

Add: F&G, 23/F., Technology Building, Quanzhi Science and Technology Innovation Park, Industrial Building, Maozhoushan Industrial Park, Houting, Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Tel: (86)755-23353209

Internet: Http://www.LCS-cert.com

Report No.: LCS190415075AR

TEST REPORT

Client company

: JCC Lighting Products Ltd.

Client address

Innovation Centre, Beeding Close, Southern Cross Trading Estate, Bognor

Regis, West Sussex PO22 9TS, UK

Manufacturer

: Zhejiang Tai-G Photoelectric Technology Co., Ltd.

Address

No.576, Gaoxin Xiyi Rd., Tongxiang Economic Development Zone, 314500,

Tongxiang, Zhejiang, China.

Report on the submitted samples said to be:

Sample Name

: Fire-rated LED downlight

Trade Mark

a LEVITON

Test Item No.

JC1001

:

Style/ Item No.

JC1002, WHIT022, WHIT030, WHIT031, WHIT032

Sample Receiving Date

April 17, 2019

Testing Period

: April 17, 2019 ~ April 18, 2019

Results

: Please refer to next page(s).

Summary of Test Results:

TEST REQUEST CONCLUSION

According to the customer's request, based on the performed tests on submitted sample, the results of lead(Pb), mercury(Hg), cadmium(Cd), hexavalent chromium(Cr^{6+}), polybrominated biphenyls(PBBs), polybrominated diphenyl(PBDEs), (BBP), (DBP), DEHP) (DIBP), comply with the limits as set by EU RoHS Directive 2011/65/EU and its amendment directives

PASS

Signed for and on behalf of LCS

Written By:

Fairy Zhang

Checked by:__

SUOZ SII

Approved by:

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Results:

A EU RoHS Directive 2011/65/EU and its amendment directives EU 863/2015

Test method:

With reference to IEC 62321-3-1:2013, Screening by X-ray Fluorescence Spectroscopy (XRF)

Lead & Cadmium Content:

With reference to IEC 62321-5:2013, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES)

Mercury Content:

With reference to IEC 62321-4:2013+AMD1:2017 CSV, by acid digestion and analysis was performed by inductively coupled plasma atomic emission spectrometer (ICP-OES)

Hexavalent Chromium Content:

With reference to IEC 62321-7-1:2015 or IEC 62321-7-2:2017, by alkaline digestion and analysis was performed by UV-visible spectrophotometer (UV-Vis)

PBBs & PBDEs Content:

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

BBP DBP DEHP & DIBP Content:

With reference to IEC 62321-8:2015, by solvent extraction and analysis was performed by gas chromatographic-mass spectrometer (GC-MS)

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No.	Sample	Tested Item Lead (Pb)	XRF Screeni ng results BL	Chemical test results (mg/kg)	Conclusion	Date of sample submission/resubm ission	
	-	, ,	BL	/	-		
	Disale	Cadmium Content (Cd)	BL	/			
01	Black coating	Mercury (Hg) Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	Coating	PBBs	BL	/	-		
	-	PBDEs	BL	/	-		
		Lead (Pb)	BL	/			
	-	Cadmium Content (Cd)	BL	/	-		
	Silver	Mercury (Hg)	BL	/	-		
02	metal sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	Silect	PBBs	BL	/	-		
	-	PBDEs	BL	/			
		Lead (Pb)	BL	/			
	-	Cadmium Content (Cd)	BL	/			
	Red	Mercury (Hg)	BL	/			
03	plastic film	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	piaotio iiiii	PBBs	BL	/	_		
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Silver	Cadmium Content (Cd)	BL	/			
	metal	Mercury (Hg)	BL	,	1		
04	needle	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	1.000.0	PBBs	BL	/	1		
		PBDEs	BL	,	1		
		Lead (Pb)	BL	,			
		Cadmium Content (Cd)	BL	/			
	White	Mercury (Hg)	BL				
05	plastic ring	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	'	PBBs	BL	/	=		
		PBDEs	BL	/	=		
		Lead (Pb)	BL	/			
	Silver	Cadmium Content (Cd)	BL	/	1		
	metal	Mercury (Hg)	BL	/	1	0040	
06	sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			

