

Report No. 70.400.19.032.111-00/02

Dated 2019-10-22



China

## Technical Report

**Applicant:** Hangzhou Hikvision Digital Technology Co., Ltd.  
No.555 Qianmo Road, Binjiang District, Hangzhou 310042,  
China

**Attn:** Ms. Du Xia

**Manufacturer:** Hangzhou Hikvision Digital Technology Co., Ltd.  
  
No.555 Qianmo Road, Binjiang District Hangzhou 310052, China

**Factory:** Hangzhou Hikvision Electronics Co., Ltd.  
No.299, Qiushi Road, Tonglu Economic Development Zone, Tonglu County,  
Hangzhou, Zhejiang, 310052, China

**Test subject:** Product: Card Enroller/Card Dispatcher、 Enrollment Station、 Fingerprint  
Recorder/Fingerprint Scanner  
Model No.: DS-K1FXXXXXXXXXX(X=0-9 or A-Z or/or-or\*or blank)  
Ref. Model No.: See APPENDIX II  
Brand: Hikvision  
Test items: refer to 3~55

**Test specification:** **2011/65/EU (RoHS) Directives and its amendment (EU) 2015/863**  
Test with reference to EN 62321-1:2013  
EN 62321-2:2014  
EN 62321-3-1:2014  
EN 62321-4:2014  
EN 62321-5:2014  
EN 62321-6:2015  
EN 62321-7-1:2015  
EN 62321-7-2:2017  
EN 62321-8: 2017

**Test result:** Refer to the data listed in following pages

**Conclusion:** With regard to the data of tested components, the requirements of Directive  
2011/65/EU (RoHS) are complied.

**Remarks:**

1. The result relates only to the items tested
2. Samples were tested as received

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**1 Order**

**1.1 Date of Purchase Order**

2019-09-30

**1.2 Customer's Reference**

Nil

**1.3 Receipt Date of Test Sample**

2019-09-26

**1.4 Date of Testing**

2019-09-26~2019-10-14

**1.5 Document submitted**

Bill of Material

**1.6 Location of Testing**

TÜV PS SHA

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## 2. Description of the tested specimen

No.	Tested sample	Conclusion	Picture
01	Transparent glass	Pass	
02	Gray coating	Pass	
03	Silvery metal substance	Pass	
04	White plastic substance	Pass	

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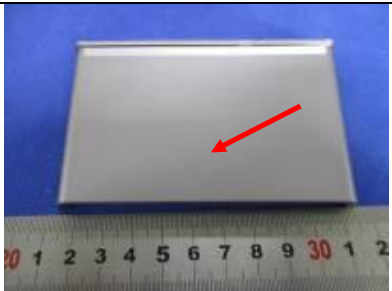



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No.	Tested sample	Conclusion	Picture
05	White plastic substance	Pass	
06	Gray plastic washer	Pass	
07	Black plastic base	Pass	
08	White/black label	Pass	

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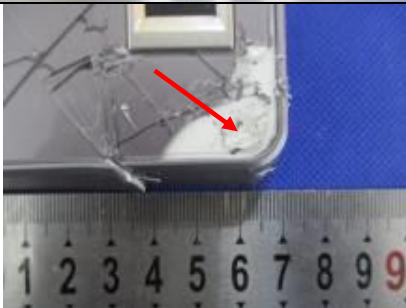
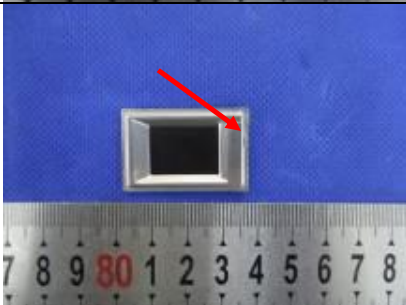
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No.	Tested sample	Conclusion	Picture
09	Black/white plastic cover	Pass	
10	Black plastic washer	Pass	
11	White glue	Pass	
12	Silvery metal frame	Pass	

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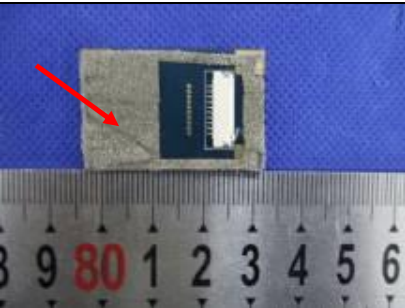



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No.	Tested sample	Conclusion	Picture
13	Brown adhesive tape	Pass	
14	Black glass	Pass	
15	Black component	Pass	
16	Black chip resistor	Pass	

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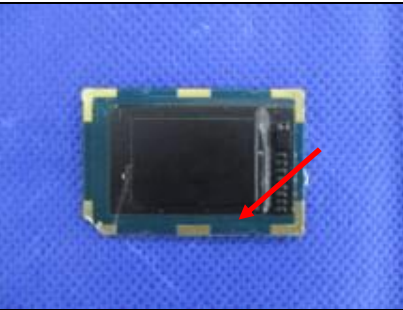

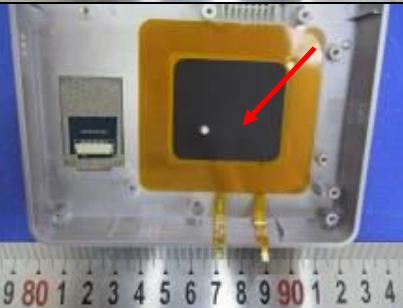

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No.	Tested sample	Conclusion	Picture
17	Green pcb	Pass	
18	Yellow FPC	Pass	
19	Black film	Pass	
20	Black plastic piece	Pass	

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No.	Tested sample	Conclusion	Picture
21	Silvery metal piece	Pass	
22	Yellow FPC	Pass	
23	White label	Pass	
24	Silvery metal component	Pass	

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No.	Tested sample	Conclusion	Picture
25	Yellow chip capacitor	Pass	
26	Black plastic block	Pass	
27	Beige plastic block	Pass	
28	Black chip capacitor	Pass	

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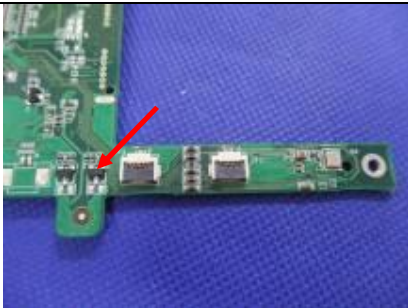
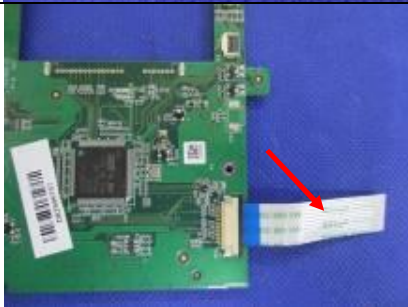
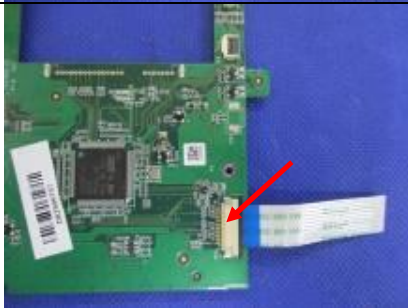
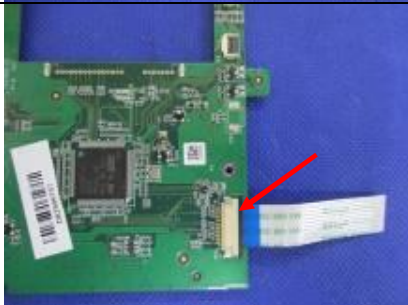
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No.	Tested sample	Conclusion	Picture
29	Black audion	Pass	
30	Blue FPC	Pass	
31	Beige plastic block	Pass	
32	Black plastic block	Pass	

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No.	Tested sample	Conclusion	Picture
33	Golden metal pin	Pass	
34	Red component	Pass	
35	Black component	Pass	
36	Black IC	Pass	

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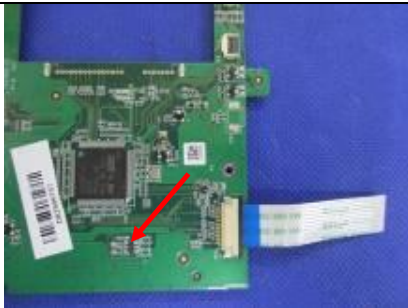



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No.	Tested sample	Conclusion	Picture
37	Black component	Pass	
38	Gray component	Pass	
39	Black component	Pass	
40	Black component	Pass	

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No.	Tested sample	Conclusion	Picture
41	Black chip resistor	Pass	
42	Black component	Pass	
43	Black component	Pass	
44	Black plastic block	Pass	

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No.	Tested sample	Conclusion	Picture
45	Black plastic block	Pass	
46	Silvery metal bracket	Pass	
47	Golden metal pin	Pass	
48	Black plastic bracket	Pass	

