



Technical Report No. 68.402.18.1507.01
Dated 2018-03-15

Client: Guangzhou Linong Lighting Technology Co., Ltd

Address: Keying Rd, Guangzhou Sci-Tech Industry Park, Taihe Town, Baiyun District, Guangzhou City, Guangdong Province, China

Attn.: Mr. Huang

Sample Description: LED strip light

Model No.: LNTS3X30XX-D12, LNTS5X30XX-D12, LNTS8X30XX-D12

Ref. Model No.: LNTS3X60XX-D12, LNTS3X120XX-D12, LNTS3X180XX-D12, LNTS3X240XX-D12, LNTS5X60XX-D12, LNTS8X60XX-D12, LNTS8X120XX-D12, LNTS8X240XX-D12

Sample Receive Date: 2018-01-02

Test Period: From 2018-01-02 to 2018-01-16

Test Requested: Polycyclic Aromatic Hydrocarbons (PAHs) Content

Test Result: Refer to following page(s)

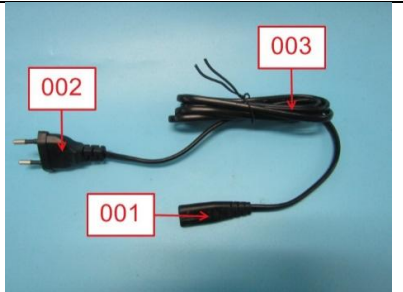

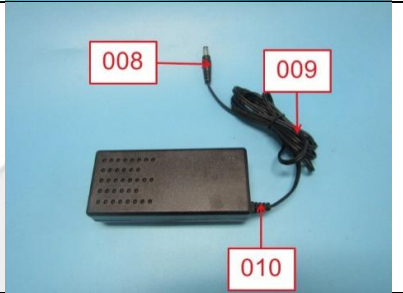
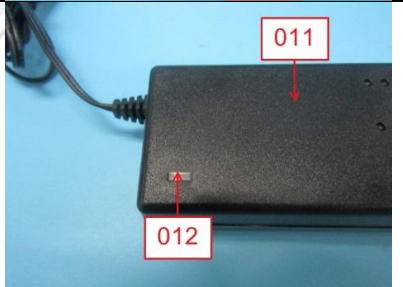
Remark:
- The result relates only to the items tested.
- The reference model(s) was declared by client.

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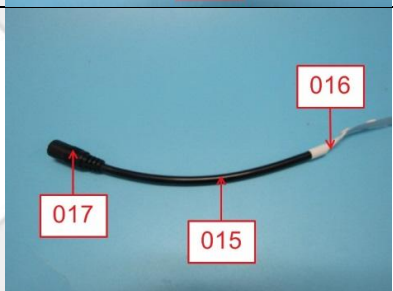
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1 TESTED SUBJECT DESCRIPTION

| Sample Number | Item Name | Tested Material Description | Photo |
|---------------|-----------|--------------------------------|---|
| 001 | | Black soft plastic holder |  |
| 002 | Wire | Black soft plastic holder | |
| 003 | | Black soft plastic wire jacket | |
| 004 | | Black soft plastic holder |  |
| 005 | Wire | Black soft plastic wire jacket | |
| 006 | | Black soft plastic holder | |
| 007 | Case | Black plastic adaptor case | |
| 008 | | Black soft plastic holder |  |
| 009 | Wire | Black soft plastic wire jacket | |
| 010 | | Black soft plastic holder | |
| 011 | Case | Black plastic adaptor case |  |
| 012 | Lamp | Transparent plastic lamp | |

Technical Report No. 68.402.18.1507.01
Dated 2018-03-15

| Sample Number | Item Name | Tested Material Description | Photo |
|---------------|-----------|--------------------------------|--|
| 013 | Cap | Black plastic cap |  |
| 014 | Panel | Black plastic panel |  |
| 015 | Wire | Black soft plastic wire jacket |  |
| 016 | Sleeve | White soft plastic sleeve | |
| 017 | Holder | Black soft plastic holder | |