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No.	Sample	Tested Item	XRF Screeni ng results	Chemical test results (mg/kg)	Conclusion	Date of sample submission/resubm ission	
		Lead (Pb)	BL	/			
	Silver	Cadmium Content (Cd)	BL	/			
07	metal	Mercury (Hg)	BL	/	PASS	2018-07-05	
01	sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	1 700	2010-07-03	
	5551	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
08	White	Mercury (Hg)	BL	/	DACC	2049 07 05	
08	coating	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
09	White	Mercury (Hg)	BL	/	DACC	2018-07-05	
	plastic ring	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
40	White	Mercury (Hg)	BL	/	DACC	2040 07 05	
10	plastic ring	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	White	Cadmium Content (Cd)	BL	/			
11	plastic	Mercury (Hg)	BL	/	PASS	2049 07 05	
''	sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	Х	N.D.			
		PBDEs	Χ	N.D.			
		Lead (Pb)	BL	/			
	Transpare	Cadmium Content (Cd)	BL	/]		
12	nt plastic	Mercury (Hg)	BL	/	DACC	2049 07 05	
12	sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			

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			XRF	Chemical		Date of sample	
No.	Sample	Tested Item	Screeni	test	Conclusion	submission/resubm	
	·		ng results	results (mg/kg)		ission	
		Lead (Pb)	BL	(111g/kg) /			
		Cadmium Content (Cd)	BL	/			
	Black	Mercury (Hg)	BL	/			
13	plastic film	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	,			
	Black	Mercury (Hg)	BL	/			
14	plastic film	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	,			
		PBDEs	BL	/			
	Silver	Lead (Pb)	BL	/			
		Cadmium Content (Cd)	Χ	N.D.			
	metal	Mercury (Hg)	BL	/			
15	needle	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	White	Cadmium Content (Cd)	BL	/			
4.0	plastic	Mercury (Hg)	BL	/	5400		
16	sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Black	Cadmium Content (Cd)	BL	/			
47	plastic	Mercury (Hg)	BL	/	DACC	2040 07 05	
17	cord skin	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Red	Cadmium Content (Cd)	BL	/			
10	plastic line	Mercury (Hg)	BL	/	DACC	2019 07 05	
18	skin	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			

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			XRF Screeni	Chemical test		Date of sample	
No.	Sample	Tested Item	ng	results	Conclusion	submission/resubm	
			results	(mg/kg)		ission	
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
40	Silver	Mercury (Hg)	BL	/	DACC	2040 07 05	
19	metal wire	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Black	Cadmium Content (Cd)	BL	/			
00	plastic line	Mercury (Hg)	BL	/	DAGG	0040 07 05	
20	skin	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	White	Cadmium Content (Cd)	BL	/			
04	plastic line	Mercury (Hg)	BL	/	DAGG	0040 07 05	
21	skin	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
20	Silver	Mercury (Hg)	BL	/	DACC	2040 07 05	
22	metal wire	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Solder	Cadmium Content (Cd)	BL	/			
22	(PCB1)	Mercury (Hg)	BL	/	DACC	2040 07 05	
23		Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Yellow	Cadmium Content (Cd)	BL	/			
24	LED	Mercury (Hg)	BL	/	DACC	2019 07 05	
24	(PCB1)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/]		

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No.	Sample	Tested Item	XRF Screeni ng results	Chemical test results (mg/kg)	Conclusion	Date of sample submission/resubmission	
	Cibrar	Lead (Pb)	BL BL	/			
	Silver metal	(/		/			
25	25 sheet (PCB1)	Mercury (Hg)	BL	/	PASS	2018-07-05	
20		Hexavalent Chromium (Cr ⁶⁺)	BL	/	17.00	2010 07 00	
		PBBs	BL	/			
		PBDEs	BL	/			
	0	Lead (Pb)	BL	/			
	Silver	Cadmium Content (Cd)	BL	/			
26	metal sheet	Mercury (Hg)	BL	/	PASS	2018-07-05	
20	(PCB2)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2010-07-03	
	(1 002)	PBBs	BL	/			
		PBDEs	BL	/			
	Black	Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
27	plastic film	Mercury (Hg)	BL	/	DACC	2040 07 05	
21	(PCB2)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	Χ	N.D.			
20	Solder	Mercury (Hg)	BL	/	DACC	2042.27.25	
28	(PCB2)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	PCB	Cadmium Content (Cd)	BL	/			
00	board	Mercury (Hg)	BL	/	DAGG	0040.07.05	
29	(PCB2)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/]		
00	Green	Mercury (Hg)	BL	/	DAGG	0040 07 05	
30	plastic film	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/	1		
		PBDEs	BL	/	1		