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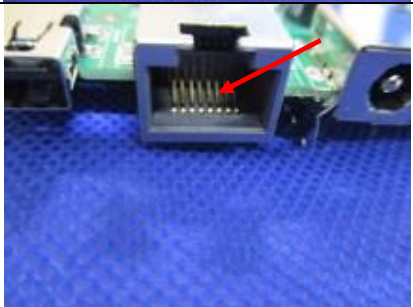


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No.	Tested sample	Conclusion	Picture
49	Silvery metal bracket	Pass	
50	Silvery metal pin	Pass	
51	Black plastic block	Pass	
52	Silvery metal bracket	Pass	

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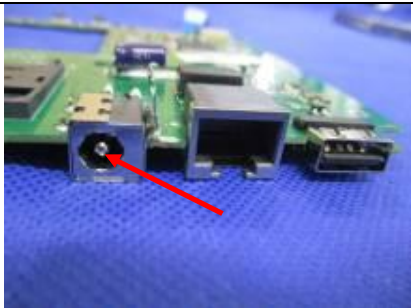



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No.	Tested sample	Conclusion	Picture
53	Silvery metal rod	Pass	
54	Blue plastic shell	Pass	
55	Silvery metal shell	Pass	
56	Gray film	Pass	

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No.	Tested sample	Conclusion	Picture
57	Silvery metal piece	Pass	
58	Gray plastic piece	Pass	
59	Black plastic washer	Pass	
60	Silvery metal pin	Pass	

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China

No.	Tested sample	Conclusion	Picture
61	White glue	Pass	
62	Black plastic bracket	Pass	
63	Golden metal pin	Pass	
64	Beige plastic socket	Pass	

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Report No. 70.400.19.032.111-00/02

Dated 2019-10-22



China

No.	Tested sample	Conclusion	Picture
65	Silvery metal pin	Pass	
66	Black component	Pass	
67	Black component	Pass	
68	Black component	Pass	

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China

No.	Tested sample	Conclusion	Picture
69	Green component	Pass	
70	Black plastic cover	Pass	
71	Silvery metal piece	Pass	
72	Silvery metal block	Pass	

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China

No.	Tested sample	Conclusion	Picture
73	Black plastic shell	Pass	
74	Copper-colored metal	Pass	
75	Silvery metal shaft	Pass	
76	Black component	Pass	

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China

No.	Tested sample	Conclusion	Picture
77	Yellow chip capacitor	Pass	
78	Silvery metal bracket	Pass	
79	Black plastic bracket	Pass	
80	Silvery metal spring	Pass	

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China

No.	Tested sample	Conclusion	Picture
81	Silvery metal pin	Pass	
82	Silvery metal pin	Pass	
83	Black plastic bracket	Pass	
84	Silvery metal bracket	Pass	

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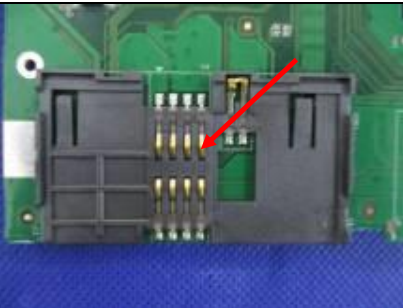
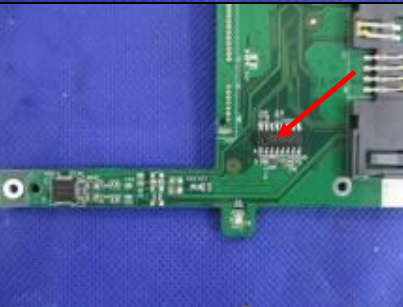
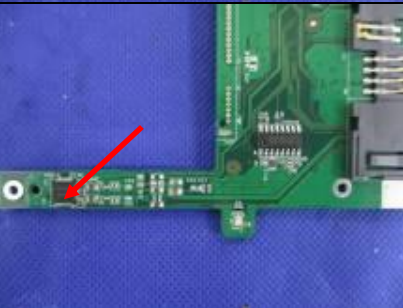
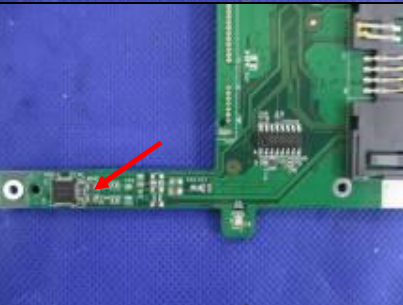
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China

No.	Tested sample	Conclusion	Picture
85	Silvery metal pin	Pass	
86	Black component	Pass	
87	Black component	Pass	
88	Black chip capacitor	Pass	

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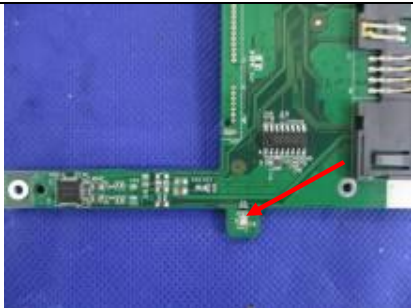

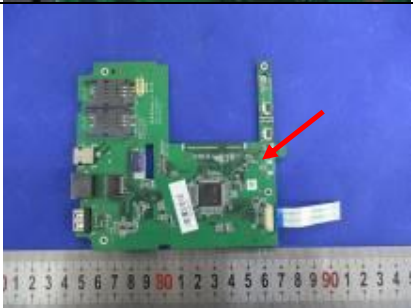
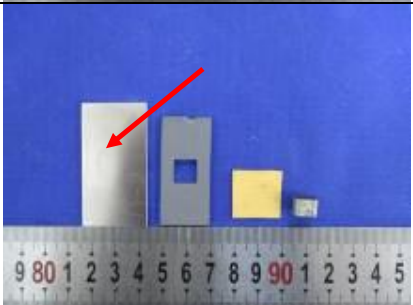
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China

No.	Tested sample	Conclusion	Picture
89	Yellow LED	Pass	
90	Silvery metal solder	Pass	
91	Green PCB	Pass	
92	Silvery metal board	Pass	

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China

No.	Tested sample	Conclusion	Picture
93	Gray washer	Pass	
94	Yellow washer	Pass	
95	Gray adhesive tape	Pass	
96	Black foam	Pass	

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China

No.	Tested sample	Conclusion	Picture
97	Pink washer	Pass	
98	White washer	Pass	
99	Silvery metal bar	Pass	
100	Golden metal block	Pass	

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China

No.	Tested sample	Conclusion	Picture
101	Silvery metal block	Pass	
102	Black component	Pass	
103	Silvery component	Pass	
104	Beige plastic socket	Pass	

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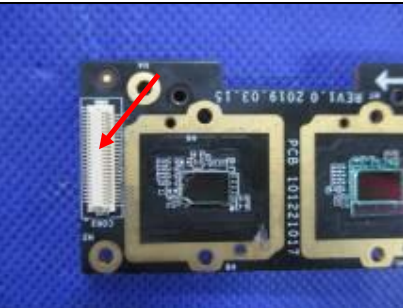
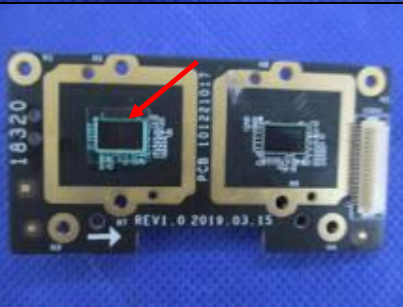
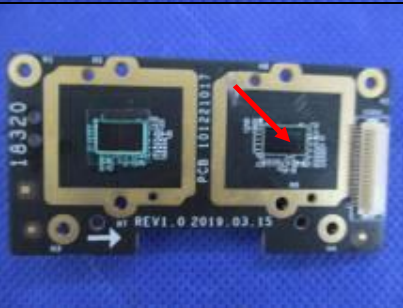

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China

No.	Tested sample	Conclusion	Picture
105	Golden metal pin	Pass	
106	Colorful glass	Pass	
107	Transparent display	Pass	
108	Black PCB	Pass	

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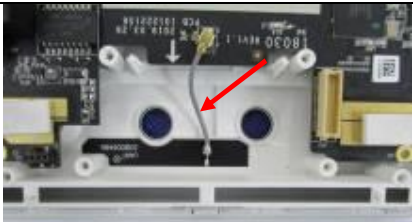


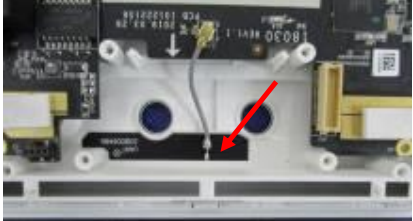
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China

No.	Tested sample	Conclusion	Picture
109	Gray plastic jacket	Pass	
110	Golden metal block	Pass	
111	Silvery solder	Pass	
112	Black plastic label	Pass	