2 TEST RESULT

2.1 POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) CONTENT TEST

Test method: With reference to AfPS GS 2014:01 PAK, extracted by toluene and analyzed by Gas Chromatography and Mass Spectrometry (GC-MS). [Reporting limit: 0.10 mg/kg]

| No. | Test Item | Result [mg/kg] | | Permissible Limit Category III (All other products acc to ProdSG) [mg/kg] |
|--|-------------------------|--|--------------------|---|
| | | Sample 001+002+003 | Sample 004+005+006 | |
| 1 | Naphthalene | <0.10 | 0.39 | < 10.00 |
| 2 | Acenaphthylene | <0.10 | <0.10 | Sum < 50.00 |
| 3 | Acenaphthene | <0.10 | <0.10 | |
| 4 | Fluorene | <0.10 | <0.10 | |
| 5 | Phenanthrene | 0.11 | 0.31 | |
| 6 | Anthracene | <0.10 | <0.10 | |
| 7 | Fluoranthene | <0.10 | <0.10 | |
| 8 | Pyrene | <0.10 | 0.15 | |
| 9 | Benzo[a]anthracene | <0.10 | <0.10 | |
| 10 | Chrysene | <0.10 | <0.10 | <1.00 |
| 11 | Benzo[b]fluoranthene | <0.10 | <0.10 | <1.00 |
| 12 | Benzo[j]fluoranthene | <0.10 | <0.10 | <1.00 |
| 13 | Benzo[k]fluoranthene | <0.10 | <0.10 | <1.00 |
| 14 | Benzo[a]pyrene | <0.10 | <0.10 | <1.00 |
| 15 | Benzo[e]pyrene | <0.10 | <0.10 | <1.00 |
| 16 | Benzo[g,h,i]perylene | <0.10 | <0.10 | <1.00 |
| 17 | Dibenzo[a,h]anthracene | <0.10 | <0.10 | <1.00 |
| 18 | Indeno[1,2,3-c,d]pyrene | <0.10 | <0.10 | <1.00 |
| Sum of Detected 18 PAHs | | 0.11 | 0.85 | < 50.00 |
| Category according to AfPS GS 2014:01 PAK | | Category III (All other products acc to ProdSG) | | |
| Conclusion | | Pass | Pass | |

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than



Technical Report No. 68.402.18.1507.01
Dated 2018-03-15

(Continued)

| No. | Test Item | Result [mg/kg] | | Permissible Limit Category III (All other products acc to ProdSG) [mg/kg] |
|--|-------------------------|--|-----------------------|---|
| | | Sample 007+011+012 | Sample 008+009+010 | |
| 1 | Naphthalene | 0.35 | 0.25 | < 10.00 |
| 2 | Acenaphthylene | <0.10 | <0.10 | Sum < 50.00 |
| 3 | Acenaphthene | <0.10 | <0.10 | |
| 4 | Fluorene | <0.10 | <0.10 | |
| 5 | Phenanthrene | <0.10 | 0.24 | |
| 6 | Anthracene | <0.10 | <0.10 | |
| 7 | Fluoranthene | <0.10 | <0.10 | |
| 8 | Pyrene | <0.10 | <0.10 | |
| 9 | Benzo[a]anthracene | <0.10 | <0.10 | |
| 10 | Chrysene | <0.10 | <0.10 | <1.00 |
| 11 | Benzo[b]fluoranthene | <0.10 | <0.10 | <1.00 |
| 12 | Benzo[j]fluoranthene | <0.10 | <0.10 | <1.00 |
| 13 | Benzo[k]fluoranthene | <0.10 | <0.10 | <1.00 |
| 14 | Benzo[a]pyrene | <0.10 | <0.10 | <1.00 |
| 15 | Benzo[e]pyrene | <0.10 | <0.10 | <1.00 |
| 16 | Benzo[g,h,i]perylene | <0.10 | <0.10 | <1.00 |
| 17 | Dibenzo[a,h]anthracene | <0.10 | <0.10 | <1.00 |
| 18 | Indeno[1,2,3-c,d]pyrene | <0.10 | <0.10 | <1.00 |
| Sum of Detected 18 PAHs | | 0.35 | 0.49 | < 50.00 |
| Category according to AfPS GS 2014:01 PAK | | Category III (All other products acc to ProdSG) | | |
| Conclusion | | Pass | Pass | |

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than



Technical Report No. 68.402.18.1507.01
Dated 2018-03-15

(Continued)