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No.	Sample	Tested Item Lead (Pb)	XRF Screeni ng results BL	Chemical test results (mg/kg)	Conclusion	Date of sample submission/resubm ission	
	Grey	Cadmium Content (Cd)	BL	/			
31	plastic film (PCB3)	Mercury (Hg)	BL	/	PASS	2018-07-05	
31		Hexavalent Chromium (Cr ⁶⁺)	BL	/	FAGG	2010-07-03	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Silver	Cadmium Content (Cd)	BL	/			
32	metal	Mercury (Hg)	BL	/	PASS	2018-07-05	
32	sheet	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2010-07-05	
	(PCB3)	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Black	Cadmium Content (Cd)	BL	/			
33	plastic film	Mercury (Hg)	BL	/	PASS	2010 07 05	
33	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Gray	Cadmium Content (Cd)	BL	/			
24	ceramic	Mercury (Hg)	BL	/	DACC	2040 07 05	
34	sheet (PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	(1 CD3)	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Gold metal	Cadmium Content (Cd)	BL	/			
35	copper wire	Mercury (Hg)	BL	/	PASS	2010 07 05	
35	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	(1 CD3)	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Red	Cadmium Content (Cd)	BL	/			
200	coating	Mercury (Hg)	BL	/	DACC	2049 07 05	
36	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	` ′	PBBs	BL	1			
		PBDEs	BL	/	1		

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No.	Sample	Tested Item	XRF Screeni ng results	Chemical test results (mg/kg)	Conclusion	Date of sample submission/resubmission	
	Yellow	Lead (Pb)	BL	/			
	plastic	Cadmium Content (Cd)	BL	/			
37	sheet	Mercury (Hg)	BL	/	PASS	2018-07-05	
31	(transform	Hexavalent Chromium (Cr ⁶⁺)	BL	/	FAGG	2010-07-03	
	er -PCB3)	PBBs	BL	/			
		PBDEs	BL	/			
	Black	Lead (Pb)	BL	/			
	plastic	Cadmium Content (Cd) BL /					
20	sheet	Mercury (Hg)	BL	/	DACC	2040 07 05	
38	(transform er -PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	er -r CD3)	PBBs	BL	/			
		PBDEs	BL	/			
	Gray	Lead (Pb)	BL	/			
	ceramic	Cadmium Content (Cd)	BL	/			
200	sheet	Mercury (Hg)	BL	/	DAGG	0040.07.05	
39	(transform	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	er -PCB3)	PBBs	BL	/			
		PBDEs	BL	/			
	Gold metal	Lead (Pb)	BL	/			
	copper	Cadmium Content (Cd)	BL	/			
40	wire	Mercury (Hg)	BL	/	PASS	2019 07 05	
40	(transform	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	er -PCB3)	PBBs	BL	/			
		PBDEs	BL	/			
	Blue	Lead (Pb)	BL	/			
	plastic	Cadmium Content (Cd)	BL	/			
41	sheet	Mercury (Hg)	BL	/	PASS	2018-07-05	
41	(capacitan	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2016-07-05	
	ce -PCB3)	PBBs	BL	/			
		PBDEs	BL	/			
	Silver	Lead (Pb)	BL	/			
	metal	Cadmium Content (Cd)	BL	/			
40	sheet	Mercury (Hg)	BL	/	DACC	2019 07 05	
42	(capacitan	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	ce -PCB3)	PBBs	BL	/			
		PBDEs	BL	/			

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			XRF	Chemical		Date of sample	
No.	Sample	Tested Item	Screeni	test results	Conclusion	submission/resubm	
			ng results	(mg/kg)		ission	
		Lead (Pb)	BL (III)				
	Black	Cadmium Content (Cd)	BL	/			
	plastic ring (capacitor -PCB3)	Mercury (Hg)	BL	/			
43		Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Blue	Cadmium Content (Cd)	BL	/			
	coating	Mercury (Hg)	BL	/	5400	0040.07.05	
44	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
	Color ring	Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
45	resistance	Mercury (Hg)	BL	/	DAGG	0040.07.05	
45	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	5	Cadmium Content (Cd)	BL	/			
46	Patch	Mercury (Hg)	BL	/	PASS	2019 07 05	
46	resistance (PCB3)	Hexavalent Chromium (Cr ⁶⁺)	Χ	N.D.	PASS	2018-07-05	
	(1 000)	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Dotob	Cadmium Content (Cd)	BL	/			
47	Patch capacitanc	Mercury (Hg)	BL	/	PASS	2018-07-05	
47	e (PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	FAGG	2010-07-03	
	0 (1 020)	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Pleak	Cadmium Content (Cd)	BL	/			
48	Black diode	Mercury (Hg)	BL	/	PASS	2018-07-05	
70	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	1 700	2018-07-05	
	(FGB3)	PBBs	BL	/			
		PBDEs	BL	/			