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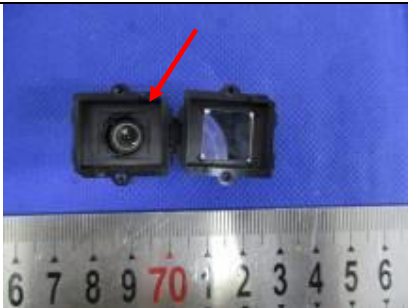
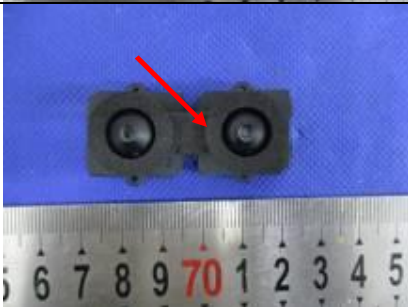


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No.	Tested sample	Conclusion	Picture
113	Black plastic bracket	Pass	
114	Black foam	Pass	
115	Black plastic block	Pass	
116	White glue	Pass	

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China

No.	Tested sample	Conclusion	Picture
117	Transparent glass	Pass	
118	Transparent plastic block	Pass	
119	Transparent plastic block	Pass	
120	Black metal block	Pass	

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China

No.	Tested sample	Conclusion	Picture
121	Black metal ring	Pass	
122	Black plastic washer	Pass	
123	glass	Pass	
124	Silvery board	Pass	

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China

No.	Tested sample	Conclusion	Picture
125	Yellow LED	Pass	
126	Black plastic block	Pass	
127	Silvery metal pin	Pass	
128	Gray washer	Pass	

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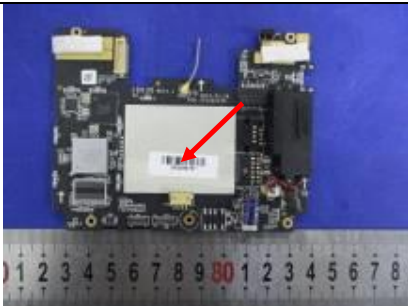



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No.	Tested sample	Conclusion	Picture
129	White/black label	Pass	
130	Black plastic socket	Pass	
131	Black chip capacitor	Pass	
132	Black component	Pass	

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Report No. 70.400.19.032.111-00/02

Dated 2019-10-22



China

No.	Tested sample	Conclusion	Picture
133	Black component	Pass	
134	Green component	Pass	
135	Black plastic	Pass	
136	Black foam	Pass	

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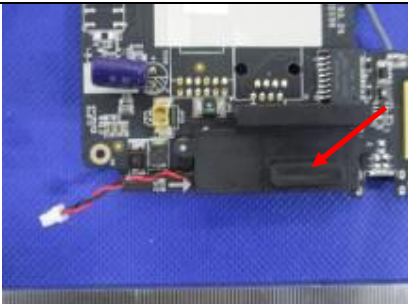
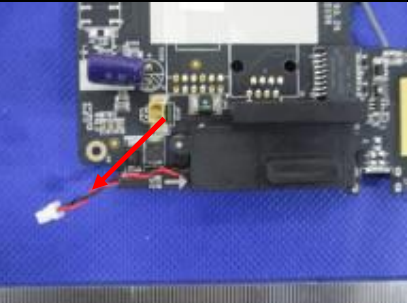


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No.	Tested sample	Conclusion	Picture
137	Black fibre	Pass	
138	Red plastic jacket	Pass	
139	Black plastic jacket	Pass	
140	White plastic block	Pass	

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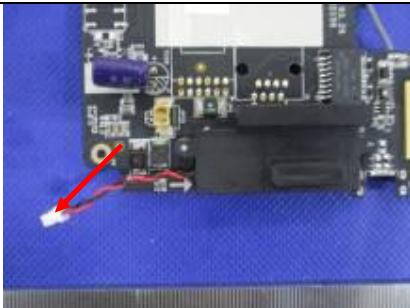
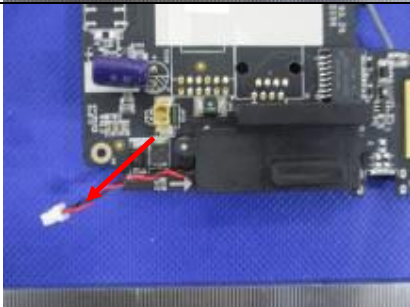

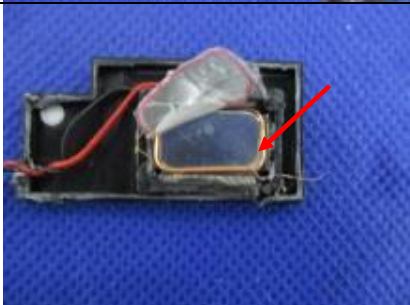
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China

No.	Tested sample	Conclusion	Picture
141	Silvery metal piece	Pass	
142	Silvery metal core	Pass	
143	Black/silvery film	Pass	
144	Copper-colored metal	Pass	

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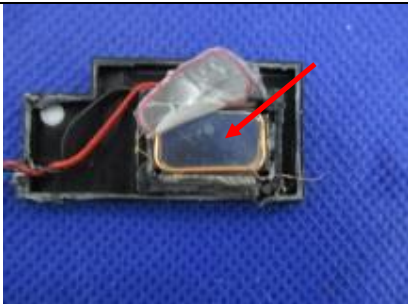



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No.	Tested sample	Conclusion	Picture
145	Silvery magnet	Pass	
146	Black component	Pass	
147	Yellow socket	Pass	
148	Yellow chip capacitor	Pass	

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No.	Tested sample	Conclusion	Picture
149	Blue plastic sheath	Pass	
150	Silvery metal shell	Pass	
151	Gray film	Pass	
152	Silvery metal piece	Pass	

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No.	Tested sample	Conclusion	Picture
153	Gray plastic piece	Pass	
154	Black sealed washer	Pass	
155	Silvery metal pin	Pass	
156	White glue	Pass	

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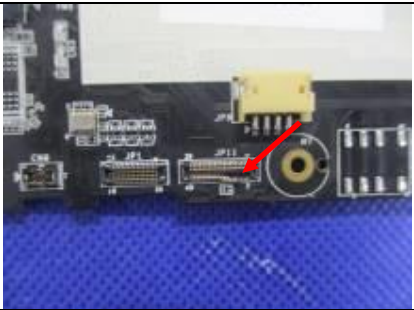
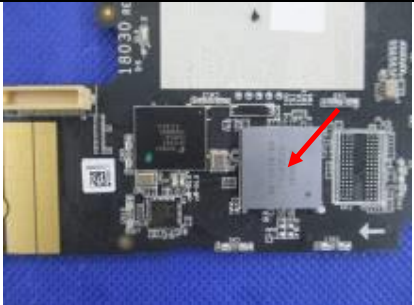

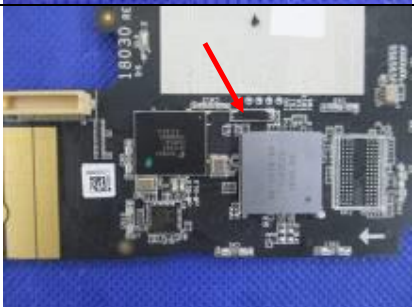
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China

No.	Tested sample	Conclusion	Picture
157	black plastic	Pass	
158	Silvery-gray metal piece	Pass	
159	Black component	Pass	
160	black component	Pass	

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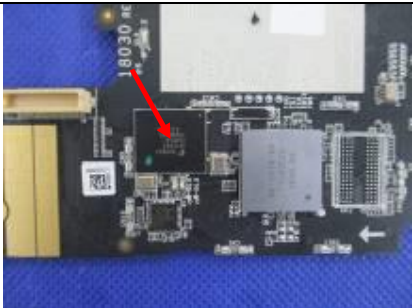
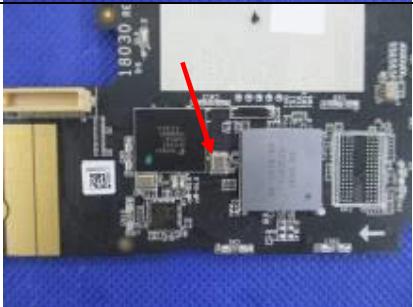
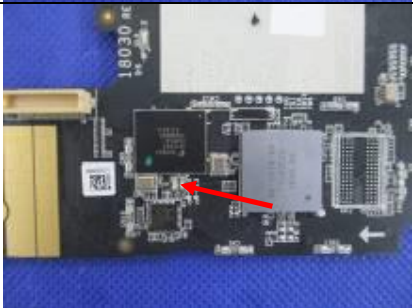
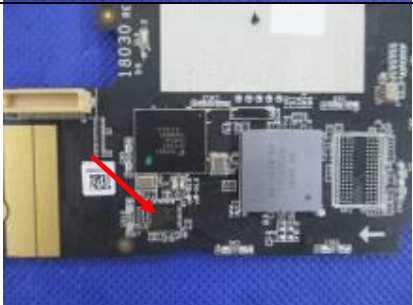
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China

No.	Tested sample	Conclusion	Picture
161	Black component	Pass	
162	Silvery metal component	Pass	
163	Yellow LED	Pass	
164	black component	Pass	

