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## RoHS Test Report

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Report No. : AGC00925210404-001

**SAMPLE NAME** : Wireless Mini Switch  
**MODEL NAME** : WXKG11LM  
**APPLICANT** : Lumi United Technology Co., Ltd  
**STANDARD(S)** : Please refer to follow page(s).  
**DATE OF ISSUE** : May 11, 2021

**Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd.**

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Applicant : Lumi United Technology Co., Ltd  
Address : 8th Floor, JinQi Wisdom Valley, No.1 Tangling Road, Liuxian Ave, Taoyuan  
Residential District, Nanshan District, Shenzhen ,China  
Test Site : 6/F., Building 2, Sanwei Chaxi Industrial Park, Sanwei Community,  
Hangcheng Street, Bao'an District, Shenzhen, Guangdong, China

**Report on the submitted sample(s) said to be:**

Sample Name : Wireless Mini Switch  
Model : WXKG11LM  
Brand : Aqara  
Manufacturer : Lumi United Technology Co., Ltd  
Address : 8th Floor, JinQi Wisdom Valley, No.1 Tangling Road, Liuxian Ave, Taoyuan  
Residential District, Nanshan District, Shenzhen ,China  
Sample Received Date : Apr.29, 2021  
Testing Period : Apr.29, 2021 to May 11, 2021

**Test Requested:**

1. As specified by client, to determine the Pb, Cd, Hg, Cr<sup>6+</sup>, PBBs, PBDEs, DBP, BBP, DEHP, DIBP content in the submitted sample in accordance with Directive 2011/65/EU (RoHS) and its amendment directive (EU) 2015/863 on XRF and Chemical Method.
2. As specified by client, to determine Lead(Pb), Cadmium(Cd), Mercury(Hg) content in the submitted sample in accordance with European Directive 2006/66/EC and its amendments 2013/56/EU on batteries and accumulators.

**Conclusion****Pass****Pass**Approved by: 

Liangdan, Jessie.Liang

Technical Director

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No.	Sample Description	
Wireless Mini Switch (WXKG11LM)		
1.	Outer shell	White plastic shell
2.		White plastic button
3.		Grey plastic bottom shell
4.		Double faced adhesive tape
5.		Gray printing
6.		Gray plastic battery cover
7.		Backing paper
8.		Transparent lamp shade
9.	Button battery	
10.	Chip capacitor	
11.	Chip crystal oscillator	
12.	Chip IC	
13.	Tin solder	
14.	PCB board	
15.	Chip capacitor	
16.	Chip resistor	
17.	Chip LED	
18.	Copper shell	
19.	Copper shell	
20.	White code scanning sticker	
21.	Tantalum chip capacitor	
22.	Touch switch	Black plastic button
23.		Silver metal shell
24.		Metal shrapnel
25.		White plastic base seat
26.	Pin	
27.	Switch	Copper button
28.		Metal shrapnel
29.		Brown tape
30.		Silver metal shell
31.		Black plastic seat
32.		Pin

**Test Result:**
**(Test Method/ Instrument/ MDL and Limit: See Appendix)**
**1. Test Result of RoHS**

No.	Test result (mg/kg)										Conclusion
	Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs	DIBP	DBP	BBP	DEHP	
1	N.D.	N.D.	N.D.	253	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>
2	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>
3	N.D.	N.D.	N.D.	421	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>
4	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>
5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>
6	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>
7	N.D.	N.D.	N.D.	446	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	<b>Conformity</b>

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No.	Test result (mg/kg)										Conclusion
	Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs	DIBP	DBP	BBP	DEHP	
8	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
10	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
11	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
12	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
13	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
14	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
15	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
16	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
17	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
18	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
19	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
20	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
21	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
22	N.D.	N.D.	N.D.	213	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
23	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
24	N.D.	N.D.	N.D.	N.D.*	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
25	N.D.	N.D.	N.D.	360	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
26	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
27	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
28	319	N.D.	N.D.	N.D.*	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
29	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
30	N.D.	N.D.	N.D.	N.D.*	N/A	N/A	N/A	N/A	N/A	N/A	Conformity
31	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.*	N.D.*	N.D.*	N.D.*	Conformity
32	N.D.	N.D.	N.D.	N.D.	N/A	N/A	N/A	N/A	N/A	N/A	Conformity

**Note:**

mg/kg = milligram per kilogram

 $\mu\text{g}/\text{cm}^2$  = microgram per square centimeter

MDL = Method Detection Limit

N.D.=Not Detected (less than method detection limit)

N/A= Not applicable

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**Remark:**

- \*denotes as reported result(s) was (were) performed by wet chemistry method. Others were screened by XRF. For XRF screening, the result(s) of Cr VI was (were) reported as total chromium and the result(s) of PBBs and PBDEs was (were) reported as total bromine. Also, the XRF result(s) may be different to the actual content based on various factors including, but not limit to, sample size, thickness, area, nonuniformity composition, surface flatness.
- This XRF Scanning 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 scanning 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.