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			XRF Screeni	Chemical test		Date of sample	
No.	Sample	Tested Item	ng	results	Conclusion	submission/resubm	
			results	(mg/kg)		ission	
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
49	Black IC	Mercury (Hg)	BL	/	DACC	2040 07 05	
49	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	5	Cadmium Content (Cd)	BL	/			
50	Black	Mercury (Hg)	BL	/	DACC	2040 07 05	
50	diode (PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	(1 CD3)	PBBs	Х	N.D.			
		PBDEs	Χ	N.D.			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
51	Solder	Mercury (Hg)	BL	/	PASS	2040 07 05	
51	(PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	202	Cadmium Content (Cd)	BL	/			
52	PCB	Mercury (Hg)	BL	/	PASS	2019 07 05	
52	board (PCB3)	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	(1 000)	PBBs	Χ	N.D.			
		PBDEs	Χ	N.D.			
		Lead (Pb)	BL	/			
	0.1	Cadmium Content (Cd)	BL	/			
53	Silver metal	Mercury (Hg)	BL	/	PASS	2018-07-05	
33	screw	Hexavalent Chromium (Cr ⁶⁺)	Χ	Negative	PASS	2010-07-03	
	Solow	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Cit.	Cadmium Content (Cd)	BL	/			
54	Silver metal	Mercury (Hg)	BL	/	PASS	2018-07-05	
34	screw	Hexavalent Chromium (Cr ⁶⁺)	BL	/	FASS	2018-07-05	
	Sciew	PBBs	BL	/			
		PBDEs	BL	/			

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No.	Sample	Tested Item	XRF Screeni ng results	Chemical test results (mg/kg)	Conclusion	Date of sample submission/resubm ission	
		Lead (Pb)	BL	/			
	Silver	Cadmium Content (Cd)	Χ	N.D.			
55	metal	Mercury (Hg)	BL	/	PASS	2018-07-05	
	screw	Hexavalent Chromium (Cr ⁶⁺)	BL	/	17.00	2010 07 00	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
56	Silver	Mercury (Hg)	BL	/	PASS	2018-07-05	
30	metal nut	Hexavalent Chromium (Cr ⁶⁺)	Χ	Negative	PASS	2010-07-03	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
57	Silver	Mercury (Hg)	BL	/	PASS	2018-07-05	
57	metal nut	Hexavalent Chromium (Cr ⁶⁺)	Χ	Negative	PASS	2016-07-05	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
	Pvc	Cadmium Content (Cd)	BL	/			
50	Silicone	Mercury (Hg)	BL	/	DACC	2040 07 05	
58	Fiberglass	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
	Sleeving	PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
59	Silver	Mercury (Hg)	BL	/	PASS	2018-07-05/	
59	metal ring	Hexavalent Chromium (Cr ⁶⁺)	Х	Negative	PASS	2018-08-04	
		PBBs	BL	/			
		PBDEs	BL	/			
		Lead (Pb)	BL	/			
		Cadmium Content (Cd)	BL	/			
60	Silver	Mercury (Hg)	BL	/	DACC	2010 07 05	
60	metal ring	Hexavalent Chromium (Cr ⁶⁺)	BL	/	PASS	2018-07-05	
		PBBs	BL	/	1		
		PBDEs	BL	/	1		

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B) The test results of DBP, BBP, DEHP & DIBP

Item	Unit	MDL			Limit	
Item	Oilit	WIDE	1+3+5	8+9+10	11+12+13	Lillit
Dibuyl Phthalate(DBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Benzylbutyl Phthalate(BBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Bis(2-ethylhexyl) Phthalate(DEHP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Diispbutyl phthalate(DIBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Conclusion	1	1	Pass	Pass	Pass	/

Item	Unit	MDL			Limit	
nem	Offic	WIDL	14+16+17	18+20+21	24+27+29	Lillit
Dibuyl Phthalate(DBP)	mg/kg	50	N.D.	104	N.D.	1000 mg/kg
Benzylbutyl Phthalate(BBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Bis(2-ethylhexyl) Phthalate(DEHP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Diispbutyl phthalate(DIBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Conclusion	1	1	Pass	Pass	Pass	/