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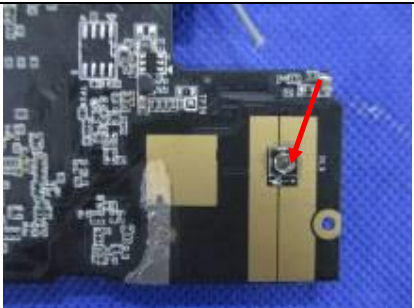

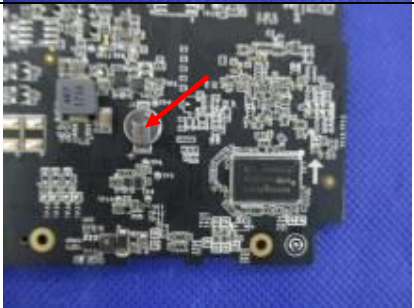
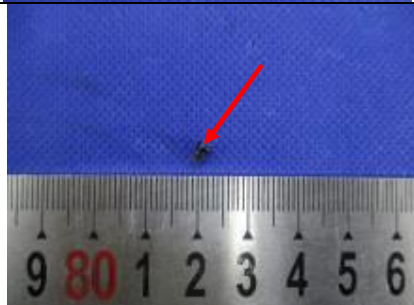
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China

No.	Tested sample	Conclusion	Picture
165	Transparent LED	Pass	
166	Black component	Pass	
167	Silvery metal piece	Pass	
168	Black metal screw	Pass	

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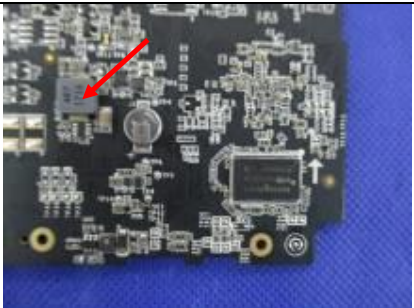
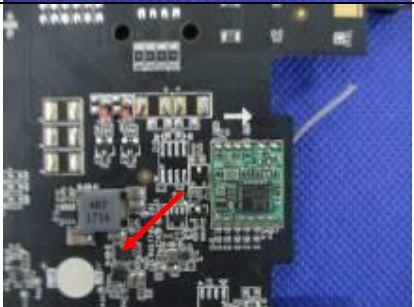
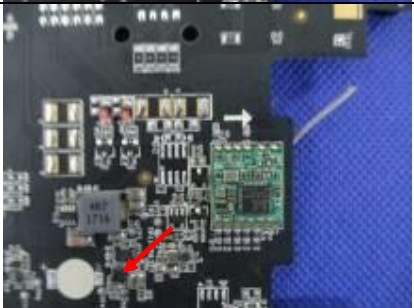

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No.	Tested sample	Conclusion	Picture
169	Black component	Pass	
170	Black component	Pass	
171	Black chip capacitor	Pass	
172	Black component	Pass	

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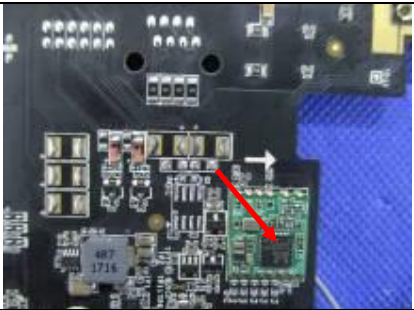



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No.	Tested sample	Conclusion	Picture
173	Black component	Pass	
174	Black chip resistor	Pass	
175	Green PCB	Pass	
176	Red component	Pass	

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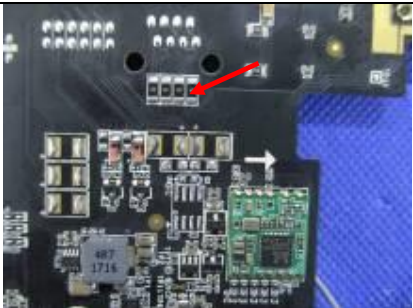



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No.	Tested sample	Conclusion	Picture
177	Black chip resistor	Pass	
178	Yellow chip capacitor	Pass	
179	Black audion	Pass	
180	Black chip resistor	Pass	

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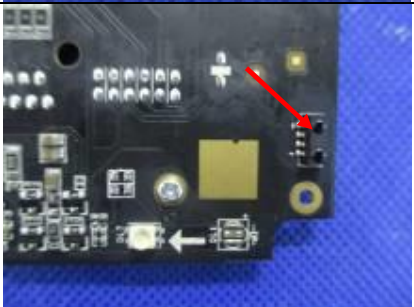
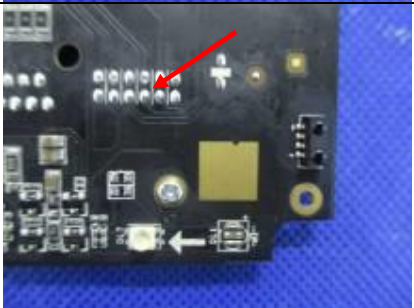

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No.	Tested sample	Conclusion	Picture
181	Beige plastic bracket	Pass	
182	Black component	Pass	
183	Silvery solder	Pass	
184	Black PCB	Pass	

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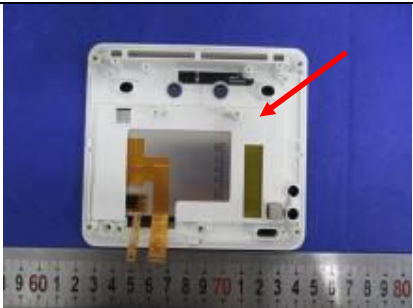
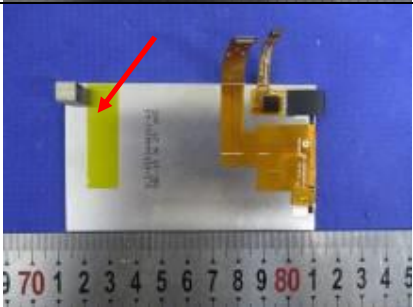
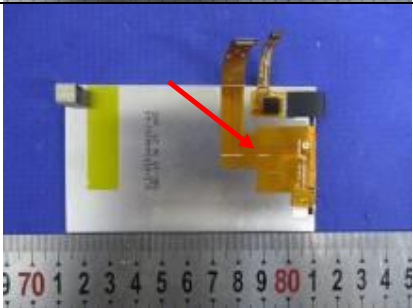
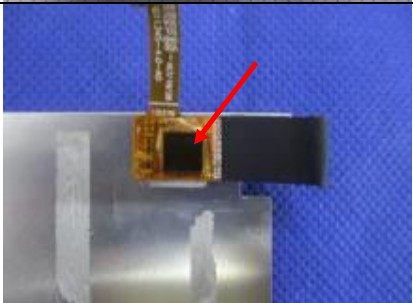


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No.	Tested sample	Conclusion	Picture
185	White plastic shell	Pass	
186	Yellow adhesive tape	Pass	
187	Yellow FPC	Pass	
188	Black component	Pass	

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China

No.	Tested sample	Conclusion	Picture
189	Silvery metal piece	Pass	
190	Silvery metal board	Pass	
191	Gray semi-transparent piece	Pass	
192	Semi-transparent glass	Pass	

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China

No.	Tested sample	Conclusion	Picture
193	Gray coating	Pass	
194	Transparent glass	Pass	
195	gray semi-transparent piece	Pass	
196	Blue glue	Pass	

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China

No.	Tested sample	Conclusion	Picture
197	White bracket	Pass	
198	Transparent piece	Pass	
199	White/silvery piece	Pass	
200	White piece	Pass	

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China

No.	Tested sample	Conclusion	Picture
201	Semi-transparent piece	Pass	
202	Black glue	Pass	
203	Transparent plastic piece	Pass	
204	White LED	Pass	

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China

No.	Tested sample	Conclusion	Picture
205	Transparent glass	Pass	
206	Black foam washer	Pass	
207	Transparent washer	Pass	
208	Silvery metal screw	Pass	

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China

No.	Tested sample	Conclusion	Picture
209	Silvery metal screw	Pass	
210	Silvery metal screw	Pass	
211	Black metal screw	Pass	
212	Silvery metal screw	Pass	

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**3. Test Results**

**3.1 Screening Test**

Test method: With reference to EN 62321-1:2013, EN 62321-2:2014, EN 62321-3-1:2014 and EN 62321-8:2017. For Heavy Metals and Flame Retardants, analyzed by Energy Dispersive X-ray Fluorescence Spectrometers (XRF); for phthalates, analyzed by Gas Chromatography and Mass Spectrometry (GC-MS).

