



**CENTRE OF TESTING SERVICE
INTERNATIONAL**

OPERATE ACCORDING TO ISO/IEC 17025

TEST REPORT

RoHS 2002/95/EC

Test Report Number : CGZ3090429-00854-C



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1 General Information

1.1 Application Details

Name : KINGLED LIGHTING (H.K) CO., LIMITED
Address : #70, Dongguanhuang Rd, Tianhe District, Guangzhou, China
Contact : Wilson Xu
Telephone : +86-20-37285900
Fax : +86-20-37285385
Mobile telephone : /
Email : xudenong@kingled.com.cn

1.2 Details of wanted approval holder

Name : KINGLED LIGHTING (H.K) CO., LIMITED
Address : #70, Dongguanhuang Rd, Tianhe District, Guangzhou, China
Contact : Wilson Xu
Telephone : +86-20-37285900
Fax : +86-20-37285385
Mobile telephone : /
Email : xudenong@kingled.com.cn

1.3 Manufacturer & Buyer

Manufacturer name : KINGLED LIGHTING (H.K) CO., LIMITED
Address : #70, Dongguanhuang Rd, Tianhe District, Guangzhou, China
Contact : Wilson Xu
Telephone : +86-20-37285900
Fax : +86-20-37285385
Mobile telephone : /
Email : xudenong@kingled.com.cn
Buyer name : /

1.4 Description of the Test Item

Sample name : LED TUBE SERIES
Model No. : FFT-xyz-abc-d, FFB-xyz-abc-d
Brand name : /
Condition of sample(s) : EFFECTIVE

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1.5 Directive

2002/95/EC

Restriction of the use of certain hazardous substances in electrical and electronic equipment
27 January 2003

in connection with:

2002/96/EC

Waste electrical and electronic equipment
27 January 2003

2005/618/EC

Establishing the maximum concentration values for certain hazardous substances in electrical and electronic equipment
18 August 2005

2 Test results

2.1 Description of the Sample

Sample name : LED TUBE SERIES
Model No. : FFT-xyz-abc-d, FFB-xyz-abc-d
Brand name : /

2.2 Sample Receiving Date

Apr. 29, 2009

2.3 Testing Period

Apr. 29, 2009 to Jul. 10, 2009

2.4 Test Method

1. X-Ray Fluorescence Spectrometry method in reference to IEC 62321.
2. Chemical test method

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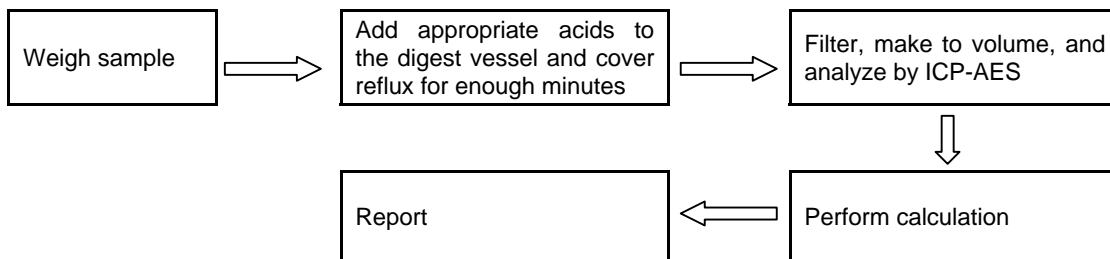
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Test Item(s)	Test Method	Test Instrument	MDL
Lead (Pb)	Refer to US EPA3050B	ICP-AES	2mg/kg
Cadmium (Cd)	Refer to EN1122:2001B	ICP-AES	2mg/kg
Mercury (Hg)	Refer to US EPA3052	ICP-AES	2mg/kg
Chromium (Cr VI)	Refer to US EPA3060A & US EPA 7196A	UV-Vis	2mg/kg
PBBs	Refer to US EPA3540C	GC-MS	5mg/kg
PBDEs	Refer to US EPA3540C	GC-MS	5mg/kg