Item	Unit	MDL	Results			Limit
			30+31+33	36+37+38	41+43+52	LIIIII
Dibuyl Phthalate(DBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Benzylbutyl Phthalate(BBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Bis(2-ethylhexyl) Phthalate(DEHP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Diispbutyl phthalate(DIBP)	mg/kg	50	N.D.	N.D.	N.D.	1000 mg/kg
Conclusion	1	1	Pass	Pass	Pass	/

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Item	Unit	MDL	Results	Limit
			58	Limit
Dibuyl Phthalate(DBP)	mg/kg	50	N.D.	1000 mg/kg
Benzylbutyl Phthalate(BBP)	mg/kg	50	N.D.	1000 mg/kg
Bis(2-ethylhexyl) Phthalate(DEHP)	mg/kg	50	N.D.	1000 mg/kg
Diispbutyl phthalate(DIBP)	mg/kg	50	N.D.	1000 mg/kg
Conclusion	1	1	Pass	/

Note:

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

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

Note:

BL = Below Limit
OL = Over Limit
X = Inconclusive

ii The XRF screening test for RoHS elements – The reading may be different to the actual content in the sample be of non-uniformity composition.

The maximum permissible limit is quoted from the document 2005/618/EC amending RoHS directive 2011/65/EU:

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

Disclaimers:

This XRF Screening report is for reference purposes only. The applicant shall make its/his/her own judgment as to whether the information provided in this XRF screening report is sufficient for its/his/her purposes.

The result shown in this XRF screening report will differ based on various factors, including but not limited to, the sample size, thickness, area, surface flatness, equipment parameters and matrix effect (e.g. plastic, rubber, metal, glass, ceramic etc.). Further wet chemical pre-treatment with relevant chemical equipment analysis are required to obtain quantitative data.

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Note:

- Negative = Absence of Cr(VI) on the tested areas
- MDL = Method Detection Limit
- N/A = Not apply
- /= Undetected
- mg/kg = ppm
- ** = Spot-test:

Negative = Absence of Cr(VI) coating/ surface layer, Positive = Presence of Cr(VI) coating/ surface layer;

(The tested sample should be further verified by boiling-water-extraction method if the spot test result cannot be confirmed)

Boiling-water-extraction:

Negative = Absence of Cr(VI) coating/ surface layer, Positive = Presence of Cr(VI) coating/ surface layer;

(The detected concentration in boiling- water-extraction solution is equal or greater than 0.02 mg/kg with 50cm² sample surface areas.)

- #=

Positive indicates the presence of Cr(VI) on the tested areas and result be regarded as conflict with RoHS requirement.

Negative indicates the absence of Cr(VI) on the tested areas and result be regarded as no conflict with RoHS requirement.

- #1 According to RoHS directive 2011/65/EU and its amendments, Lead is exempted in glass of cathode ray tubes, electronic components and fluorescent tubes.
- #2 According to RoHS directive 2011/65/EU and its amendments, Lead is exempted in electronic ceramic parts (e.g. piezoelectronic devices).
- #3 According to RoHS directive 2011/65/EU and its amendments, Lead is exempted as an alloying element in Copper containing up to 4% (40000ppm) by weight.
- #4 According to RoHS directive 2011/65/EU and its amendments, Lead is exempted in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).
- #5 According to the statement provided by the customer, according to RoHS directive 2011/65/EU and its amendments, Lead is exempted as an alloying element in Aluminum containing up to 0.4% (4000ppm) by weight.
- #6 According to the statement provided by the customer, according to RoHS directive 2011/65/EU and its amendments, Cadmium and its compounds in electrical contact is exempted.
- Flow chart appendix is included.
- Photo appendix is included.
- This report cites data numbered LCS180625019AR.

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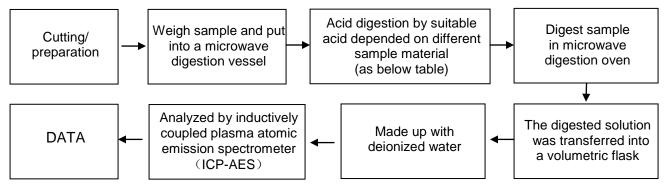
Tel: (86)755-23353209 Internet: Http://www.LCS-cert.com