Sample No.	Heavy Metals and Flame Retardants					Phthalates			
	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
01	BL	BL	BL	BL	BL	BL	BL	BL	BL
02	BL	BL	BL	BL	BL	BL	BL	BL	BL
03	BL	BL	BL	BL	NA	NA	NA	NA	NA
04	BL	BL	BL	BL	BL	BL	BL	BL	BL
05	BL	BL	BL	BL	BL	BL	BL	BL	BL
06	BL	BL	BL	BL	BL	BL	BL	BL	BL
07	BL	BL	BL	BL	BL	BL	BL	BL	BL
08	BL	BL	BL	BL	BL	BL	BL	BL	BL
09	BL	BL	BL	BL	BL	BL	BL	BL	BL
10	BL	BL	BL	BL	BL	BL	BL	BL	BL
11	BL	BL	BL	BL	BL	BL	BL	BL	BL
12	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
13	BL	BL	BL	BL	BL	BL	BL	BL	BL
14	BL	BL	BL	BL	BL	BL	BL	BL	BL
15	BL	BL	BL	BL	BL	BL	BL	BL	BL
16	BL	BL	BL	BL	BL	BL	BL	BL	BL
17	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
18	BL	BL	BL	BL	BL	BL	BL	BL	BL
19	BL	BL	BL	BL	BL	BL	BL	BL	BL
20	BL	BL	BL	BL	BL	BL	BL	BL	BL
21	BL	BL	BL	BL	NA	NA	NA	NA	NA
22	BL	BL	BL	BL	BL	BL	BL	BL	BL
23	BL	BL	BL	BL	BL	BL	BL	BL	BL
24	BL	BL	BL	BL	NA	NA	NA	NA	NA
25	BL	BL	BL	BL	BL	BL	BL	BL	BL
26	BL	BL	BL	BL	BL	BL	BL	BL	BL
27	BL	BL	BL	BL	BL	BL	BL	BL	BL
28	BL	BL	BL	BL	BL	BL	BL	BL	BL
29	BL	BL	BL	BL	BL	BL	BL	BL	BL
30	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
31	Inc. <sup>(a)</sup>	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
32	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
33	BL	BL	BL	BL	NA	NA	NA	NA	NA

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Sample No.	Heavy Metals and Flame Retardants					Phthalates			
	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
34	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL	BL	BL	BL
35	BL	BL	BL	BL	BL	BL	BL	BL	BL
36	BL	BL	BL	BL	BL	BL	BL	BL	BL
37	BL	BL	BL	BL	BL	BL	BL	BL	BL
38	BL	BL	BL	BL	BL	BL	BL	BL	BL
39	BL	BL	BL	BL	BL	BL	BL	BL	BL
40	BL	BL	BL	BL	BL	BL	BL	BL	BL
41	BL	Inc. <sup>(a)</sup>	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL	BL
42	BL	BL	BL	BL	BL	BL	BL	BL	BL
43	BL	BL	BL	BL	BL	BL	BL	BL	BL
44	BL	BL	BL	BL	BL	BL	BL	BL	BL
45	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
46	BL	BL	BL	BL	NA	NA	NA	NA	NA
47	BL	BL	BL	BL	NA	NA	NA	NA	NA
48	BL	BL	BL	BL	BL	BL	BL	BL	BL
49	BL	BL	BL	BL	NA	NA	NA	NA	NA
50	BL	BL	BL	BL	NA	NA	NA	NA	NA
51	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
52	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
53	BL	Inc. <sup>(a)</sup>	BL	BL	NA	NA	NA	NA	NA
54	BL	BL	BL	BL	BL	BL	BL	BL	BL
55	BL	BL	BL	BL	NA	NA	NA	NA	NA
56	BL	BL	BL	BL	BL	BL	BL	BL	BL
57	BL	BL	BL	BL	NA	NA	NA	NA	NA
58	BL	BL	BL	BL	BL	BL	BL	BL	BL
59	BL	BL	BL	BL	BL	BL	BL	BL	BL
60	BL	BL	BL	BL	NA	NA	NA	NA	NA
61	BL	BL	BL	BL	BL	BL	BL	BL	BL
62	BL	BL	BL	BL	BL	BL	BL	BL	BL
63	BL	BL	BL	BL	NA	NA	NA	NA	NA
64	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
65	BL	BL	BL	BL	NA	NA	NA	NA	NA
66	BL	BL	BL	BL	BL	BL	BL	BL	BL
67	BL	BL	BL	BL	BL	BL	BL	BL	BL
68	BL	BL	BL	BL	BL	BL	BL	BL	BL
69	BL	BL	BL	BL	BL	BL	BL	BL	BL
70	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
71	BL	BL	BL	BL	NA	NA	NA	NA	NA

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	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
72	BL	BL	BL	BL	NA	NA	NA	NA	NA
73	BL	BL	BL	BL	BL	BL	BL	BL	BL
74	BL	BL	BL	BL	NA	NA	NA	NA	NA
75	BL	BL	BL	BL	NA	NA	NA	NA	NA
76	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL	BL
77	BL	BL	BL	BL	BL	BL	BL	BL	BL
78	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
79	BL	BL	BL	BL	BL	BL	BL	BL	BL
80	BL	BL	BL	BL	NA	NA	NA	NA	NA
81	BL	BL	BL	BL	NA	NA	NA	NA	NA
82	BL	BL	BL	BL	NA	NA	NA	NA	NA
83	BL	BL	BL	BL	BL	BL	BL	BL	BL
84	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
85	BL	BL	BL	BL	NA	NA	NA	NA	NA
86	BL	BL	BL	BL	BL	BL	BL	BL	BL
87	BL	BL	BL	BL	BL	BL	BL	BL	BL
88	BL	BL	BL	BL	BL	BL	BL	BL	BL
89	BL	BL	BL	BL	BL	BL	BL	BL	BL
90	BL	BL	BL	BL	NA	NA	NA	NA	NA
91	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
92	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
93	BL	BL	BL	BL	BL	BL	BL	BL	BL
94	BL	BL	BL	BL	BL	BL	BL	BL	BL
95	BL	BL	BL	BL	BL	BL	BL	BL	BL
96	BL	BL	BL	BL	BL	BL	BL	BL	BL
97	BL	BL	BL	BL	BL	BL	BL	BL	BL
98	BL	BL	BL	BL	BL	BL	BL	BL	BL
99	BL	BL	BL	BL	NA	NA	NA	NA	NA
100	BL	Inc. <sup>(a)</sup>	BL	BL	NA	NA	NA	NA	NA
101	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
102	BL	BL	BL	BL	BL	BL	BL	BL	BL
103	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
104	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
105	BL	BL	BL	BL	NA	NA	NA	NA	NA
106	BL	BL	BL	BL	BL	BL	BL	BL	BL
107	BL	BL	BL	BL	BL	BL	BL	BL	BL
108	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
109	BL	BL	BL	BL	BL	BL	BL	BL	BL

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	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
110	BL	BL	BL	BL	NA	NA	NA	NA	NA
111	BL	BL	BL	BL	NA	NA	NA	NA	NA
112	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
113	BL	BL	BL	BL	BL	BL	BL	BL	BL
114	BL	BL	BL	BL	BL	BL	BL	BL	BL
115	BL	BL	BL	BL	BL	BL	BL	BL	BL
116	BL	BL	BL	BL	BL	BL	BL	BL	BL
117	BL	BL	BL	BL	BL	BL	BL	BL	BL
118	BL	BL	BL	BL	BL	BL	BL	BL	BL
119	BL	BL	BL	BL	BL	BL	BL	BL	BL
120	BL	BL	BL	BL	NA	NA	NA	NA	NA
121	BL	BL	BL	BL	NA	NA	NA	NA	NA
122	BL	BL	BL	BL	BL	BL	BL	BL	BL
123	BL	BL	BL	BL	BL	BL	BL	BL	BL
124	BL	BL	BL	BL	NA	NA	NA	NA	NA
125	BL	BL	BL	BL	BL	BL	BL	BL	BL
126	BL	BL	BL	BL	BL	BL	BL	BL	BL
127	BL	BL	BL	BL	NA	NA	NA	NA	NA
128	BL	BL	BL	BL	BL	BL	BL	BL	BL
129	BL	BL	BL	BL	BL	BL	BL	BL	BL
130	BL	BL	BL	BL	BL	BL	BL	BL	BL
131	BL	BL	BL	BL	BL	BL	BL	BL	BL
132	BL	BL	BL	BL	BL	BL	BL	BL	BL
133	BL	BL	BL	BL	BL	BL	BL	BL	BL
134	BL	BL	BL	BL	BL	BL	BL	BL	BL
135	BL	BL	BL	BL	BL	BL	BL	BL	BL
136	BL	BL	BL	BL	BL	BL	BL	BL	BL
137	BL	BL	BL	BL	BL	BL	BL	BL	BL
138	BL	BL	BL	BL	BL	BL	BL	BL	BL
139	BL	BL	BL	BL	BL	BL	BL	BL	BL
140	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
141	BL	BL	BL	BL	NA	NA	NA	NA	NA
142	BL	BL	BL	BL	NA	NA	NA	NA	NA
143	BL	BL	BL	BL	BL	BL	BL	BL	BL
144	BL	BL	BL	BL	NA	NA	NA	NA	NA
145	BL	BL	BL	BL	NA	NA	NA	NA	NA
146	BL	BL	BL	BL	BL	BL	BL	BL	BL
147	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL

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	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
148	BL	BL	BL	BL	BL	BL	BL	BL	BL
149	BL	BL	BL	BL	BL	BL	BL	BL	BL
150	BL	BL	BL	BL	NA	NA	NA	NA	NA
151	BL	BL	BL	BL	BL	BL	BL	BL	BL
152	BL	BL	BL	BL	NA	NA	NA	NA	NA
153	BL	BL	BL	BL	BL	BL	BL	BL	BL
154	BL	BL	BL	BL	BL	BL	BL	BL	BL
155	BL	BL	BL	BL	NA	NA	NA	NA	NA
156	BL	BL	BL	BL	BL	BL	BL	BL	BL
157	BL	BL	BL	BL	BL	BL	BL	BL	BL
158	BL	BL	BL	BL	NA	NA	NA	NA	NA
159	BL	BL	BL	BL	BL	BL	BL	BL	BL
160	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL	BL	BL	BL
161	BL	BL	BL	BL	BL	BL	BL	BL	BL
162	BL	BL	BL	BL	NA	NA	NA	NA	NA
163	BL	BL	BL	BL	BL	BL	BL	BL	BL
164	BL	BL	BL	BL	BL	BL	BL	BL	BL
165	BL	BL	BL	BL	BL	BL	BL	BL	BL
166	BL	BL	BL	BL	BL	BL	BL	BL	BL
167	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
168	BL	BL	BL	BL	NA	NA	NA	NA	NA
169	BL	BL	BL	BL	BL	BL	BL	BL	BL
170	BL	BL	BL	BL	BL	BL	BL	BL	BL
171	BL	BL	BL	BL	BL	BL	BL	BL	BL
172	BL	BL	BL	BL	BL	BL	BL	BL	BL
173	BL	BL	BL	BL	BL	BL	BL	BL	BL
174	BL	BL	BL	BL	BL	BL	BL	BL	BL
175	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
176	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL	BL	BL	BL
177	BL	BL	BL	BL	BL	BL	BL	BL	BL
178	BL	BL	BL	BL	BL	BL	BL	BL	BL
179	BL	BL	BL	BL	BL	BL	BL	BL	BL
180	BL	BL	BL	BL	BL	BL	BL	BL	BL
181	BL	BL	BL	BL	BL	BL	BL	BL	BL
182	BL	BL	BL	BL	BL	BL	BL	BL	BL
183	Inc. <sup>(a)</sup>	BL	BL	BL	NA	NA	NA	NA	NA
184	BL	BL	BL	BL	Inc. <sup>(a)</sup>	BL	BL	BL	BL
185	BL	BL	BL	BL	BL	BL	BL	BL	BL

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Sample No.	Heavy Metals and Flame Retardants					Phthalates			
	Cd	Pb	Hg	Cr	Br	DEHP	BBP	DBP	DIBP
186	BL	BL	BL	BL	BL	BL	BL	BL	BL
187	BL	BL	BL	BL	BL	BL	BL	BL	BL
188	BL	BL	BL	BL	BL	BL	BL	BL	BL
189	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
190	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
191	BL	BL	BL	BL	BL	BL	BL	BL	BL
192	BL	BL	BL	BL	BL	BL	BL	BL	BL
193	BL	BL	BL	BL	BL	BL	BL	BL	BL
194	BL	BL	BL	BL	BL	BL	BL	BL	BL
195	BL	BL	BL	BL	BL	BL	BL	BL	BL
196	BL	BL	BL	BL	BL	BL	BL	BL	BL
197	BL	BL	BL	BL	BL	BL	BL	BL	BL
198	BL	BL	BL	BL	BL	BL	BL	BL	BL
199	BL	BL	BL	BL	BL	BL	BL	BL	BL
200	BL	BL	BL	BL	BL	BL	BL	BL	BL
201	BL	BL	BL	BL	BL	BL	BL	BL	BL
202	BL	BL	BL	BL	BL	BL	BL	BL	BL
203	BL	BL	BL	BL	BL	BL	BL	BL	BL
204	BL	BL	BL	BL	BL	BL	BL	BL	BL
205	BL	BL	BL	BL	BL	BL	BL	BL	BL
206	BL	BL	BL	BL	BL	BL	BL	BL	BL
207	BL	BL	BL	BL	BL	BL	BL	BL	BL
208	BL	BL	BL	BL	NA	NA	NA	NA	NA
209	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
210	BL	BL	BL	BL	NA	NA	NA	NA	NA
211	BL	BL	BL	Inc. <sup>(a)</sup>	NA	NA	NA	NA	NA
212	BL	BL	BL	BL	NA	NA	NA	NA	NA

Remark:

1. "BL" denotes below limit
2. "OL" denotes over limit
3. "Inc." denotes inconclusive
4. "NA" denotes not applicable
5. "(a)" denotes further confirmation test was conducted, results are listed in 3.2
6. XRF screening limits in mg/kg for regulated elements in various matrices

ELEMENT	POLYMER		
	BL	INCONCLUSIVE	OL
Cd	$X < (70-3\sigma)$	$(70-3\sigma) < X < (130+3\sigma)$	$X > (130+3\sigma)$
Pb	$X < (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X > (1300+3\sigma)$

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Hg	$X < (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X > (1300+3\sigma)$
Br	$X < (300-3\sigma)$	$X > (300-3\sigma)$	NA
Cr	$X < (700-3\sigma)$	$X > (700-3\sigma)$	NA

ELEMENT	METAL		
	BL	INCONCLUSIVE	OL
Cd	$X < (70-3\sigma)$	$(70-3\sigma) < X < (130+3\sigma)$	$X > (130+3\sigma)$
Pb	$X < (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X > (1300+3\sigma)$
Hg	$X < (700-3\sigma)$	$(700-3\sigma) < X < (1300+3\sigma)$	$X > (1300+3\sigma)$
Cr	$X < (700-3\sigma)$	$X > (700-3\sigma)$	NA

ELEMENT	COMPLEX MATERIAL		
	BL	INCONCLUSIVE	OL
Cd	$X < (50-3\sigma)$	$(50-3\sigma) < X < (150+3\sigma)$	$X > (150+3\sigma)$
Pb	$X < (500-3\sigma)$	$(500-3\sigma) < X < (1500+3\sigma)$	$X > (1500+3\sigma)$
Hg	$X < (500-3\sigma)$	$(500-3\sigma) < X < (1500+3\sigma)$	$X > (1500+3\sigma)$
Br	$X < (250-3\sigma)$	$X > (250-3\sigma)$	NA
Cr	$X < (500-3\sigma)$	$X > (500-3\sigma)$	NA

9. Screening limits in mg/kg for regulated phthalated in various matrices

Phthalates	BL	INCONCLUSIVE
DEHP	$X < 500$	$X \geq 500$
BBP	$X < 500$	$X \geq 500$
DBP	$X < 500$	$X \geq 500$
DIBP	$X < 500$	$X \geq 500$

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### 3.2 Wet chemical test

#### Main instruments used for wet chemical test

Testing Target	Instrument	Method
Lead & Cadmium	ICP-OES	EN 62321-5:2014
Mercury	ICP-OES	EN 62321-4:2014
Hexavalent Chromium	UV-Vis	EN 62321-7-1:2015 EN 62321-7-2:2017
PBBs & PBDEs	GC/MS	EN 62321-6:2015
DEHP, BBP, DBP & DIBP	GC/MS	EN62321-8:2017

#### Criteria of chemical test results

##### **Pass:**

A definite Pass is given If the chemical test result meets the requirements of RoHS.

##### **Fail:**

A definite Fail is given If the chemical test result exceeds the full respective RoHS limit.

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Limit	100	1000	1000	1000	1000	1000	
Sample 031	ND	--	--	--	--	--	Pass
Sample 183	ND	--	--	--	--	--	Pass
Sample 034	--	26489**	--	--	--	--	Pass
Sample 041	--	93	--	--	--	--	Pass
Sample 053	--	19782*	--	--	--	--	Pass
Sample 100	--	26317*	--	--	--	--	Pass
Sample 160	--	2762**	--	--	--	--	Pass
Sample 176	--	14988**	--	--	--	--	Pass
Sample 041	--	--	--	ND	--	--	Pass
Sample 076	--	--	--	ND	--	--	Pass
Sample 017	--	--	--	--	ND	ND	Pass
Sample 030	--	--	--	--	ND	ND	Pass
Sample 031	--	--	--	--	ND	ND	Pass
Sample 032	--	--	--	--	ND	ND	Pass
Sample 045	--	--	--	--	ND	ND	Pass
Sample 051	--	--	--	--	ND	ND	Pass
Sample 064	--	--	--	--	ND	ND	Pass
Sample 070	--	--	--	--	ND	ND	Pass
Sample 091	--	--	--	--	ND	ND	Pass
Sample 104	--	--	--	--	ND	ND	Pass

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Test Sample	Cadmium [mg/kg]	Lead [mg/kg]	Mercury [mg/kg]	Chromium (VI) [mg/kg]	PBBs (Sum) [mg/kg]	PBDEs (Sum) [mg/kg]	OVERALL RESULT
Sample 108	--	--	--	--	ND	ND	Pass
Sample 112	--	--	--	--	ND	ND	Pass
Sample 140	--	--	--	--	ND	ND	Pass
Sample 147	--	--	--	--	ND	ND	Pass
Sample 175	--	--	--	--	ND	ND	Pass
Sample 184	--	--	--	--	ND	ND	Pass

Remark:

1. ND = Not detected (Detected limit of Cd :2mg/kg;Pb, Hg, and Cr(VI):10mg/kg; PBBs and PBDEs: 200mg/kg)
2. "mg/kg" denotes " milligram per kilogram ".
3. "--" means the substance for this sample are not tested.
4. "\*" means the exempt item according to DIRECTIVE 2011/65/EU ANNEX III item No 6(c).
5. "\*\*\*" means the exempt item according to DIRECTIVE 2011/65/EU ANNEX III item No 7(c)-1.

