



**CENTRE OF TESTING SERVICE  
INTERNATIONAL**

**OPERATE ACCORDING TO ISO/IEC 17025**

# **TEST REPORT**

**RoHS 2011/65/EU**

**Test Report Number : CGZ3150109-00118-C-R1**



**CTS (Guangzhou) Testing Service Technology Co., Ltd.**

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 1 of 14

### Table of contents

<b>1</b>	<b>General Information</b>	<b>2</b>
1.1	Application Details	2
1.2	Manufacturer & Buyer	2
1.3	Description of the Test Item	2
<b>2</b>	<b>Test results</b>	<b>3</b>
2.1	Sample Receiving Date	3
2.2	Testing Period	3
2.3	Test Requested	3
2.4	Test Method	3
2.5	Chemical Test Method Flow Chart	4
2.6	Conclusion	5
2.7	Test Results	6
2.7.1	Test results of all parts by EDXRF and chemical confirmation	6
<b>3</b>	<b>Combined Survey Report Contents</b>	<b>9</b>
<b>4</b>	<b>Sample Reference Photo</b>	<b>13</b>

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**TEST REPORT**REPORT No. : CGZ3150109-00118-C-R1  
DATE : Aug. 26, 2015  
PAGE : 2 of 14**1 General Information****1.1 Application Details**Name : Guangzhou Osen Electrical Co., Ltd.  
Address : No.1-2,Lanyue North Street,Taishi,Dongyong Town,Panyu  
District,Guangzhou,China  
Contact : Mr. Peng  
Telephone : +86-20-34920388-358  
Fax : +86-20-34920387  
Mobile telephone : 13660771536  
Email : osenlighting@163.com**1.2 Manufacturer & Buyer**Manufacturer name : Guangzhou Osen Electrical Co., Ltd.  
Address : No.1-2,Lanyue North Street,Taishi,Dongyong Town,Panyu  
District,Guangzhou,China  
Contact : Mr. Peng  
Telephone : +86-20-34920388-358  
Fax : +86-20-34920387  
Mobile telephone : 13660771536  
Email : osenlighting@163.com  
Buyer name : /**1.3 Description of the Test Item**Sample name : Fixed lamp  
Model No. : 10002031, 10003031, 10004031, 10005031, 1045031, 50001031,  
50002031, 40193013, P16961, 40194031, P16961C  
Brand name : OSEN  
Condition of sample(s) : EFFECTIVE

## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 3 of 14

## 2 Test results

### 2.1 Sample Receiving Date

Jan. 10, 2015

### 2.2 Testing Period

Jan. 10, 2015 to Jan. 15, 2015

### 2.3 Test Requested

In accordance with the RoHS Directive 2011/65/EU Annex II.

### 2.4 Test Method

1. X-Ray Fluorescence Spectrometry method in reference to IEC 62321-3-1:2013.
2. Chemical test method

Test Item(s)	Test Method	Test Instrument
Lead (Pb)	With reference to IEC 62321-5:2013	ICP-AES
Cadmium (Cd)	With reference to IEC 62321-5:2013	ICP-AES
Mercury (Hg)	With reference to IEC 62321-4:2013	ICP-AES
Chromium VI (Cr VI)	With reference to IEC 62321:2008	UV-Vis
PBBs	With reference to IEC 62321:2008	GC-MS
PBDEs		