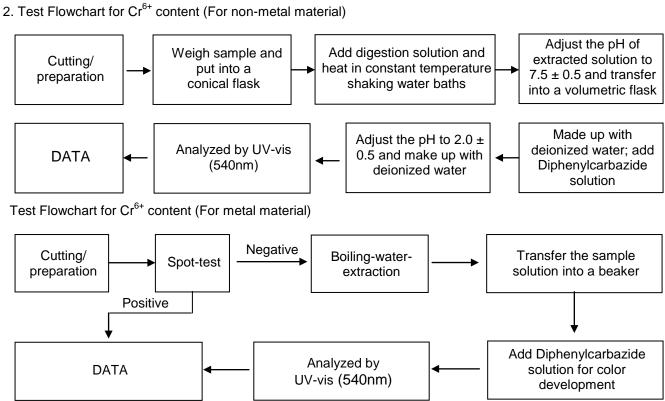
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AppendixI

Test Flow chart

1. Test Flow chart for Cd / Pb /Hg content These samples were dissolved totally by pre-conditioning method according to below flow chart.





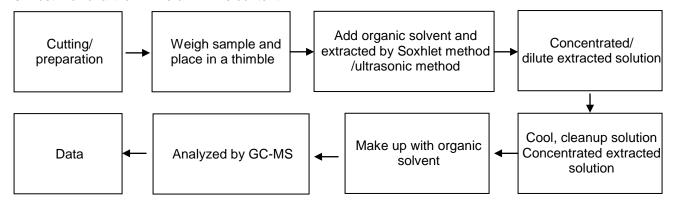
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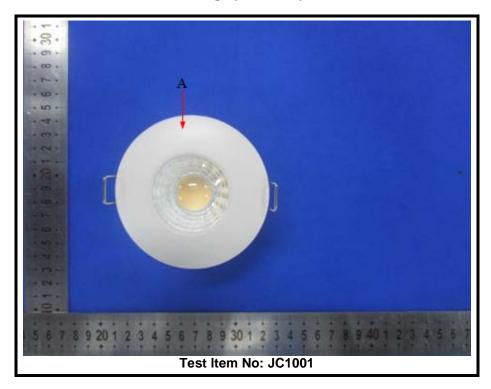
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3. Test Flowchart for PBBs & PBDEs content



AppendixIIPhotograph of Sample

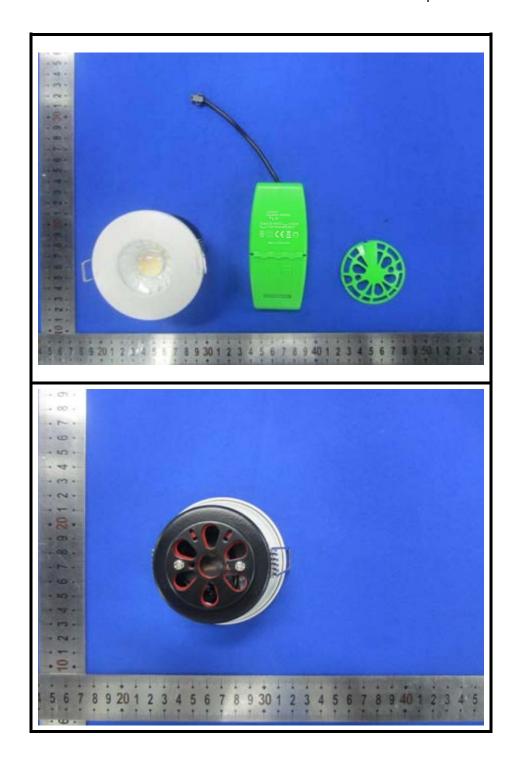


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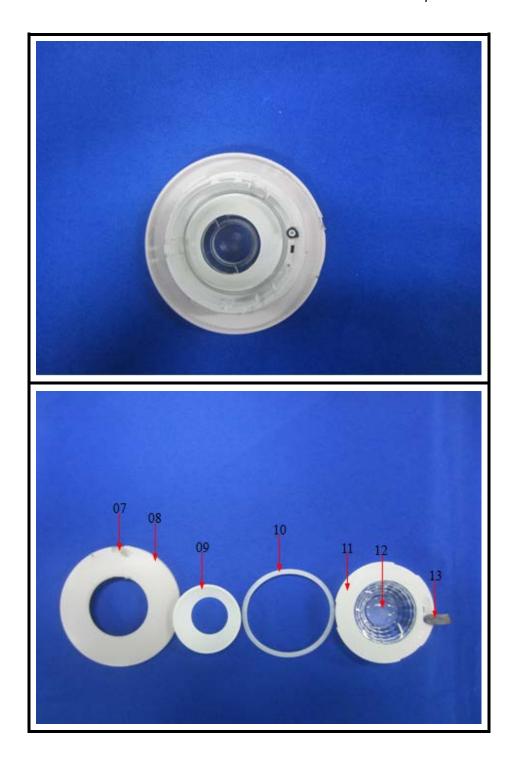


