Test Report



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Report No.: DGC210824074ZE

| Applicant | C: Shenzhen Chengjie Lighting Co., Ltd. |
|-----------|--|
| Address | : 2B-2-1101, Xingfu Fengjing, Meilong Road, Longhua District, Shenzhen |

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

| Product Name | : LED Strip Light |
|--------------|--|
| Model | : CJ-5V-5050-30L-RGB |
| Manufacturer | : Shenzhen Chengjie Lighting Co., Ltd. |
| Address | : 2B-2-1101, Xingfu Fengjing, Meilong Road, Longhua District, Shenzhen |
| | |

Date of Sample Received: Aug. 24, 2021Test period: Aug. 24, 2021- Sept. 01, 2021

Test requested

In accordance with RoHS Directive 2011/65/EU and amendment 2015/863/EU, to determine Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium (Cr (VI)), PBBs, PBDEs, Di (2-ethyl hexyl)-phthalate (DEHP), Dibutyl phthalate (DBP), Butylbenzyl phthalate (BBP), Diisobuty phthalate (DIBP) content on submitted samples.

Conclusion

Pass

Test method

Please refer to next page.

Test result

: Please refer to next page.

Tested by:

Zack dong Zack Dong

Approved by:

Caby Yang (Signed for and on behalf)



Grace Lin

Grace Liu

Sept. 01, 2021

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Test method:

 For the Cadmium (Cd), Lead (Pb), Mercury (Hg), Chromium (Cr (VI)), PBBs, PBDEs: With reference to IEC 62321 Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products, XRF scanning first test, then using chemical test method to confirm.

| Testing Item | | Test Method | Measuring Instrument | MDL 🧷 |
|-----------------|-----------------------------|--------------------------------|----------------------|------------------------|
| | | IEC 62321-3-1: 2013 | XRF | <u> </u> |
| - A | Lead (Pb) | IEC 62321-5: 2013 | ICP-OES | 2mg/kg |
| | Cadmium (Cd) | IEC 62321-5: 2013 | ICP-OES | 2mg/kg |
| Wet Chemical | Mercury (Hg) | IEC 62321-4: 2013+AMD1:2017 | ICP-OES | 2mg/kg |
| test | test Chromium (Cr (VI))▼ | IEC 62321-7-2:2017 | | 10mg/kg |
| | | IEC 62321-7-1: 2015 | UV-Vis | 0.10µg/cm ² |
| | PBBs, PBDEs | IEC 62321-6: 2015 | GC-MS | 5 mg/kg |

2. For the DEHP, DBP, BBP and DIBP:

| Testing Item | Pretreatment Method | Measuring Instrument | MDL |
|-------------------------------------|---------------------|----------------------|---------|
| Di (2-ethyl hexyl)-phthalate (DEHP) | × * | | 30mg/kg |
| Butylbenzyl phthalate (BBP) | | | 30mg/kg |
| Dibutyl phthalate (DBP) | IEC 62321-8: 2017 | GC-MS | 30mg/kg |
| Diisobuty phthalate (DIBP) | | | 30mg/kg |

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1. Description of the test subject:

Sample No. Location Sample Description LED Strip Light 1 Beige plastic frame LED Strip Light 2 Transparent soft rubber strip 3 LED Strip Light White SMD LED LED Strip Light 4 SMD resistor LED Strip Light 5 Black PCB light board LED Strip Light 6 Black PCB light board solder LED Strip Light 7 Blue film LED Strip Light 8 Transparent double-sided tape LED Strip Light 9 White double-sided tape

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2. Test results (Unit: mg/kg):

2.1 Test results of Cr (VI), Cd, Pb, Hg, PBBs, PBDEs:

| | | Heavy Metals and Flame Retardants | | | | | |
|---------|-------------|-----------------------------------|------|----|------------------|---------------------|------------|
| No. | Test Method | Cd | Pb | Hg | Cr (Cr (V I)) | Br (PBBs, PBDEs) | Conclusion |
| <u></u> | Screening | BL | S BL | BL | BL | BL | Comply |
| 2 | Screening | BL | BL | BL | BL | BL | Comply |
| 3 | Screening | BL | BL / | BL | BL | BL 🖈 | Comply |
| 4 | Screening | BL | BL | BL | BL | BL | Comply |
| 5 | Screening | BL | BL | BL | BL | BL | Comply |
| 6 | Screening | BL | BL | BL | BL | N.A. | Comply |
| 7 | Screening | BL | BL | BL | BL | BL | Comply |
| 8 | Screening | BL | BL | BL | BL | BL | Comply |
| 9 | Screening | S BL | BL | BL | BL | BL | Comply |