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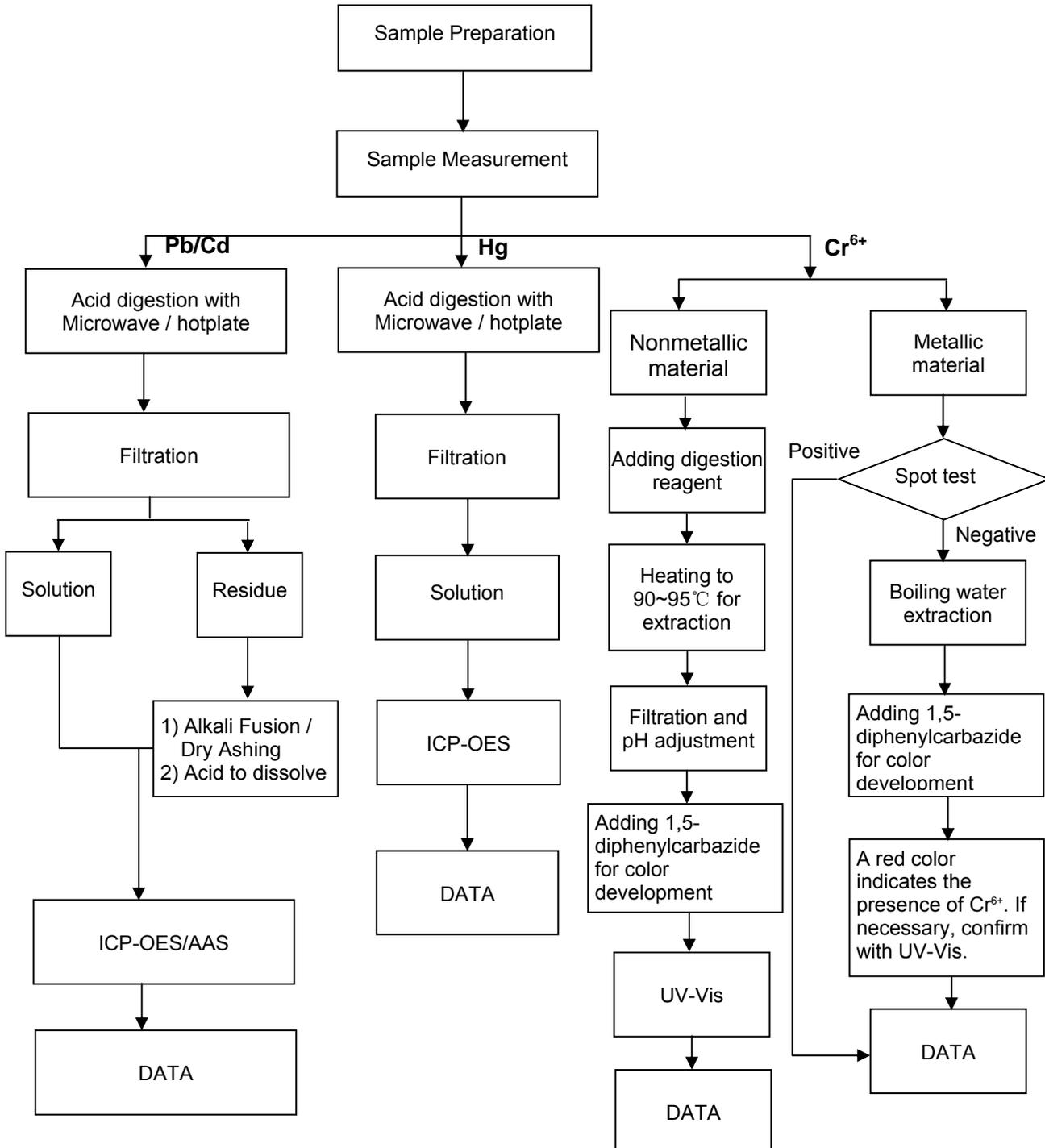
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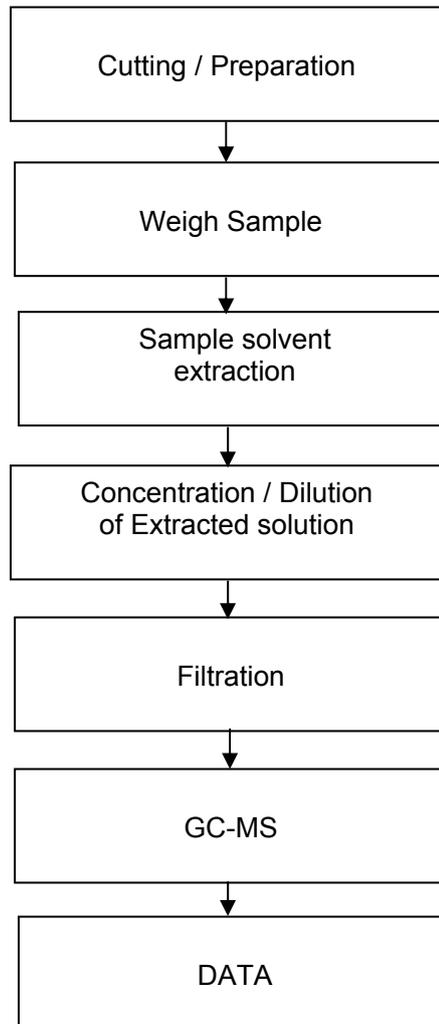
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REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 4 of 14

### 2.5 Chemical Test Method Flow Chart



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**TEST REPORT**REPORT No. : CGZ3150109-00118-C-R1  
DATE : Aug. 26, 2015  
PAGE : 5 of 14**PBBs / PBDEs****2.6 Conclusion**

Based on the performed tests on submitted samples, the results of Lead, Cadmium, Mercury, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE) comply with the limits as set by RoHS Directive 2011/65/EU Annex II; recasting 2002/95/EC.

