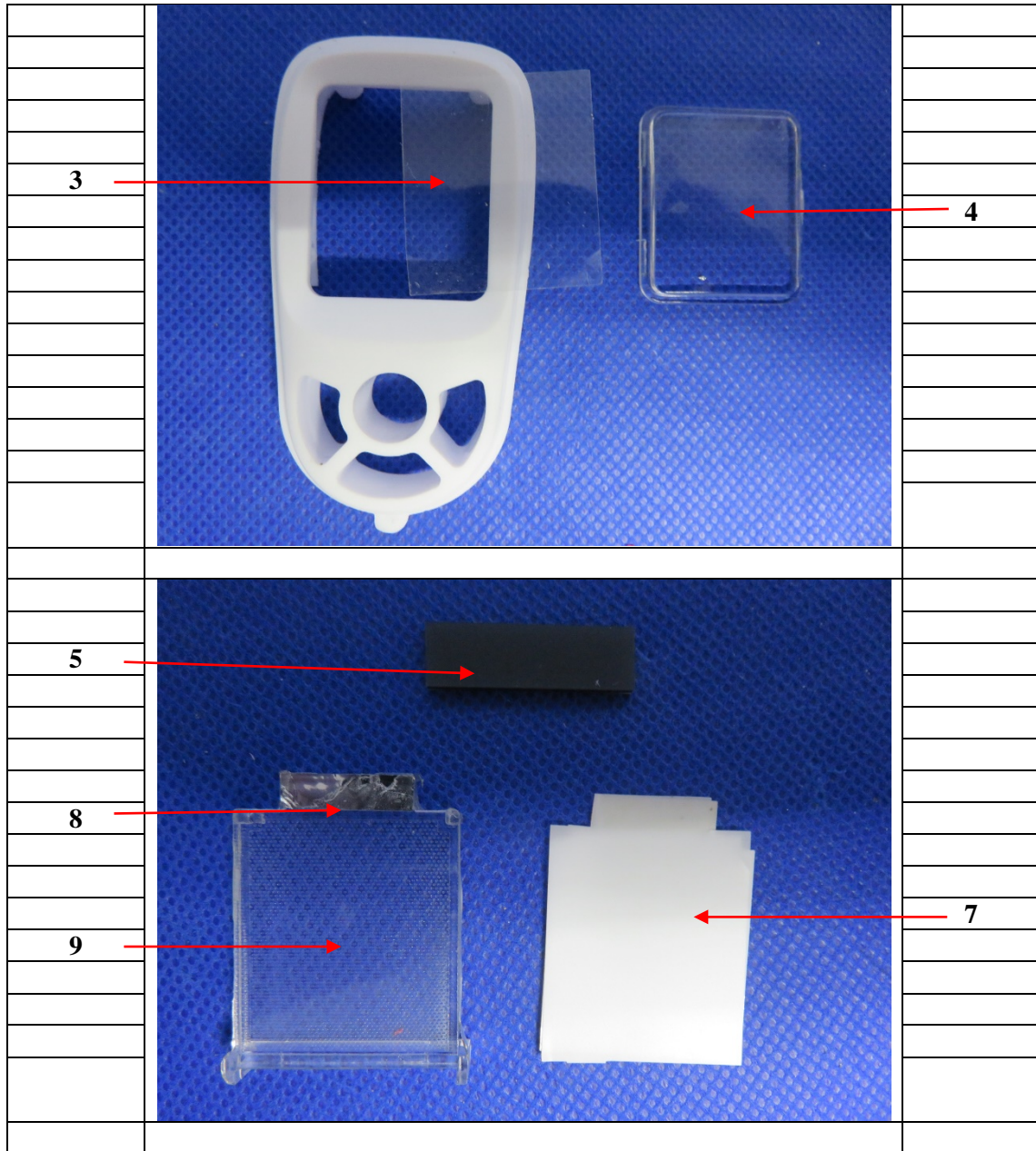


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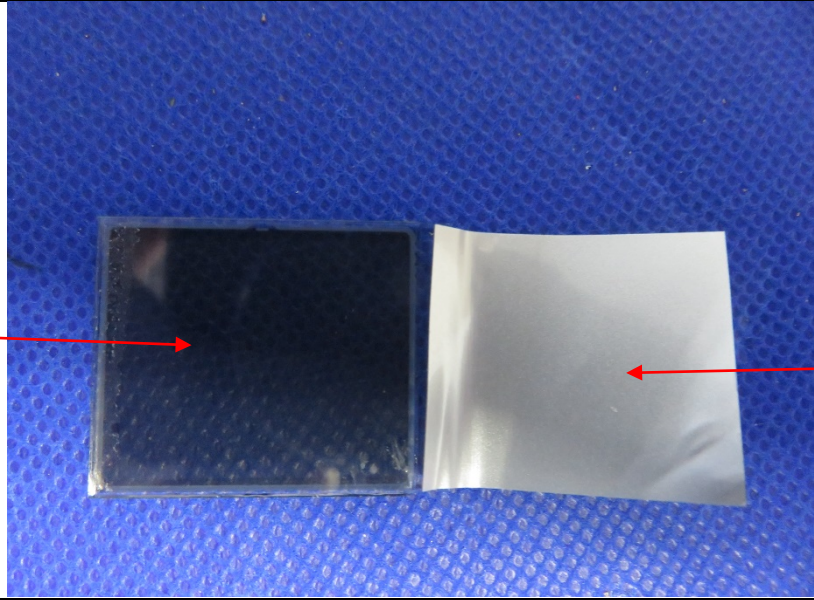






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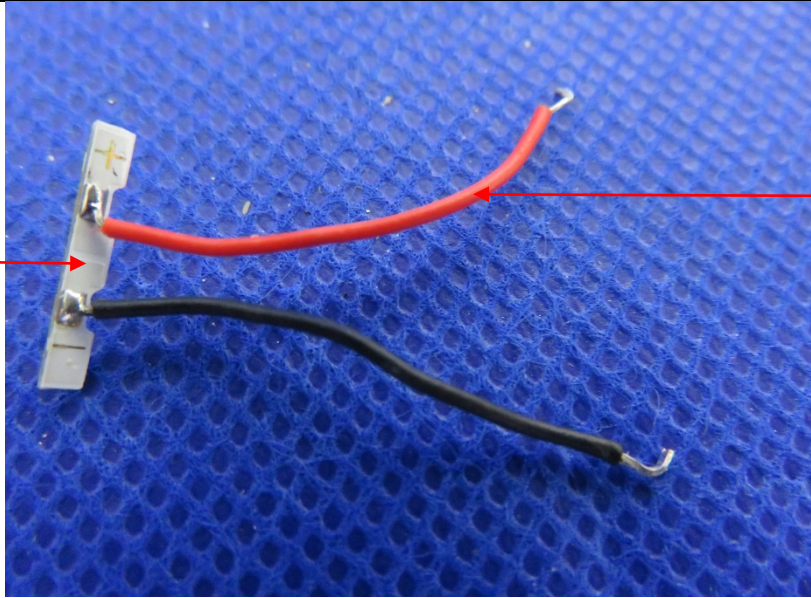
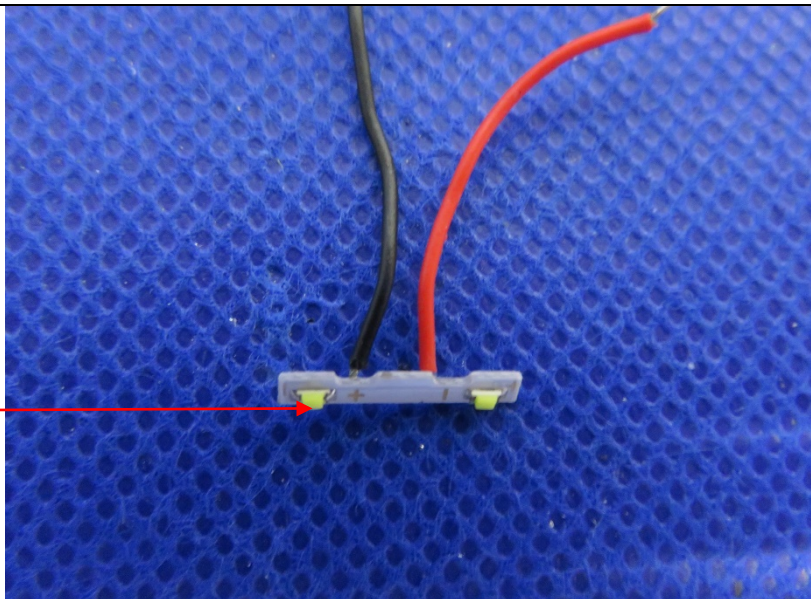
		
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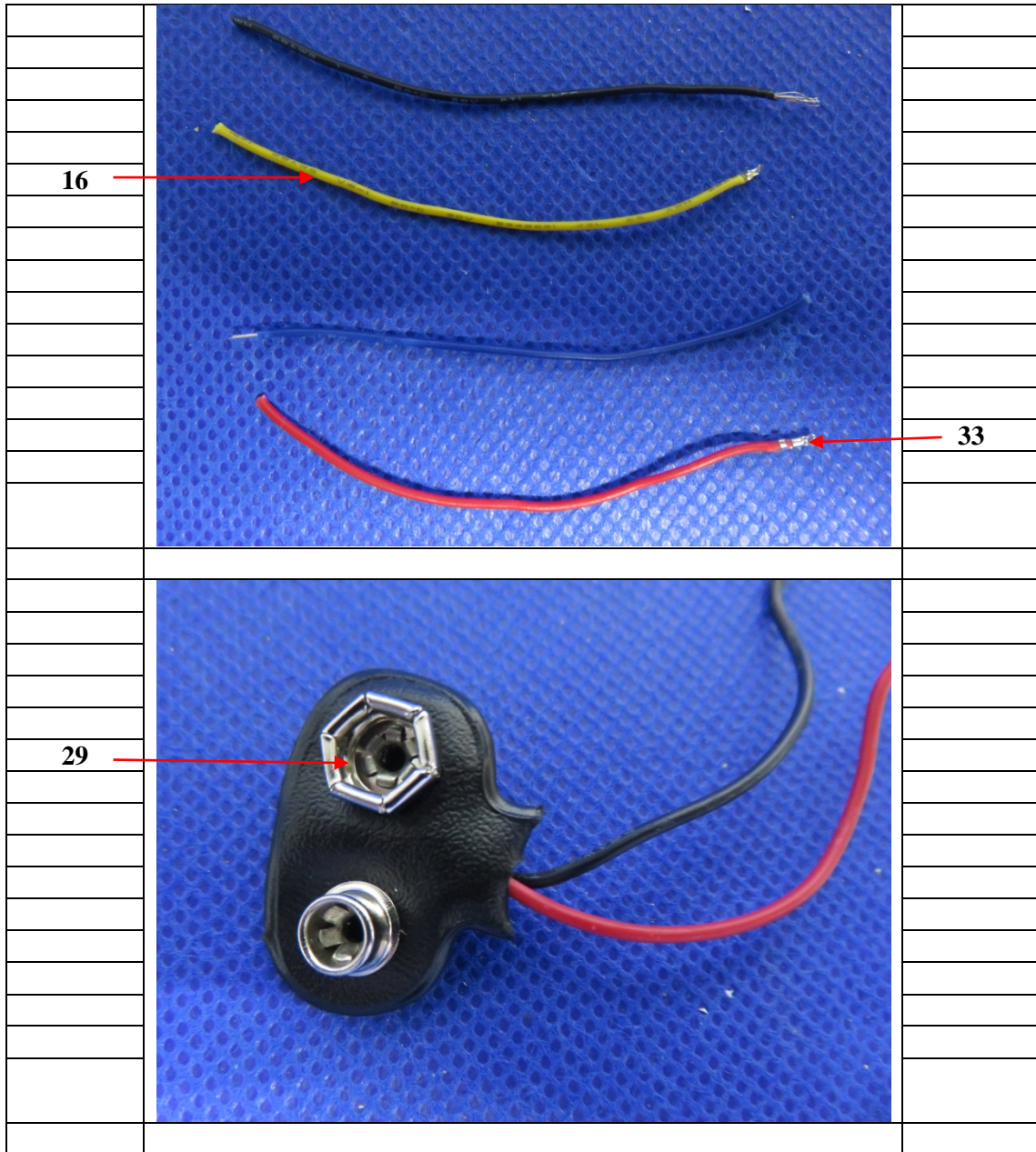
		
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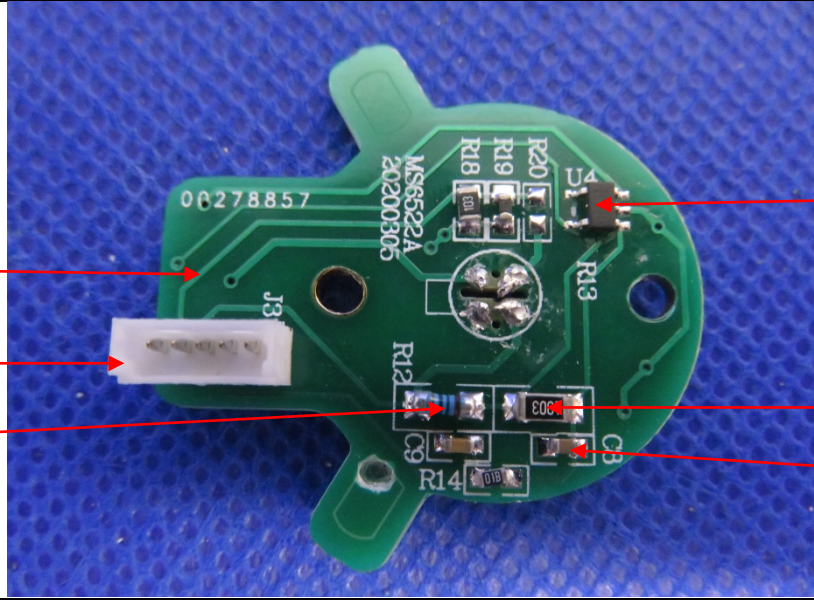
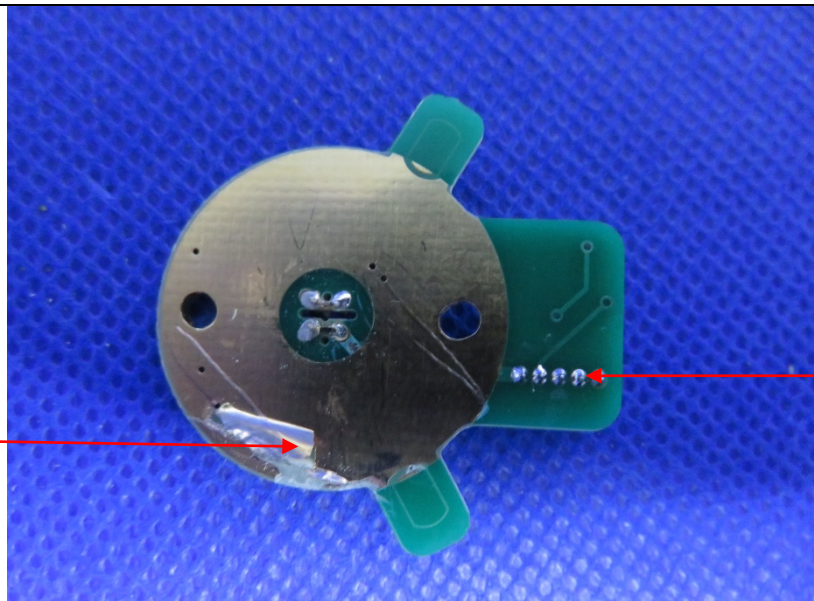