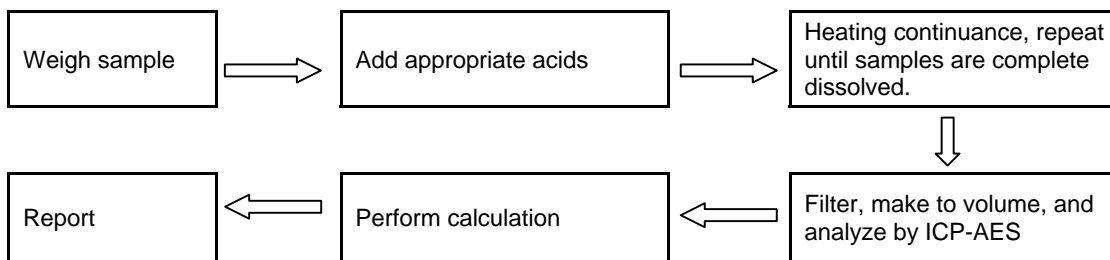
Remark: MDL= Method Detect Limit

2.5 Chemical Test Method Flow Chart

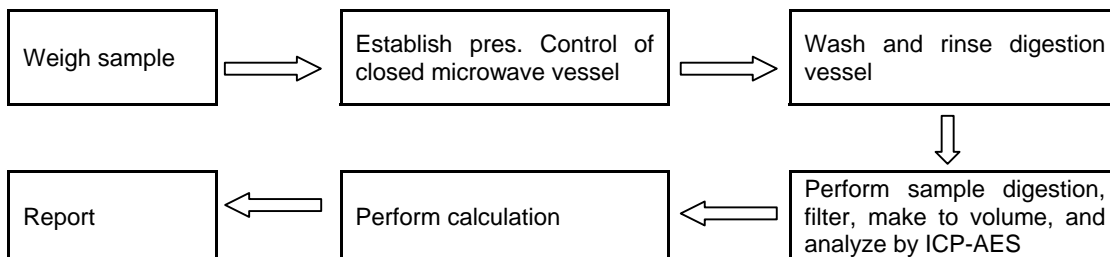
1. EPA3050B:



2. EN1122 2001 method B:



3. EPA3052:



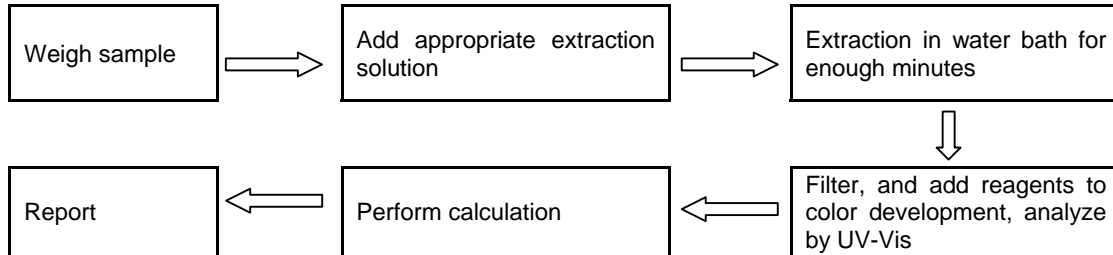
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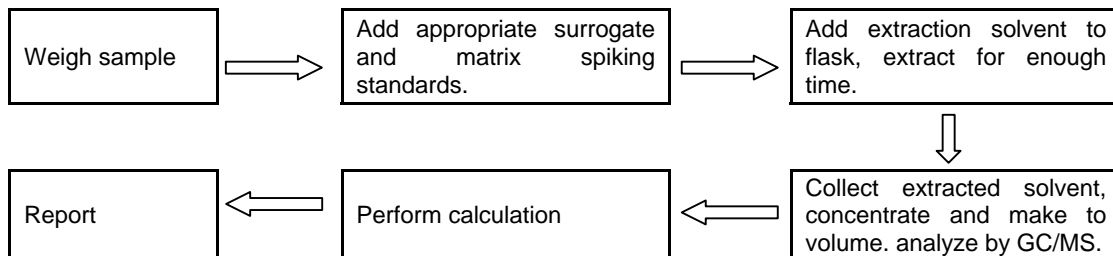
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4. EPA3060A & EPA 7196A



5. EPA3540C:



2.6 Test Results

2.6.1 Test results of all parts by EDXRF and chemical confirmation

No.	Sample Description	Results					Chemical Confirmation Result (Unit=mg/kg)
		Pb	Cd	Hg	Cr	Br	
1	Silvery metal crust	P	P	P	P	/	/
2*	Red-copper touch head	X	P	P	P	/	Pb: 20420
3	Black insulated shim	P	P	P	P	P	/
4	Transparent plastic crust	P	P	P	P	P	/
5	White plastic inner tube	P	P	P	P	P	/
6	White paster	P	P	P	P	P	/
7	Yellow PCB	P	P	P	P	X	PBBs: N.D. PBDEs: N.D.
8	Red plastic jacket	P	P	P	P	P	/

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No.	Sample Description	Results					Chemical Confirmation Result (Unit=mg/kg)
		Pb	Cd	Hg	Cr	Br	
9	Silvery metal wire	P	P	P	P	/	/
10	Soldering tin	P	P	P	P	/	/
11**	Chip resistor	F	P	P	P	X	PBBs: N.D. PBDEs: N.D.
12	Body of LED	P	P	P	P	P	/
13	Silvery metal pin	P	P	P	P	/	/
14	Brown PCB	P	P	P	P	X	PBBs: N.D. PBDEs: N.D.
15	White PCB	P	P	P	P	X	PBBs: N.D. PBDEs: N.D.
16	Black plastic scarfskin	P	P	P	P	P	/
17	Aluminium crust	P	P	P	P	/	/
18	Rubber shim	P	P	P	P	P	/
19	Core	P	P	P	P	P	/
20	Silvery metal pin	P	P	P	P	/	/
21	Yellow body of multicolor resistor	P	P	P	P	P	/
22	Silvery metal pin	X	P	P	P	/	Pb: 58
23	Body of IC (MB6S)	P	P	P	P	X	PBBs: N.D. PBDEs: N.D.
24	Silvery metal pin (MB6S)	P	P	P	P	/	/
25	Grey body of multicolor resistor (180K Ω)	P	P	P	P	P	/
26	Silvery metal pin (180K Ω)	X	P	P	P	/	Pb: 333
27	Grey body of multicolor resistor (18K Ω)	P	P	P	P	P	/

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No.	Sample Description	Results					Chemical Confirmation Result (Unit=mg/kg)
		Pb	Cd	Hg	Cr	Br	
28	Silvery metal pin (18K Ω)	X	P	P	P	/	Pb: 79
29	Red body of capacitor (630V 103K)	P	P	P	P	P	/
30	Silvery metal pin (630V 103K)	X	P	P	P	/	Pb: 87

Note : P = Below Limit (Pass)
 F = Over Limit (Fail)
 X = Inconclusive
 N.D. = not detected (less than MDL)
 1mg/kg=1ppm=0.0001%

* According to the declaration from client, the source of lead in the sample could be from the copper alloy material. Lead as a copper alloy containing which is under 4% (40000ppm) is exempted from the requirement of RoHS Directive (2002/95/EC).

** According to the declaration from client, the source of lead in the sample could be from the ceramic parts. Lead in electronic ceramic parts is exempted from the requirement of RoHS Directive (2002/95/EC).

Remarks:

(1) Results are obtained by EDXRF for primary screening, and further chemical testing is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321.

Element	Polymer Materials	Metallic Materials	Electronic Materials
Pb	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$
Cd	$P \leq 50 < X < 130 \leq F$	$P \leq 50 < X < 130 \leq F$	$X < 130 \leq F$
Hg	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$	$P \leq 500 < X < 1300 \leq F$
Cr	$P \leq 700 < X$	$P \leq 700 < X$	$P \leq 500 < X$
Br	$P \leq 250 < X$	/	$P \leq 250 < X$

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

(3) The test results only apply to the materials requested by applicant.

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Written by:

Mili

Inspected by

Jane

Approved by:

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End of Report



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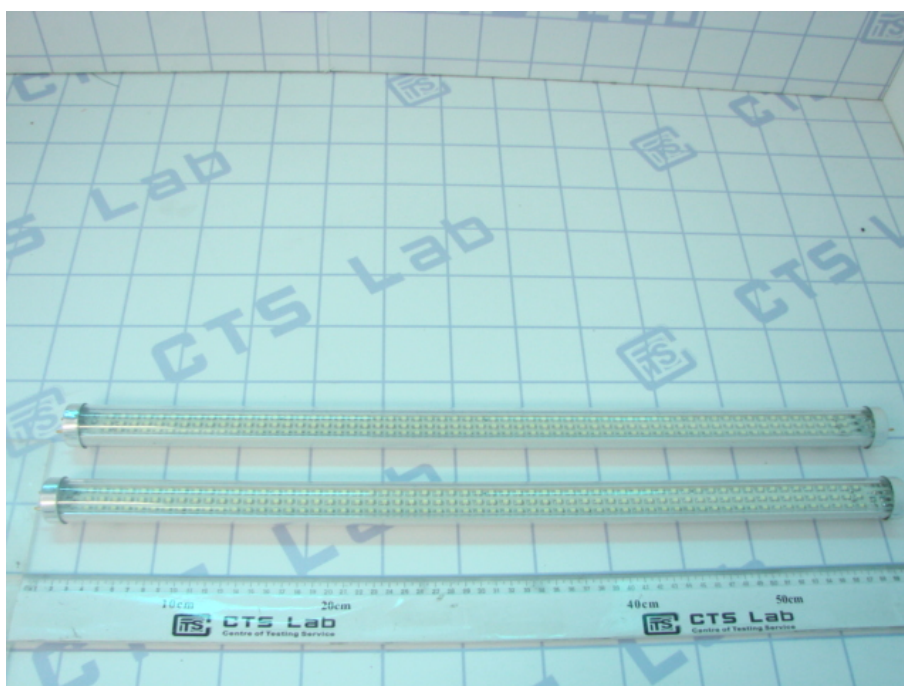
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3 Sample Reference Photo



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