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 6 of 14

### 2.7 Test Results

#### 2.7.1 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 frame	P	P	P	P	/		
2	Bright silvery metal frame	P	P	P	P	/		
3	White plastic film	P	P	P	P	P		
4	Silvery metal screw	P	P	P	P	/		
5	Silvery metal nut	P	P	P	P	/		
6	Silvery metal ring	P	P	P	P	/		
7 <sup>^</sup>	Silvery-grey metal ring	P	P	P	P	/		
8	Transparent plastic	P	P	P	P	P		
9	White sticker with black printing	P	P	P	P	P		
10	Black EVA	P	P	P	P	P		
11	Black plastic	P	P	P	P	P		
12	White plastic	P	P	P	P	P		
13	Beige plastic	P	P	P	P	P		
14	Bright silvery metal block	X	P	P	P	/	Pb=2.2×10 <sup>4</sup> *	
15 <sup>^</sup>	Semi-transparent plastic	P	P	P	P	P		
16	Wire	Blue cable jacket		P	P	P	P	
17		Red cable jacket		P	P	P	P	
18		Black cable jacket		P	P	P	P	

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 7 of 14

No.	Sample Description		Results					Chemical Confirmation Result (Unit=mg/kg)	
			Pb	Cd	Hg	Cr	Br		
19	Wire	Brown cable jacket	P	P	P	P	P		
20		Black pyrocondensation tube	P	P	P	P	P		
21		White protect tube	P	P	P	P	P		
22		Copper wire	P	P	P	P	/		
23		Transparent jacket	P	P	P	P	P		
24		Silvery wire	P	P	P	P	/		
25 <sup>▲</sup>	PCB	White fiberboard	P	P	P	P	X	PBBs,PBDEs=N.D.	
26		Copper foil	P	P	P	P	/		
27		Solder tin	P	P	P	P	/		
28 <sup>▲</sup>		Chip LED	P	P	P	P	X	PBBs,PBDEs=N.D.	
29		Connection base	Green plastic	P	P	P	P	P	
30			Blue plastic	P	P	P	P	P	
31			Silvery metal wafer	P	P	P	X	/	CrVI=N.D.
32		Transformer	Enamelled wire	P	P	P	P	P	
33			Yellow adhesive tape	P	P	P	P	P	
34		Transformer	Black metal winding column	P	P	P	P	/	
35			Black plastic base	P	P	P	P	P	
36		Brown polyester capacitor	Brown encapsulation material	P	P	P	P	P	
37			Capacitor film	P	P	P	P	P	
38			Pin	P	P	P	P	/	
39	Rectifier diode	Black solid with silvery printing body	P	P	P	P	P		

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 8 of 14

No.	Sample Description		Results					Chemical Confirmation Result (Unit=mg/kg)
			Pb	Cd	Hg	Cr	Br	
40	Chip diode		P	P	P	P	X	PBBs,PBDEs=N.D.
41	Chip resistor		X	P	P	X	P	Pb=1.2×10 <sup>3</sup> △ CrVI=N.D.
42	Chip capacitor		P	P	P	P	P	
43	Yellow capacitance	Yellow plastic cover	P	P	P	P	P	
44		Yellow encapsulation material	P	P	P	P	P	
45	In-line inductance	Black soft plastic coat	P	P	P	P	P	
46		Enamelled wire	P	P	P	P	P	
47		Winding column	P	P	P	P	P	
48	Color wheel resistor	Blue body	P	P	P	P	P	
49	Aluminum electrolytic capacitor	Black plastic jacket with white printing	P	P	P	P	P	
50		Silvery metal cover	P	P	P	P	/	
51♦	Ceramic capacitor	Green body	P	P	P	P	P	
52♦		Pin	P	P	P	P	/	
53	White hot-melt glue		P	P	P	P	P	

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 (Annex III,2011/65/EU).  
 △ 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 (Annex III,2011/65/EU).  
 ♦ The test results are taken from report CGZ3130227-00435-C, Date:2013/03/22. In