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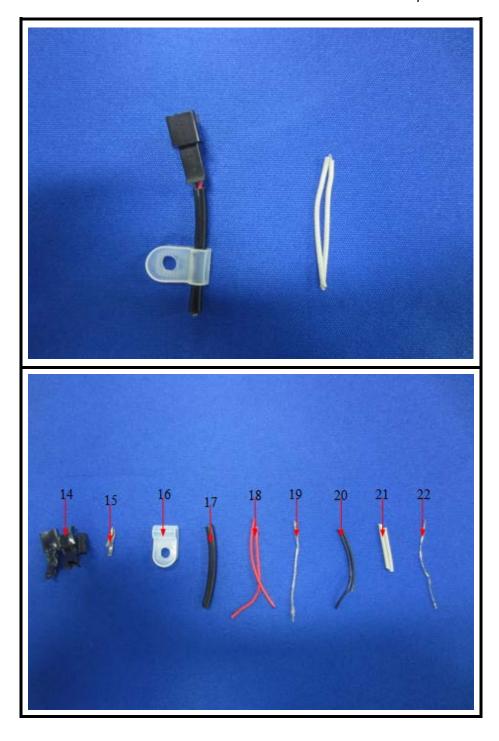


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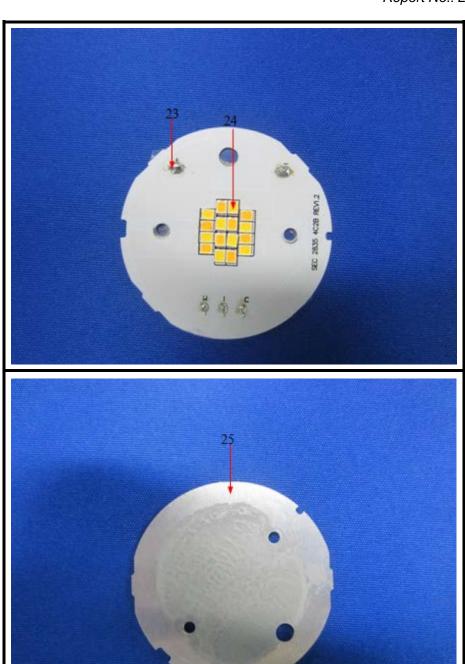


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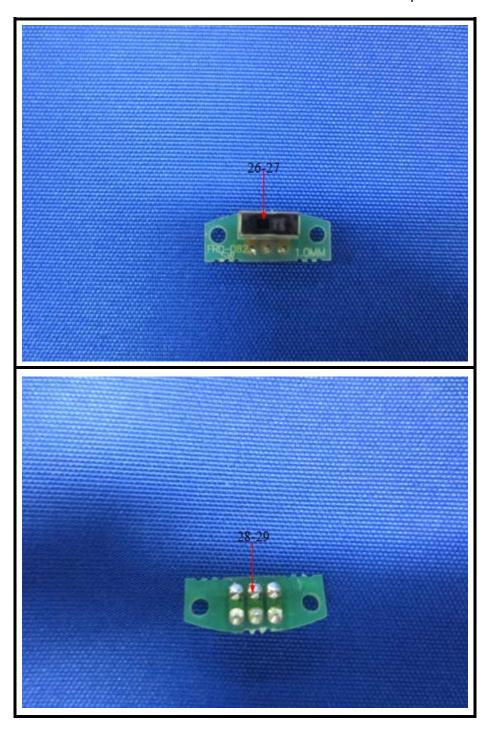


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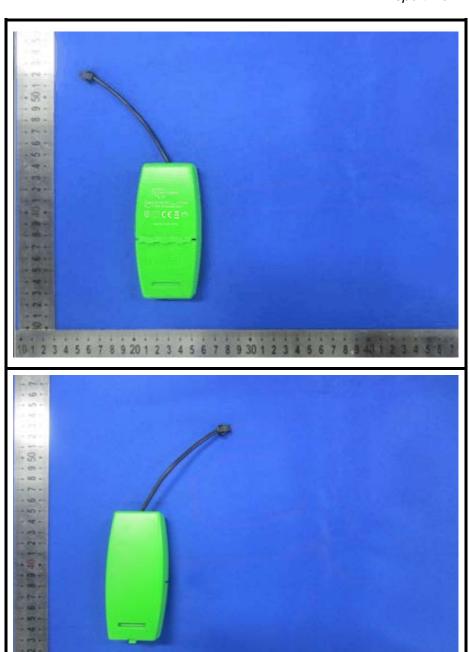