Test Sample	Cadmium [mg/kg]	Lead [mg/kg]	Mercury [mg/kg]	Chromium# (VI) [mg/kg]	PBBs (Sum) [mg/kg]	PBDEs (Sum) [mg/kg]	OVERALL RESULT
Limit	100	1000	1000	§	1000	1000	
Sample 012	--	--	--	Negative	--	--	Pass
Sample 052	--	--	--	Negative	--	--	Pass
Sample 078	--	--	--	Negative	--	--	Pass
Sample 084	--	--	--	Negative	--	--	Pass
Sample 092	--	--	--	Negative	--	--	Pass
Sample 101	--	--	--	Negative	--	--	Pass
Sample 103	--	--	--	Negative	--	--	Pass
Sample 167	--	--	--	Negative	--	--	Pass
Sample 189	--	--	--	Negative	--	--	Pass
Sample 190	--	--	--	Negative	--	--	Pass

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Test Sample	Cadmium [mg/kg]	Lead [mg/kg]	Mercury [mg/kg]	Chromium# (VI) [mg/kg]	PBBs (Sum) [mg/kg]	PBDEs (Sum) [mg/kg]	OVERALL RESULT
Sample 209	--	--	--	Negative	--	--	Pass
Sample 211	--	--	--	Negative	--	--	Pass

Remark:

1. "--" means the substance for this sample are not tested.
2. "mg/kg" denotes "milligram per kilogram"
3. "§" The Chromium (VI) content in surface layer have been confirmed with reference to EN 62321-7-1:2015

Result	Chromium (VI) concentration	Qualitative result
Negative	$<0.1 \mu\text{g}/\text{cm}^2$	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.
Inconclusive	$\geq 0.1 \mu\text{g}/\text{cm}^2$ and $\leq 0.13 \mu\text{g}/\text{cm}^2$	The result is considered to be inconclusive. Unavoidable coating variations may influence the determination. Recommendation: if additional samples are available, perform a total of 3 trials to increase sampling surface area. Use the averaged result of the 3 trials for the final determination.
Positive	$>0.13 \mu\text{g}/\text{cm}^2$	The sample is positive for Cr(VI). Concentration is above the limit of quantification and the statistical margin of error. The sample coating is considered to contain Cr(VI).

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Engineer:

Mr. Yang Sirong

Checked by:

Ms. Qi Nannan

-END OF REPORT -

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APPENDIX I: Additional Models

Product: DS-K1FXXXXXXXXXX(X=0-9 or A-Z or/or-or\*or blank)

Model: DS-K1F600-D6E-F、DS-K1F600-D6E、DS-K1F600-D6E-FUHK、DS-K1F600-D6E-FCKV、DS-K1F600-D6E-FUVS、DS-K1F600-D6E-FKVO、DS-K1F600-D6E-FHUN、DS-K1F600-D6EUHK、DS-K1F600-D6ECKV、DS-K1F600-D6EUVS、DS-K1F600-D6EKVO、DS-K1F600-D6EHUN、DS-K1FXXXXXXXXXX(X=0-9 or A-Z or/or-or\*or blank)

Remark

1. The report covers material testing on specified samples
2. The tested materials covered by the report were declared by the manufacturer to be used on the models listed in the APPENDIX of the report.

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## APPENDIX II: Official Exemption Items

Below items are quoted based on Directives of 2011/65/EU and its valid Amending Directives.

Exemption		Scope and dates of applicability
1	Mercury in single capped (compact) fluorescent lamps not exceeding (per burner)	
1(a)	For general lighting purpose < 30 W:5mg	Expires on 31 December 2011; 3,5mg maybe used per burner after 31 December 2011 until 31 December 2012; 2.5mg shall be used per burner after 31 December 2012
1(b)	For general lighting purposes $\geq 30$ W and < 50 W:5mg	Expires on 31 December 2011; 3,5mg maybe used per burner after 31 December 2011 until 31 December 2012; 2.5mg shall be used per burner after 31 December 2012
1(c)	For general lighting purposes $\geq 50$ W and < 150 W:5mg	
1(d)	For general lighting purpose $\geq 30$ W and $\geq 150$ W:15mg	
1(e)	For general lighting purpose with circular or square structural shape and tube diameter <17mm	No limitation of use until 31 December 2011; 7 mg may be used per burner after 31 December 2011
1(f)	For special purposes:5mg	
2(a)	Mercury in double capped linear fluorescent lamps for general lighting purposes not exceeding (per lamp)	
2(a)(1)	Tri-band phosphor with normal lifetime and a tube diameter < 9 mm (e.g. T2): 5mg	Expires on 31 December 2011; 4mg may be used per lamp after 31 December 2011
2(a)(2)	Tri-band phosphor with normal lifetime and a tube diameter $\geq 9$ mm and $\leq 17$ mm (e.g. T5): 5mg	Expires on 31 December 2011; 3mg may be used per lamp after 31 December 2011
2(a)(3)	Tri-band phosphor with normal lifetime and a tube diameter >17 mm and $\leq 28$ mm (e.g. T8): 5mg	Expires on 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
2(a)(4)	Tri-band phosphor with normal lifetime and a tube diameter >28mm (e.g. T12): 5mg	Expires on 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
2(a)(5)	Tri-band phosphor with long lifetime( $\geq 25$ 000h):8mg	Expires on 13 December 2011;5mg may be used per lamp after 31 December 2011

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Exemption		Scope and dates of applicability
2(b)	Mercury in other fluorescent lamps not exceeding (per lamp):	
2(b)(1)	Linear halophosphate lamps with tube >28 mm(e.g.T10 and T12): 10mg	Expires on 13 April 2012
2(b)(2)	Non-linear halophosphate lamps (all diameters):15mg	Expires on 13 April 2016
2(b)(3)	Non-linear tri-band phosphor lamps with tube diameter >17mm (e.g. T9)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
2(b)(4)	Lamps for other general lighting and special purposes (e.g. induction lamps)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
3	Mercury in cold cathode fluorescent lamps and external electrode fluorescent lamps (CCFL and EEFL) for special purposes not exceeding (per lamp)	
3(a)	Short length(≤500mm)	No limitation of use until 31 December 2011; 3,5 mg may be used per lamp after 31 December 2011
3(b)	Medium length (> 500mm and ≤ 1 500mm)	No limitation of use until 31 December 2011; 5 mg may be used per lamp after 31 December 2011
3(c)	Long length (> 1 500mm)	No limitation of use until 31 December 2011; 13 mg may be used per lamp after 31 December 2011
4(a)	Mercury in other low pressure discharge lamps (per lamp)	No limitation of use until 31 December 2011; 15 mg may be used per lamp after 31 December 2011
4(b)	Mercury in High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner) in lamps with improved colour rendering index Ra >60;	
4(b)-I	P≤155 W	No limitation of use until 31 December 2011; 30mg may be used per burner after 31 December 2011
4(b)-II	155 W < P ≤ 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011
4(b)-III	P > 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011
4(c)	Mercury in other High Pressure Sodium (vapour) lamps for general lighting purposes not exceeding (per burner)	
4(c)-I	P≤155 W	No limitation of use until 31 December 2011; 30mg may be used per burner after 31 December 2011

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Report No. 70.400.19.032.111-00/02

Dated 2019-10-22



China

Exemption		Scope and dates of applicability
4(c)-II	155 W < P ≤ 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011
4(c)-III	P > 405 W	No limitation of use until 31 December 2011; 40mg may be used per burner after 31 December 2011
4(d)	Mercury in High Pressure Mercury (vapour) lamps (HPMV)	Expires on 13 April 2015
4(e)	Mercury in metal halide lamps (MH)	
4(f)	Mercury in other discharge lamps for special purposes not specifically mentioned in this Annex	
4(g)	Mercury in hand crafted luminous discharge tubes used for signs, decorative or architectural and specialist lighting and light-artwork, where the mercury content shall be limited as follows: (a) 20 mg per electrode pair + 0,3 mg per tube length in cm, but not more than 80 mg, for outdoor applications and indoor applications exposed to temperatures below 20 °C; (b) 15 mg per electrode pair + 0,24 mg per tube length in cm, but not more than 80 mg, for all other indoor applications.	Expires on 1 December 2018
5(a)	Lead in glass of cathode ray tubes	
5(b)	Lead in glass of fluorescent tubes not exceeding 0,2 % by weight	
6(a)	Lead as an alloying element in steel for machining purposes and in galvanised steel containing up to 0,35 % lead by weight	Expires on: — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments; — 21 July 2023 for category 8 in vitro diagnostic medical devices; — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(a)-I	Lead as an alloying element in steel for machining purposes containing up to 0,35 % lead by weight and in batch hot dip galvanised steel components containing up	Expires on 21 July 2021 for categories 1-7 and 10. <sup>1</sup>

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China

Exemption		Scope and dates of applicability
	to 0,2 % lead by weight	
6(b)	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight	Expires on: — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.
6(b)-I	Lead as an alloying element in aluminium containing up to 0,4 % lead by weight, provided it stems from lead-bearing aluminium scrap recycling	Expires on 21 July 2021 for categories 1-7 and 10.
6(b)-II	Lead as an alloying element in aluminium for machining purposes with a lead content up to 0,4 % by weight	Expires on 18 May 2021 for categories 1-7 and 10.'
6(c)	Copper alloy containing up to 4 % lead by weight	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.'
7(a)	Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead)	Applies to categories 1-7 and 10 (except applications covered by point 24 of this Annex) and expires on 21 July 2021. For categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments expires on 21 July 2021. For category 8 in vitro diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.'
7(b)	Lead in solders for servers, storage and storage array systems, network infrastructure equipment for switching, signalling, transmission, and network management for telecommunications	

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Exemption		Scope and dates of applicability
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	Applies to categories 1-7 and 10 (except applications covered under point 34) and expires on 21 July 2021. For categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments expires on 21 July 2021. For category 8 in vitro diagnostic medical devices expires on 21 July 2023. For category 9 industrial monitoring and control instruments, and for category 11 expires on 21 July 2024.
7(c)-II	Lead in dielectric ceramic in capacitors for a rated voltage of 125 V AC or 250 V DC or higher	
7(c)-III	Lead in dielectric ceramic in capacitors for a rated voltage of less than 125 V AC or 250 V DC	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
7(c)-IV	Lead in PZT based dielectric ceramic materials for capacitors being part of integrated circuits or discrete semiconductors'	
8(a)	Cadmium and its compounds in one shot pellet type thermal cut-offs	Expires on 1 January 2012 and after that date may be used in spare parts for EEE placed on the market before 1 January 2012
8(b)	Cadmium and its compounds in electrical contacts	
9	Hexavalent chromium as an anticorrosion agent of the carbon steel cooling system in absorption refrigerators up to 0,75 % by weight in the cooling solution	
9(b)	Lead in bearing shells and bushes for refrigerant-containing compressors for heating, ventilation, air conditioning and refrigeration (HVACR) applications	
11(a)	Lead used in C-press compliant pin connector systems	May be used in spare parts for EEE placed on the market before 24 September 2010
11(b)	Lead used in other than C-press compliant pin connector systems	Expires on 1 January 2013 and after that date may be used in spare parts for EEE placed on the market before 1 January 2013
12	Lead as a coating material for the thermal conduction module C-ring	May be used in spare parts for EEE placed on the market before 24 September 2010

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China

Exemption		Scope and dates of applicability
13(a)	Lead in white glasses used for optical applications	
13(b)	Cadmium and lead in filter glasses and glasses used for reflectance standards	
14	Lead in solders consisting of more than two elements for the connection between the pins and the package of microprocessors with a lead content of more than 80 % and less than 85 % by weight	Expires on 1 January 2011 and after that date may be used in spare parts for EEE placed on the market before 1 January 2011
15	Lead in solders to complete a viable electrical connection between semiconductor die and carrier within integrated circuit flip chip packages	
16	Lead in linear incandescent lamps with silicate coated tubes	Expires on 1 September 2013
17	Lead halide as radiant agent in high intensity discharge (HID) lamps used for professional reprography applications	
18(a)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as speciality lamps for diazoprinting reprography, lithography, insect traps, photochemical and curing processes containing phosphors such as SMS ((Sr,Ba) <sub>2</sub> MgSi <sub>2</sub> O <sub>7</sub> :Pb)	Expires on 1 January 2011
18(b)	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps when used as sun tanning lamps containing phosphors such as BSP(BaSi <sub>2</sub> O <sub>5</sub> :Pb)	Categories 1-7 and 10, Expires on 21 July 2021
		Categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, Expires on 21 July 2021
		Category 8 in vitro diagnostic medical devices, Expires on 21 July 2023
		Category 9 industrial monitoring and control instruments, and for category 11, Expires on 21 July 2024
18(b)-I	Lead as activator in the fluorescent powder (1 % lead by weight or less) of discharge lamps containing phosphors such as BSP (BaSi <sub>2</sub> O <sub>5</sub> :Pb) when used in medical phototherapy equipment	Categories 5 and 8, excluding applications covered by entry 34 of Annex IV, Expires on 21 July 2021
19	Lead with PbBiSn-Hg and PbInSn-Hg in specific compositions as main amalgam and with PbSn-Hg as auxiliary amalgam in very compact energy saving lamps (ESL)	Expires on 1 June 2011
20	Lead oxide in glass used for bonding front and rear substrates of flat fluorescent lamps used for Liquid Crystal Displays (LCDs)	Expires on 1 June 2011

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	Exemption	Scope and dates of applicability
21	Lead and cadmium in printing inks for the application of enamels on glasses, such as borosilicate and soda lime glasses	
23	Lead in finishes of fine pitch components other than connectors with a pitch of 0,65 mm and less	May be used in spare parts for EEE placed on the market before 24 September 2010
24	Lead in solders for the soldering to machined through hole discoidal and planar array ceramic multilayer capacitors	Expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical devices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.'
25	Lead oxide in surface conduction electron emitter displays (SED) used in structural elements, notably in the seal frit and frit ring	
26	Lead oxide in the glass envelope of black light blue lamps	Expires on 1 June 2011
27	Lead alloys as solder for transducers used in high-powered (designated to operate for several hours at acoustic power levels of 125 dB SPL and above) loudspeakers	Expired on 24 September 2010
29	Lead bound in crystal glass as defined in Annex I (Categories 1, 2, 3 and 4) of Council Directive 69/493/EEC ( 1 )	
30	Cadmium alloys as electrical/mechanical solder joints to electrical conductors located directly on the voice coil in transducers used in high-powered loudspeakers with sound pressure levels of 100 dB (A) and more	
31	Lead in soldering materials in mercury free flat fluorescent lamps (which e.g. are used for liquid crystal displays, design or industrial lighting)	
32	Lead oxide in seal frit used for making window assemblies for Argon and Krypton laser tubes	
33	Lead in solders for the soldering of thin copper wires of 100 um diameter and less in power transformers	
34	Lead in cermet-based trimmer potentiometer elements	Applies to all categories; expires on: — 21 July 2021 for categories 1-7 and 10, — 21 July 2021 for categories 8 and 9 other than in vitro diagnostic medical

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China

Exemption		Scope and dates of applicability
		devices and industrial monitoring and control instruments, — 21 July 2023 for category 8 in vitro diagnostic medical de-vices, — 21 July 2024 for category 9 industrial monitoring and control instruments, and for category 11.'
36	Mercury used as a cathode sputtering inhibitor in DC plasma displays with a content up to 30 mg per display	Expired on 1 July 2010
37	Lead in the plating layer of high voltage diodes on the basis of a zinc borate glass body	
38	Cadmium and cadmium oxide in thick film pastes used on aluminium bonded beryllium oxide	
39(a)	Cadmium selenide in downshifting cadmium-based semiconductor nanocrystal quantum dots for use in display lighting applications (< 0,2 µg Cd per mm2 of display screen area)	Expires for all categories on [two years after the publication of the Delegated Directive in the Official Journal]
40	Cadmium in photoresistors for analogue optocouplers applied in professional audio equipment	Expires on 31 December 2013
41	Lead in solders and termination finishes of electrical and electronic components and finishes of printed circuit boards used in ignition modules and other electrical and electronic engine control systems, which for technical reasons must be mounted directly on or in the crankcase or cylinder of hand-held combustion engines (classes SH:1, SH:2, SH:3 of Directive 97/68/EC of the European Parliament and of the Council.	Expires on 1 December 2018
42	Lead in bearings and bushes of diesel or gaseous fuel powered internal combustion engines applied in non-road professional use equipment:  - with engine total displacement ≥ 15 litres; or - with engine total displacement < 15 litres and the engine is designed to operate in applications where the time between signal to start and full load is required to be less than 10 seconds; or regular maintenance is typically performed in a harsh and dirty outdoor environment, such as mining, construction, and agriculture applications.	Category 11, excluding applications covered by entry 6(c) of Annex III, Expires on 21 July 2024

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