| No. | Test Item | Result [mg/kg] | | Permissible Limit Category III (All other products acc to ProdSG) [mg/kg] |
|--|-------------------------|--|-------------------|---|
| | | Sample 013+014 | Sample 015+017 | |
| 1 | Naphthalene | 0.47 | 0.16 | < 10.00 |
| 2 | Acenaphthylene | <0.10 | <0.10 | Sum < 50.00 |
| 3 | Acenaphthene | <0.10 | <0.10 | |
| 4 | Fluorene | <0.10 | <0.10 | |
| 5 | Phenanthrene | 0.64 | 0.24 | |
| 6 | Anthracene | 0.13 | <0.10 | |
| 7 | Fluoranthene | 0.30 | <0.10 | |
| 8 | Pyrene | 0.57 | <0.10 | |
| 9 | Benzo[a]anthracene | <0.10 | <0.10 | |
| 10 | Chrysene | <0.10 | <0.10 | <1.00 |
| 11 | Benzo[b]fluoranthene | <0.10 | <0.10 | <1.00 |
| 12 | Benzo[j]fluoranthene | <0.10 | <0.10 | <1.00 |
| 13 | Benzo[k]fluoranthene | <0.10 | <0.10 | <1.00 |
| 14 | Benzo[a]pyrene | <0.10 | <0.10 | <1.00 |
| 15 | Benzo[e]pyrene | <0.10 | <0.10 | <1.00 |
| 16 | Benzo[g,h,i]perylene | <0.10 | <0.10 | <1.00 |
| 17 | Dibenzo[a,h]anthracene | <0.10 | <0.10 | <1.00 |
| 18 | Indeno[1,2,3-c,d]pyrene | <0.10 | <0.10 | <1.00 |
| Sum of Detected 18 PAHs | | 2.11 | 0.40 | < 50.00 |
| Category according to AfPS GS 2014:01 PAK | | Category III (All other products acc to ProdSG) | | |
| Conclusion | | Pass | Pass | |

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than



Technical Report No. 68.402.18.1507.01
Dated 2018-03-15

(Continued)

| No. | Test Item | Result [mg/kg] | Permissible Limit Category III (All other products acc to ProdSG) [mg/kg] |
|--|-------------------------|--|---|
| | | Sample 016 | |
| 1 | Naphthalene | 0.25 | < 10.00 |
| 2 | Acenaphthylene | <0.10 | Sum < 50.00 |
| 3 | Acenaphthene | <0.10 | |
| 4 | Fluorene | <0.10 | |
| 5 | Phenanthrene | 0.26 | |
| 6 | Anthracene | <0.10 | |
| 7 | Fluoranthene | <0.10 | |
| 8 | Pyrene | <0.10 | |
| 9 | Benzo[a]anthracene | <0.10 | |
| 10 | Chrysene | <0.10 | <1.00 |
| 11 | Benzo[b]fluoranthene | <0.10 | <1.00 |
| 12 | Benzo[j]fluoranthene | <0.10 | <1.00 |
| 13 | Benzo[k]fluoranthene | <0.10 | <1.00 |
| 14 | Benzo[a]pyrene | <0.10 | <1.00 |
| 15 | Benzo[e]pyrene | <0.10 | <1.00 |
| 16 | Benzo[g,h,i]perylene | <0.10 | <1.00 |
| 17 | Dibenzo[a,h]anthracene | <0.10 | <1.00 |
| 18 | Indeno[1,2,3-c,d]pyrene | <0.10 | <1.00 |
| Sum of Detected 18 PAHs | | 0.51 | < 50.00 |
| Category according to AfPS GS 2014:01 PAK | | Category III (All other products acc to ProdSG) | |
| Conclusion | | Pass | |

Note:

- "mg/kg" denotes milligram per kilogram
- "<" denotes less than

3 REMARK

Requirement of AfPS GS 2014:01 PAK: Restraining maximum values for products

| Parameter (unit: mg/kg) | Category 1 | Category 2 | | Category 3 | |
|---|------------|---|---|----------------------------------|----------------------------------|
| | | Materials intended to be put in the mouth, or materials of toys with intended long term skin contact (>30s) | Materials not covered by category 1, with foreseeable skin contact for longer than 30 s (long-term skin contact) or repeated short term skin contact* | Toys acc to directive 2009/48/EC | All other products acc to ProdSG |
| Benzo[a]pyrene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Benzo[e]pyrene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Benzo[a]anthracene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Benzo[b]fluoranthene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Benzo[j]fluoranthene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Benzo[k]fluoranthene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Chrysene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Dibenzo[a,h]anthracene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Benzo[ghi]perylene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Indeno[1,2,3-cd]pyrene | <0.2 | <0.2 | <0.5 | <0.5 | <1 |
| Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Pyrene, Anthracene, Fluoranthene, | sum <1 | sum <5 | sum <10 | sum <20 | sum <50 |
| Naphthaline | <1 | <2 | <10 | <10 | <50 |
| Sum 18 PAHs | <1 | <5 | <10 | <20 | <50 |

* Definition: short-term repetitive contact with the human skin from "REACH Annex XVII Nr. 50 amendment (COMMISSION REGULATION (EU) No 1272/2013)"

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Project Handler







Reviewed by:

Scarlett

Scarlett Liang
Designated Reviewer

APPENDIX:

Photos of submitted products

| | |
|--|---|
|  |  |
| <p>LNTS3X30XX-D12</p> | <p>LNTS5X30XX-D12</p> |
|  |  |
| <p>LNTS8X30XX-D12</p> | <p>/</p> |