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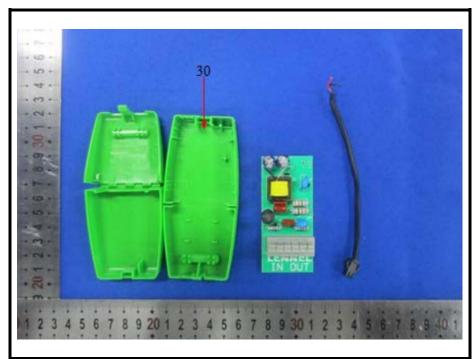


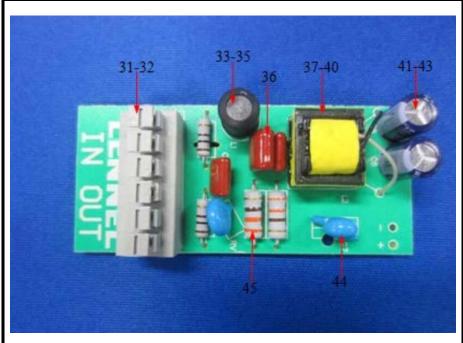
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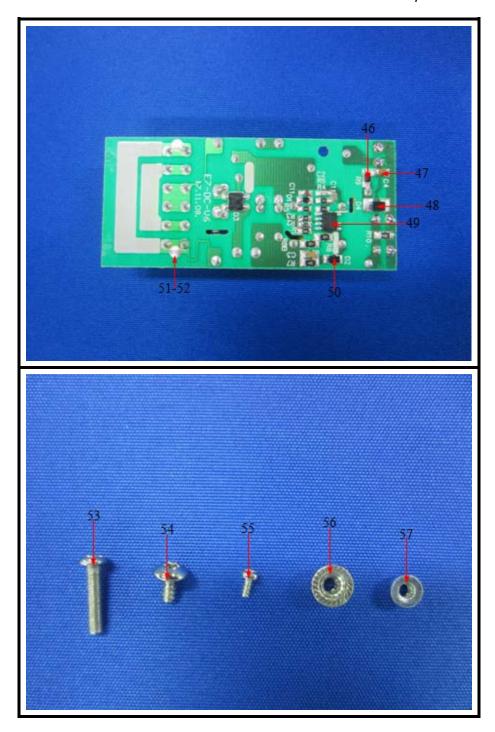


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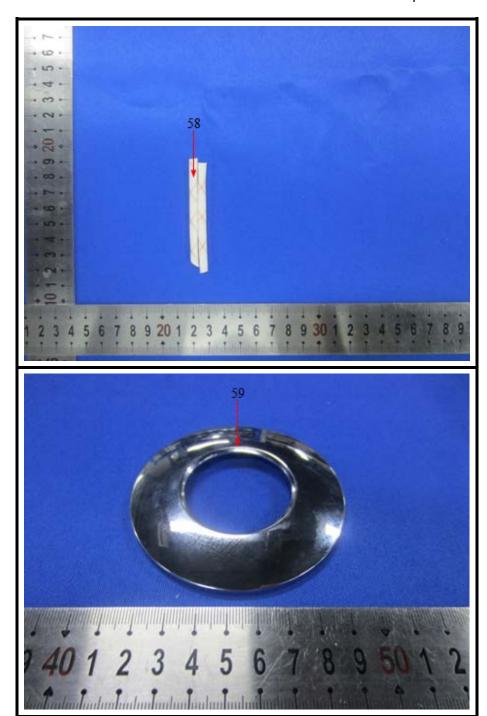


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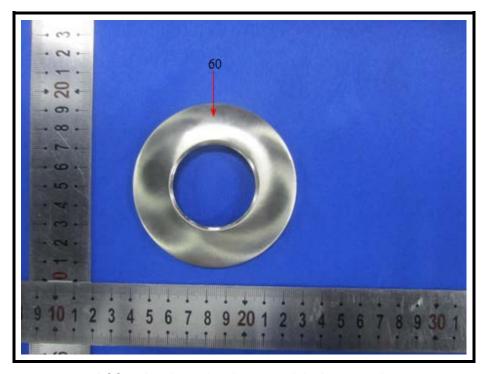


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