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 10 of 14

### Test Data Summary

Item		Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs		
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Limit		1000	100	1000	1000	1000	1000		
Part No.1	Wire	White cable jacket		N.D.	N.D.	N.D.	N.D.		
		Light blue cable jacket		N.D.	N.D.	N.D.	N.D.		
		Dark brown cable jacket		N.D.	N.D.	N.D.	N.D.		
		Solder tin		N.D.	N.D.	N.D.	N.D.	/	
	PCB	Green fiberboard	Flux		N.D.	N.D.	N.D.	N.D.	
			Substrate		N.D.	N.D.	N.D.	N.D.	
		Silvery metal block		N.D.	N.D.	N.D.	N.D.	/	
		Silvery metal wire jumper		N.D.	N.D.	N.D.	N.D.	/	
		Connection base	Silvery-white metal screw		N.D.	N.D.	N.D.	N.D.	/
		Transformer	Yellow paint		N.D.	N.D.	N.D.	N.D.	N.D.
			Pin		N.D.	N.D.	N.D.	N.D.	/
			Transparent cable jacket		N.D.	N.D.	N.D.	N.D.	N.D.
		Blue Y capacitor	Blue body		N.D.	N.D.	N.D.	N.D.	N.D.
			Pin		N.D.	N.D.	N.D.	N.D.	/
		Yellow Y capacitor	Yellow body		N.D.	N.D.	N.D.	N.D.	N.D.
			Pin		N.D.	N.D.	N.D.	N.D.	/
		Black Y capacitor	Black body		N.D.	N.D.	N.D.	N.D.	N.D.
			Pin		N.D.	N.D.	N.D.	N.D.	/
		Rectifier diode	Pin		N.D.	N.D.	N.D.	N.D.	/
		Chip voltage regulator diode		209505 <sup>■</sup>	N.D.	N.D.	N.D.	N.D.	N.D.

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 11 of 14

Item		Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs		
Unit		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg		
Limit		1000	100	1000	1000	1000	1000		
Part No.1	PCB	Field-effect tube	body	N.D.	N.D.	N.D.	N.D.	N.D.	
			Pin	N.D.	N.D.	N.D.	N.D.	/	
		Audion	Black body	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
		Yellow capacitance	Capacitor film	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
		In-line inductance	Yellow paint	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
		Color wheel resistor	Blue body	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
		Aluminum electrolytic capacitor	Black plastic jacket with yellow printing	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Green plastic jacket with yellow printing	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Black rubber end closure	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
			Capacitor anode film	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Capacitor cathode film	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		fuse	Paper film	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Brown plastic cover	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
			Black plastic base	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
 DATE : Aug. 26, 2015  
 PAGE : 12 of 14

Item			Pb	Cd	Hg	Cr <sup>6+</sup>	PBBs	PBDEs
Unit			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit			1000	100	1000	1000	1000	1000
		Silvery fuse	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
Part No.1	PCB	Green coating	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		Black metal ring	N.D.	N.D.	N.D.	N.D.	N.D.	/
		Black plastic base	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		Enamelled wire ( Yellow )	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		Yellow paint	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		Enamelled wire ( Red )	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
		Pin	N.D.	N.D.	N.D.	N.D.	N.D.	/
		Transparent cable jacket	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.

Note : 1. N.D.=Not detected (<MDL)  
 2. N.A.=Not applicable  
 3. N.C.=Not conducted  
 4. 1mg/kg=1ppm=0.0001%  
 5. The lead content in glass of electronic components is exempted from the requirement of Directive 2011/65/EU (RoHS)

Disclaim : 1. The method detect limit of other labs may be different from that of CTS.  
 2. CTS has combined the submitted test reports only for any substances in the third party test report submitted by the applicant. The applicant and/or manufacturer of the submitted products are solely and fully responsible for conformity and determination of compliance of all manufactured products to all applicable standards, specifications, requirements, laws or regulations CTS is not responsible for and gives no any judgement to the third party data.

Written by: *Amanda* Inspected by: *Annie* Approved by: *Hyt*

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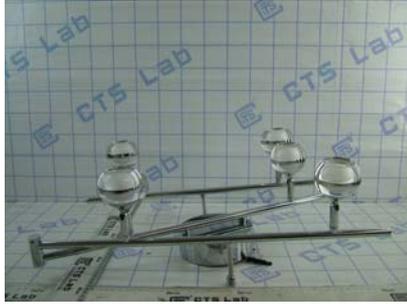
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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
DATE : Aug. 26, 2015  
PAGE : 13 of 14

### 4 Sample Reference Photo



1045031



10002031



10003031



10004031



10005031



40193013

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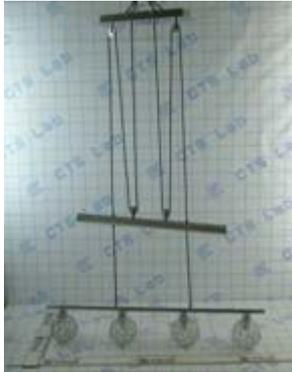
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## TEST REPORT

REPORT No. : CGZ3150109-00118-C-R1  
DATE : Aug. 26, 2015  
PAGE : 14 of 14



40194031



50001031



50002031



P16961



P16961C

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