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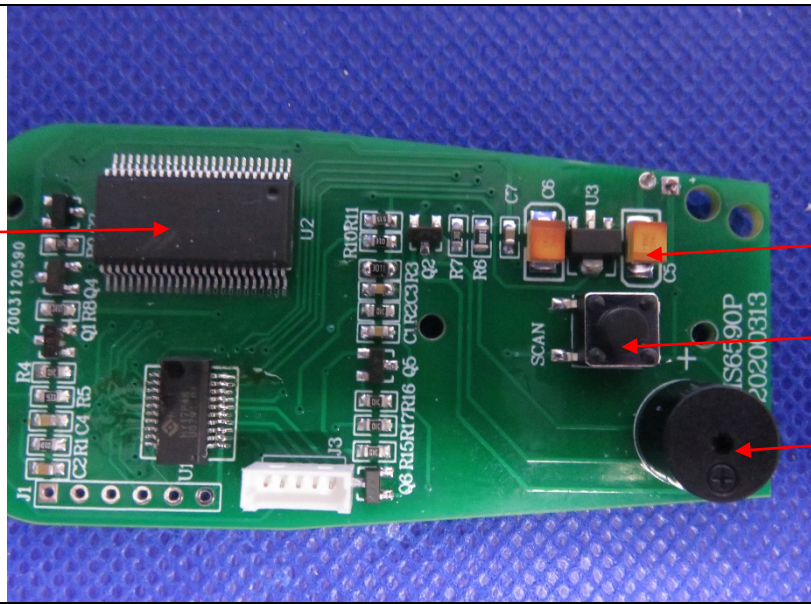
		
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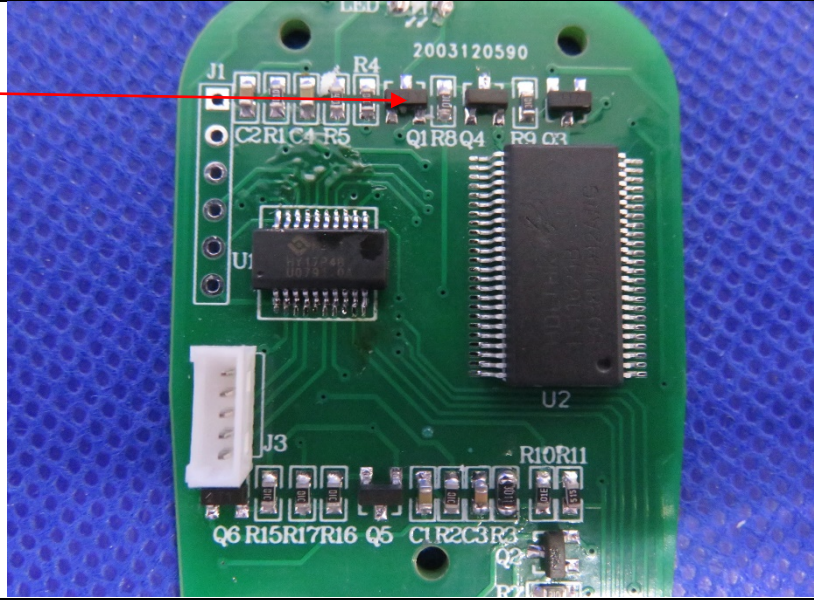
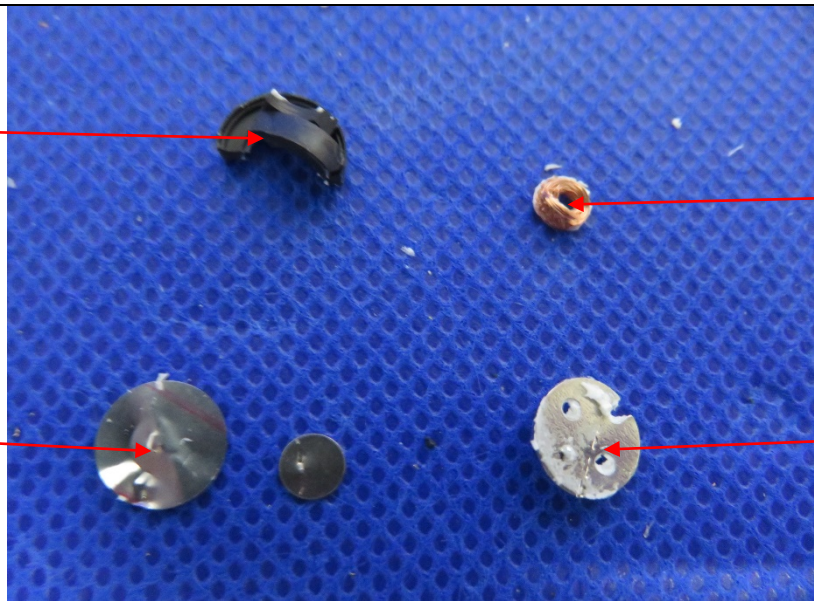

		
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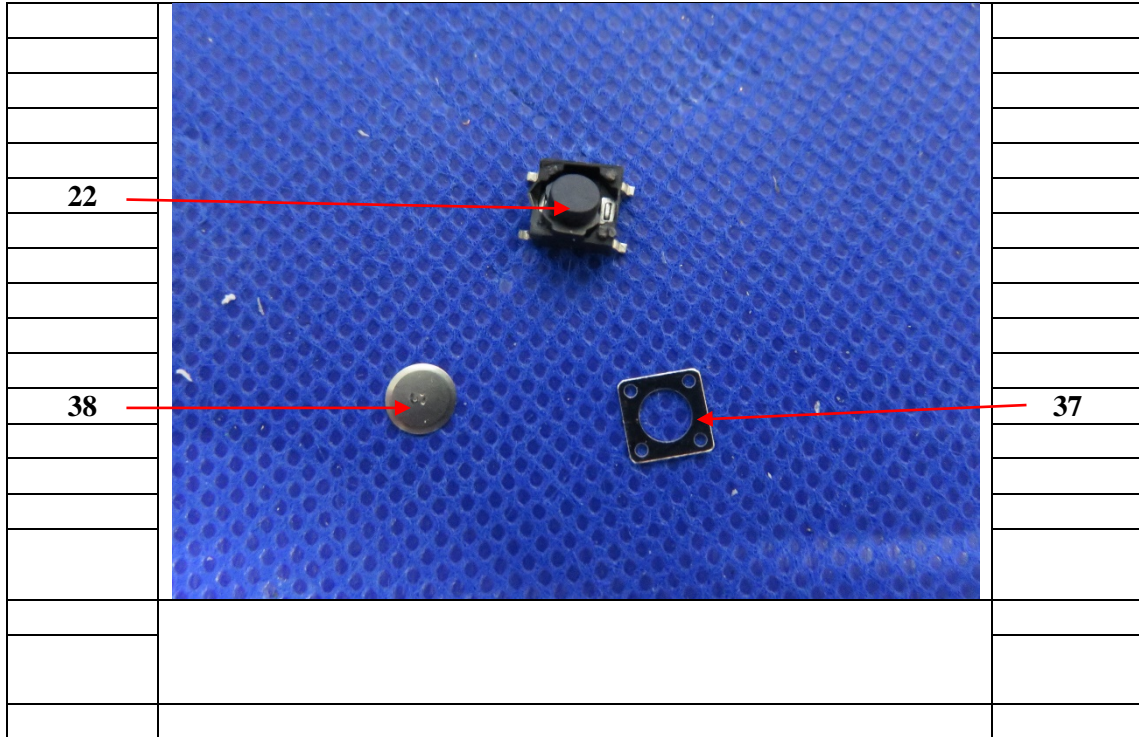
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Appendix for Photos of the Submitted Sample(s)



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3. The Company shall be at liberty