- Boiling-water-extraction:

Number	Colorimetric result (Cr(VI) concentration)	Qualitative result
1	The sample solution is < the 0,10 µg/cm <sup>2</sup> equivalent comparison standard solution	The sample is negative for Cr(VI) – The Cr(VI) concentration is below the limit of quantification. The coating is considered a non-Cr(VI) based coating.
2	The sample solution is ≥ the 0,10 µg/cm <sup>2</sup> and ≤ the 0,13 µg/cm <sup>2</sup> equivalent comparison standard solutions	The result is considered to be inconclusive – Unavoidable coating variations may influence the determination.
3	The sample solution is > the 0,13 µg/cm <sup>2</sup> equivalent comparison standard solution	The sample is positive for Cr(VI) – The Cr(VI) concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

- Negative indicates the absence of Cr(VI) on the tested areas concentration is below the limit of quantification.

The coating is considered a non-Cr(VI) based coating.

Uncertainty indicates the absence of Cr(VI) on the tested areas unavoidable coating variations may influence the determination.

Positive indicates the presence of Cr(VI) on the tested areas concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

Storage conditions and production date of the tested sample are unavailable and thus result of Cr(VI) represent status of the sample at the time of testing.

**2. Test Result of Lead(Pb), Cadmium(Cd), Mercury(Hg)(European Directive 2006/66/EC)**

No.	Test result (%)			Conclusion
	Lead(Pb)	Cadmium(Cd)	Mercury(Hg)	
9	N.D.	N.D.	N.D.	Conformity

**Note:**

%= percentage

N.D.=Not Detected (less than method detection limit)