2.2 The test results of DEHP, DBP, BBP, DIBP:

| Group | Part No. | Part No. Test Mathed Phthalates | | | | Constructor | |
|-------|----------|---------------------------------|------|------|------|-------------|------------|
| No. | Part NO. | Test Method | DEHP | DBP | BBP | DIBP | Conclusion |
| 1 | 2+7+8+9 | Wet Chem. | N.D. | N.D. | N.D. | N.D. | Comply |
| 2 | 1+3+5 | Wet Chem. | N.D. | N.D. | N.D. | N.D. < | Comply |

Remark:

- (1) While the test results were less than the one-fourth limits indicates the presence of Phthalates on the four tested areas and result were all be regarded as no conflict with the requirement;
- (2) While the test results were less than the one-third limits indicates the presence of Phthalates on the three tested areas and result were all be regarded as no conflict with the requirement.

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Note:

- (1) (a) It is the result on total Br while test PBBs, PBDEs by XRF, It is the result on total Cr while test Cr (VI) by XRF.
 - (b) Results are obtained by XRF for primary screening and further chemical testing by ICP-OES (for Pb, Cd and Hg), UV-Vis (for Cr (VI)) and GC-MS (for PBBs, PBDEs) is recommended to be performed, if the concentration exceeds the below warning value according to IEC 62321-3-1:2013. (unit: mg/kg).

| Element | Polymer | Polymer Metal | |
|---------|--|--|--|
| Cd | BL≤(70 -3σ) <x<(130+3σ)≤ol< td=""><td colspan="2">S BL≤(70-3σ)<x<(70+3σ)≤ol td="" <=""></x<(70+3σ)≤ol></td></x<(130+3σ)≤ol<> | S BL≤(70-3σ) <x<(70+3σ)≤ol td="" <=""></x<(70+3σ)≤ol> | |
| Pb | BL≤(700-3σ) <x<(1300+3σ) ≤OL</x<(1300+3σ) | BL≤(700-3σ) <x<(1300+3σ) ≤OL</x<(1300+3σ) | BL≤(500-3σ) <x<(1500+3σ) ≤OL</x<(1500+3σ) |
| Hg | BL≤(700-3σ) <x<(1300+3σ) ≤OL</x<(1300+3σ) | BL≤(700-3σ) <x<(1300+3σ) ≤OL</x<(1300+3σ) | BL≤(500-3σ) <x<(1500+3σ) ≤OL</x<(1500+3σ) |
| Cr | BL≤(700-3σ)<Χ | BL≤(700-3σ)<Χ | BL≤(500-3σ)<Χ |
| Br | BL≤(300-3σ)<Χ | - 5 | BL≤(250-3σ)<Χ |

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

(d) OL=Over Limit, BL=Below Limit, IN=Inconclusive, LOD= Limit of Detection;

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(2) mg/kg=ppm=0.0001%, N.D.=Not detected(<MDL), MDL=Method Detection Limit, "---"=Not conducted, "--"=Not regulated, "N.A."=Not applicable.

(3)"[▼]" =Metal sample

- a. The sample is positive for Cr (VI) if the Cr (VI) concentration is greater than 0.13 µg/cm². The sample coating is considered to contain Cr (VI) ;
- b. The sample is negative for Cr (VI) if Cr (VI) concentration is less than 0.10 μg/cm².
 The coating is considered a non-Cr (VI) based coating ;
- c. The result between 0.10 μ g/cm² and 0.13 μ g/cm² is considered to be inconclusive unavoidable coating variations may influence the determination ;

Information on storage conditions and production date of the tested sample is unavailable and thus Cr (VI) results represent status of the sample at the time of testing.

| (4) RoHS Requirement | |
|--|-----------------|
| Restricted substances | Limits |
| Lead (Pb) | 0.1% (1000 ppm) |
| Cadmium (Cd) | 0.01% (100 ppm) |
| Chromium(VI) (Cr (VI)) | 0.1% (1000 ppm) |
| Mercury (Hg) | 0.1% (1000 ppm) |
| Polybrominated biphenyls (PBBs) | 0.1% (1000 ppm) |
| Polybrominated diphenyl ethers (PBDEs) | 0.1% (1000 ppm) |
| Di (2-ethyl hexyl)-phthalate (DEHP) | 0.1% (1000 ppm) |
| Butylbenzyl phthalate (BBP) | 0.1% (1000 ppm) |
| