

**Test Report** No. SHAEC1500253303 Date: 09 Jan 2015 Page 1 of 7

# **ELECTRIC LIGHT SOURCE CO.,LTD** TOWN, DAN TU DISTRICT, ZHENJIANG, CHINA

The following sample(s) was/were submitted and identified on behalf of the clients as: NEON LAMP

SGS Job No.: SP15-000324-SH

Main Substance: **NEON-ELECTRODE \, DEMET-PASSTHRBUGH \, TRANSPARENT GLASS** 

**TUBE** 

NE-2/4X10、5X13、6X13、6X16、4X10+150KOHM/RT 、5X13+150KOHM/RT Part No. (P/N):

**√ 6X13+150KOHM/RT √ 6X16+150KOHM/RT** 

Date of Sample Received: 06Jan 2015

**Testing Period:** 06 Jan 2015 - 09 Jan 2015

**Test Requested:** Selected test(s) as requested by client.

**Test Method:** Please refer to next page(s).

**Test Results:** Please refer to next page(s).

Based on the performed tests on submitted sample(s), the results of Lead, **Conclusion:** 

> Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs) comply with the limits as set by RoHS

Directive 2011/65/EU Annex II; recasting 2002/95/EC.

Signed for and on behalf of

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

**Marry Ma** 

**Approved Signatory** 



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#### **Test Results:**

#### **Test Part Description:**

Specimen No.	SGS Sample ID	Description
SN1	SHA15-002533.002	Silvery metal thread
SN2	SHA15-002533.003	Red metal thread
SN3	SHA15-002533.004	Transparent glass tube

#### Remarks:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = Method Detection Limit
- (3) ND = Not Detected (< MDL)
- (4) "-" = Not Regulated

### **RoHS Directive 2011/65/EU**

Test Method: (1) With reference to IEC 62321-5:2013, determination of Cadmium by ICP-OES.

(2) With reference to IEC 62321-5:2013, determination of Lead by AAS.

(3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.

(4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by Colorimetric Method using UV-Vis.

(5) With reference to IEC 62321:2008, determination of PBBs and PBDEs by GC-MS.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	<u>004</u>
Cadmium (Cd)	100	mg/kg	2	ND
Lead (Pb)	1000	mg/kg	2	14
Mercury (Hg)	1000	mg/kg	2	ND
Hexavalent Chromium (Cr(VI))	1000	mg/kg	2	ND
Sum of PBBs	1000	mg/kg	-	ND
Monobromobiphenyl	-	mg/kg	5	ND
Dibromobiphenyl	-	mg/kg	5	ND
Tribromobiphenyl	-	mg/kg	5	ND
Tetrabromobiphenyl	-	mg/kg	5	ND
Pentabromobiphenyl	-	mg/kg	5	ND
Hexabromobiphenyl	-	mg/kg	5	ND
Heptabromobiphenyl	-	mg/kg	5	ND
Octabromobiphenyl	-	mg/kg	5	ND
Nonabromobiphenyl	-	mg/kg	5	ND
Decabromobiphenyl	-	mg/kg	5	ND



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Test Item(s)	<u>Limit</u>	<u>Unit</u>	MDL	<u>004</u>	
Sum of PBDEs	1000	mg/kg	-	ND	
Monobromodiphenyl ether	-	mg/kg	5	ND	
Dibromodiphenyl ether	-	mg/kg	5	ND	
Tribromodiphenyl ether	-	mg/kg	5	ND	
Tetrabromodiphenyl ether	-	mg/kg	5	ND	
Pentabromodiphenyl ether	-	mg/kg	5	ND	
Hexabromodiphenyl ether	-	mg/kg	5	ND	
Heptabromodiphenyl ether	-	mg/kg	5	ND	
Octabromodiphenyl ether	-	mg/kg	5	ND	
Nonabromodiphenyl ether	-	mg/kg	5	ND	
Decabromodiphenyl ether	-	mg/kg	5	ND	

#### Notes:

(1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II

#### **RoHS Directive 2011/65/EU**

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  - (2) With reference to IEC 62321-5:2013, determination of Lead by AAS.
  - (3) With reference to IEC 62321-4:2013, determination of Mercury by ICP-OES.
  - (4) With reference to IEC 62321:2008, determination of Hexavalent Chromium by spot test/ Colorimetric Method using UV-Vis.

Test Item(s)	<u>Limit</u>	<u>Unit</u>	<u>MDL</u>	<u>002</u>	<u>003</u>
Cadmium (Cd)	100	mg/kg	2	ND	ND
Lead (Pb)	1000	mg/kg	2	ND	ND
Mercury (Hg)	1000	mg/kg	2	ND	ND
Hexavalent Chromium (Cr(VI))	-	-	$\Diamond$	Negative	Negative

#### Notes:

- (1) The maximum permissible limit is quoted from directive 2011/65/EU, Annex II
- (2) Spot-test:

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

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

**⊘Boiling-water-extraction:** 

Negative = Absence of Cr(VI) coating

Positive = Presence of Cr(VI) coating; the detected concentration in boiling-water-extraction solution is equal or greater than 0.02 mg/kg with 50 cm<sup>2</sup> sample surface area.

Information on storage conditions and production date of the tested sample is unavailable and thus



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Cr(VI) results represent status of the sample at the time of testing.



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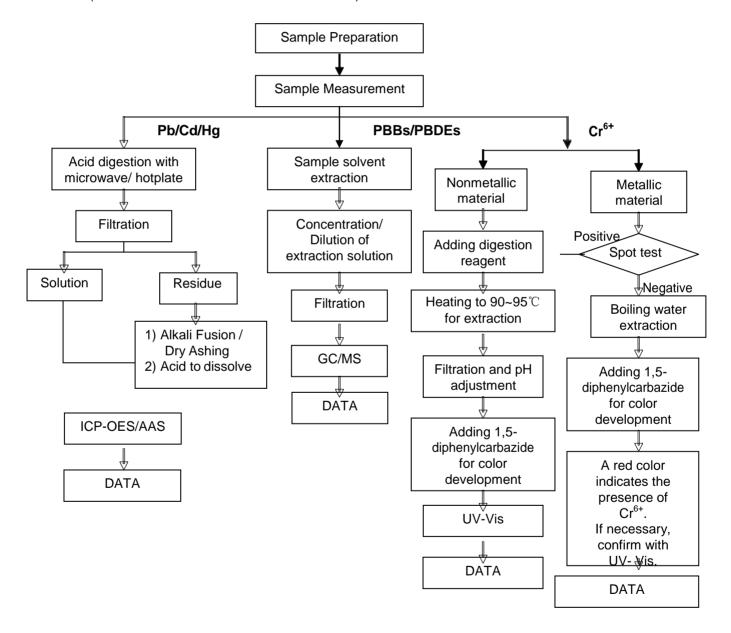
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#### **ATTACHMENTS**

### **RoHS Testing Flow Chart**

- 1) Name of the person who made testing: Bob Zhang/Gary Xu/Stone Chen/Sunny Qin
- 2) Name of the person in charge of testing: Jan Shi/Summer Jin/Jessy Huang
- 3) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr<sup>6+</sup> and PBBs/PBDEs test method excluded)





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### Sample photo:









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