to disclose the testing-related documents and/or files anytime to any third-party accreditation and/or recognition bodies for audit or other related purposes. No liabilities whatsoever shall attach to the Company's act of disclosure.
4. The Company shall not be called or be liable to be called to give evidence or testimony on the Report in a court of law without its prior written consent, unless required by the relevant governmental authorities, laws or court orders.
5. The results in Report apply only to the sample as received and do not apply to the bulk, unless the sampling has been carried out by the Company and is stated as such in the Report. The Clients provide the sample's relevant information, and the Company will not be liable for or accept responsibility for the truth of the sample information.
6. When a statement of conformity to a specification or standard is provided, the ILAC-G8 Guidance document (and/or IEC Guide 115 in the electrotechnical sector) will be adopted as a decision rule for the determination of conformity unless it is inherent in the requested specification or standard, or otherwise specified in the Report.
7. In the event of the improper use the report as determined by the Company, the Company reserves the right to withdraw it, and to adopt any other additional remedies which may be appropriate.
8. Sample submitted for testing are accepted on the understanding that the Report issued cannot form the basis of, or be the instrument for, any legal action against the Company.
9. The Company will not be liable for or accept responsibility for any loss or damage howsoever arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
10. Clients wishing to use the Report in court proceedings or arbitration shall inform the Company to that effect prior to submitting the sample for testing.
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12. Issuance records of the Report are available on the internet at www.stc.group. Further enquiry of validity or verification of the Reports should be addressed to the Company.