MDL = Method Detection Limit

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**Appendix:**

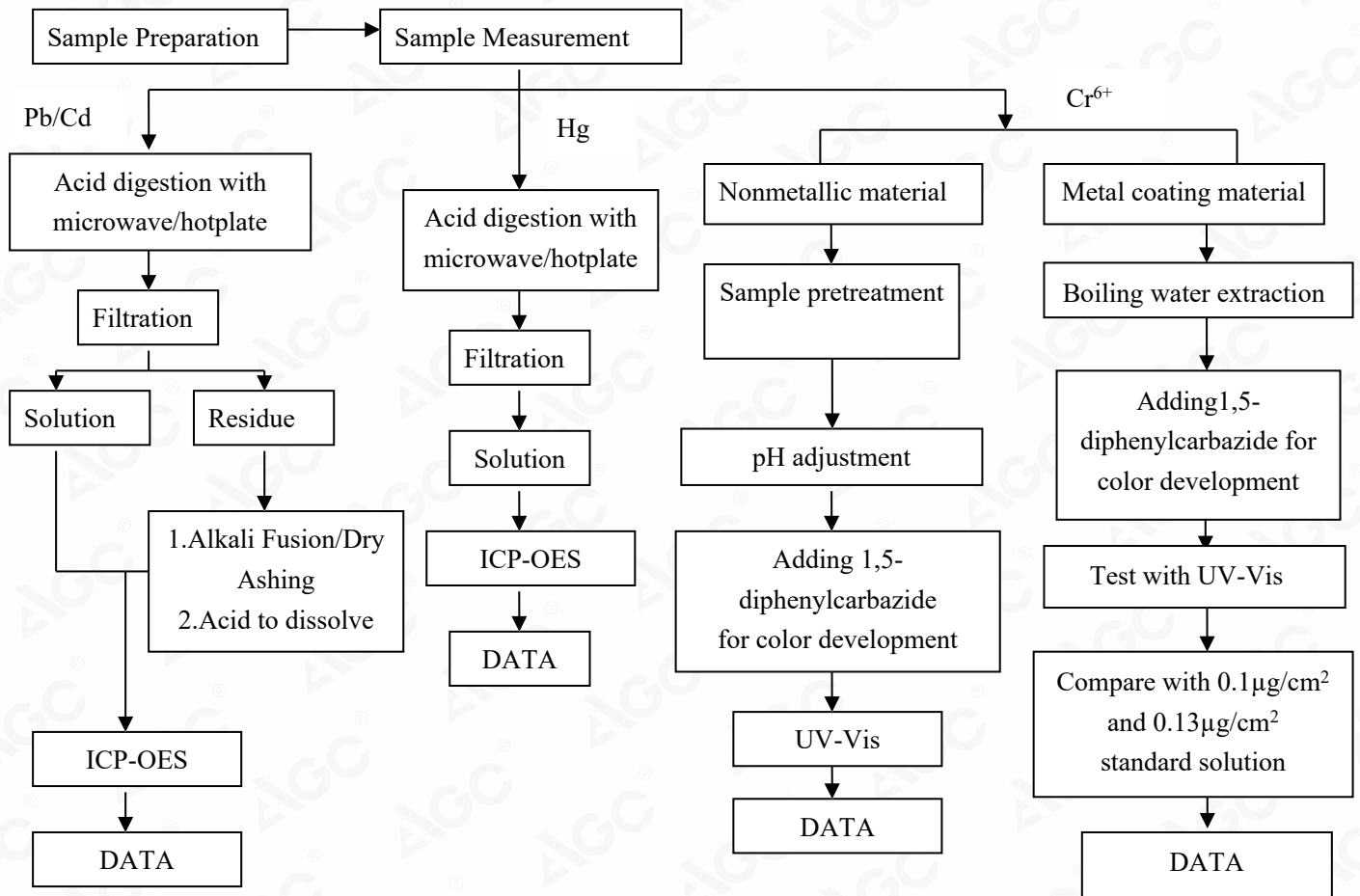
Test Item	Test Method/ Instrument	MDL	Maximum Limit
<b>X-ray Fluorescence Spectrometry(XRF)</b>			
Lead (Pb)	IEC 62321-3-1:2013 / XRF	200mg/kg	1000mg/kg
Cadmium (Cd)		50mg/kg	100mg/kg
Mercury (Hg)		200mg/kg	1000mg/kg
Total Chromium		200mg/kg	/
Total Bromine		200mg/kg	/
<b>Wet Chemistry Method</b>			
Lead (Pb)	IEC 62321-5:2013/ ICP-OES	10mg/kg	1000mg/kg
Cadmium (Cd)	IEC 62321-5:2013/ ICP-OES	10mg/kg	100mg/kg
Mercury (Hg)	IEC 62321-4: 2013+A1:2017/ ICP-OES	10mg/kg	1000mg/kg
Non-metal Hexavalent Chromium (Cr <sup>6+</sup> )	IEC 62321-7-2:2017/ UV-Vis	8mg/kg	1000mg/kg
Metal Hexavalent Chromium (Cr <sup>6+</sup> )	IEC 62321-7-1:2015/ UV-Vis	0.1µg/cm <sup>2</sup>	/
Polybrominated Biphenyls (PBBs) -Monobromobiphenyl (MonoBB) -Dibromobiphenyl (DiBB) -Tribromobiphenyl (TriBB) -Tetrabromobiphenyl (TetraBB) -Pentabromobiphenyl (PentaBB) -Hexabromobiphenyl (HexaBB) -Heptabromobiphenyl (HeptaBB) -Octabromobiphenyl (OctaBB) -Nonabromodiphenyl (NonaBB) -Decabromodiphenyl (DecaBB)	IEC 62321-6:2015/ GC-MS	Single 5mg/kg	Sum 1000mg/kg
Polybrominated Diphenylethers (PBDEs) -Monobromodiphenyl ether (MonoBDE) -Dibromodiphenyl ether (DiBDE) -Tribromodiphenyl ether (TriBDE) -Tetrabromodiphenyl ether (TetraBDE) -Pentabromodiphenyl ether (PentaBDE) -Hexabromodiphenyl ether (HexaBDE) -Heptabromodiphenyl ether (HeptaBDE) -Octabromodiphenyl ether (OctaBDE) -Nonabromodiphenyl ether (NonaBDE) -Decabromodiphenyl ether (DecaBDE)	IEC 62321-6:2015/ GC-MS	Single 5mg/kg	Sum 1000mg/kg
Di-iso-butyl phthalate (DIBP)	IEC 62321-8:2017/ GC-MS	50mg/kg	1000mg/kg
Dibutyl phthalate (DBP)		50mg/kg	1000mg/kg
Butylbenzyl phthalate (BBP)		50mg/kg	1000mg/kg
Di-(2-ethylhexyl) Phthalate (DEHP)		50mg/kg	1000mg/kg
<b>Lead(Pb), Cadmium(Cd), Mercury(Hg)(European Directive 2006/66/EC)</b>			
Lead (Pb)	IEC 62321-5:2013/ ICP-OES	0.0005%	/
Cadmium (Cd)	IEC 62321-5:2013/ ICP-OES	0.0005%	0.002%
Mercury (Hg)	IEC 62321-4: 2013+A1:2017/ ICP-OES	0.0001%	0.0005%

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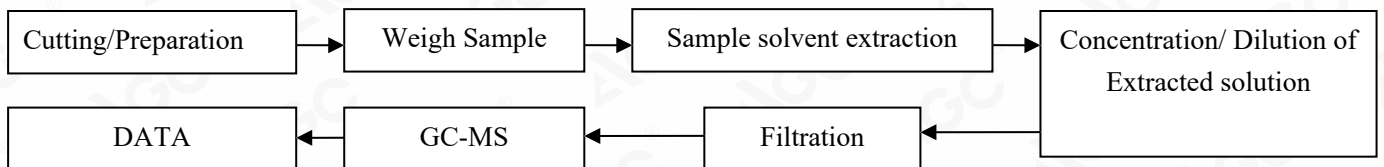
### Test Flow Chart

#### 1. For Pb, Cd, Hg, Cr<sup>6+</sup>



These sample were dissolved totally by pre-conditioning method according to above flow chart (Cr<sup>6+</sup> test method excluded)

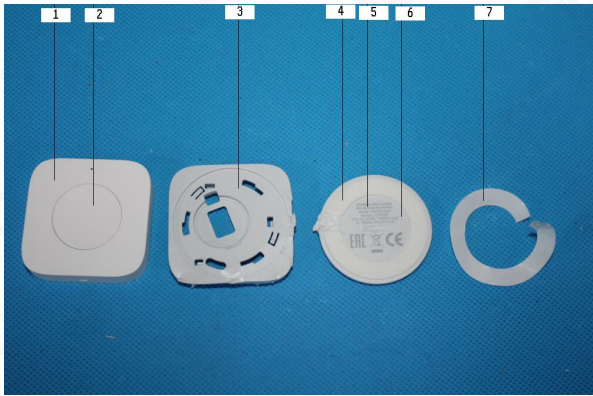
#### 2. For PBBs, PBDEs, DBP, BBP, DEHP, DIBP



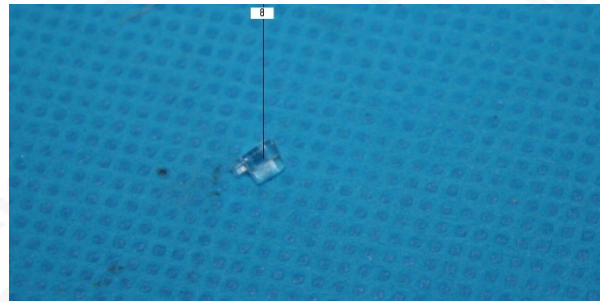
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**The photo of the sample**



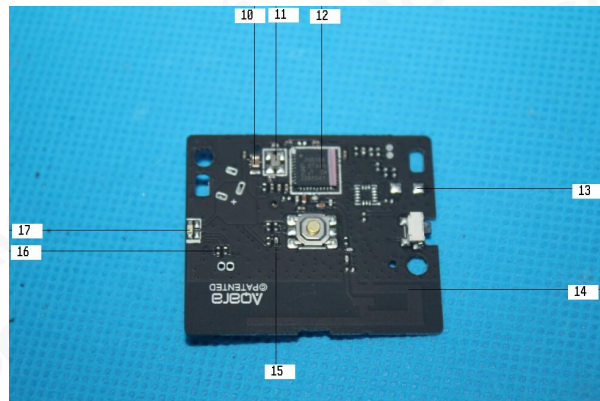
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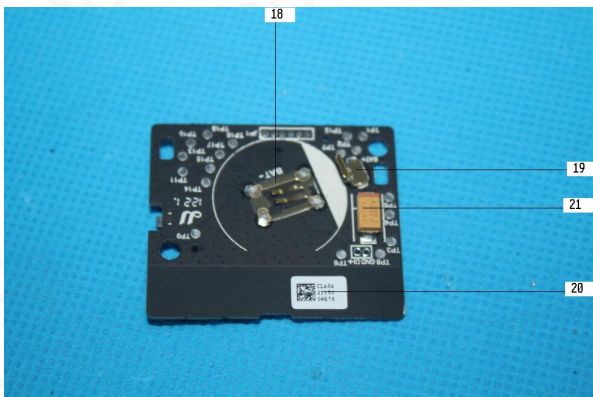
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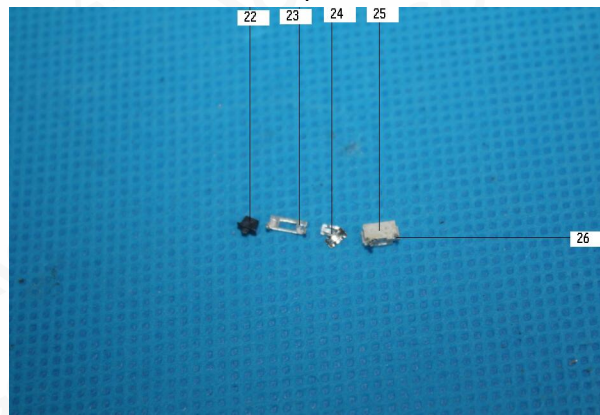
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4



5

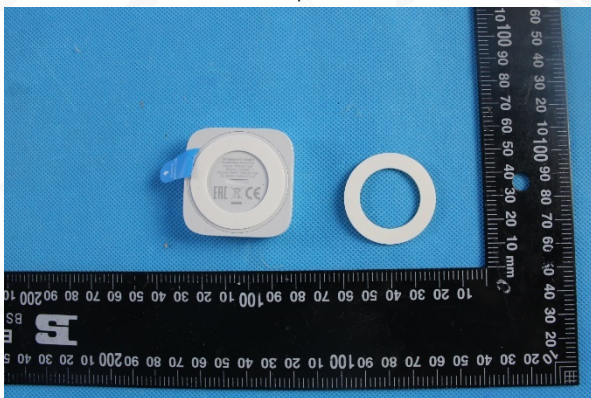
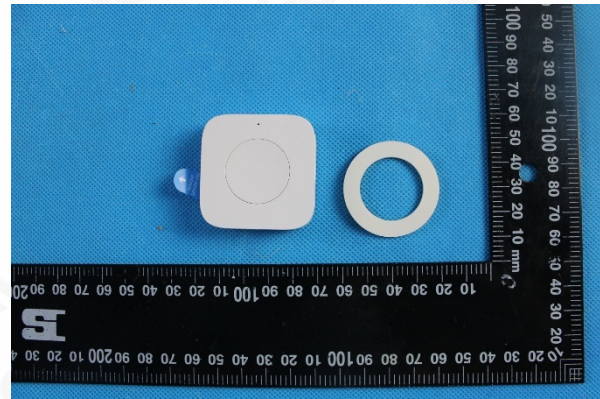


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**AGC00925210404-001**

AGC authenticate the photo only on original report

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

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## Conditions of Issuance of Test Reports

1. All samples and goods are accepted by the Attestation of Global Compliance (Shenzhen) Std & Tech Co., Ltd. (the “Company”) solely for testing and reporting in accordance with the following terms and conditions. The company provides its services on the basis that such terms and conditions constitute express agreement between the company and any person, firm or company requesting its services (the “Clients”).
2. Any report issued by Company as a result of this application for testing services (the “Report”) shall be issued in confidence to the Clients and the Report will be strictly treated as such by the Company. It may not be reproduced either in its entirety or in part and it may not be used for advertising or other unauthorized purposes without the written consent of the Company. The Clients to whom the Report is issued may, however, show or send it, or a certified copy thereof prepared by the Company to its customer, supplier or other persons directly concerned. The Company will not, without the consent of the Clients, enter into any discussion or correspondence with any third party concerning the contents of the Report, unless required by the relevant governmental authorities, laws or court orders.
3. 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.
4. The non-CMA report issued by AGC is only permitted to be used by the client as internal reference use and shall not be used for public demonstration purpose.
5. In the event of the improper use of 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.
6. Samples 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.
7. The Company will not be liable for or accept responsibility for any loss or damage however arising from the use of information contained in any of its Reports or in any communication whatsoever about its said tests or investigations.
8. 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.
9. The Company is not responsible for recalling the electronic version of the original report when any revision is made to them. The Client assumes the responsibility to providing the revised version to any interested party who uses them.
10. Subject to the variable length of retention time for test data and report stored hereinto as otherwise specifically required by individual accreditation authorities, the Company will only keep the supporting test data and information of the test report for a period of six years. The data and information will be disposed of after the aforementioned retention period has elapsed. Under no circumstances shall we provide any data and information which has been disposed of after retention period. Under no circumstances shall we be liable for damage of any kind, including (but not limited to) compensatory damages, lost profits, lost data, or any form of special, incidental, indirect, consequential or punitive damages of any kind, whether based on breach of contract of warranty, tort (including negligence), product liability or otherwise, even if we are informed in advance of the possibility of such damages.

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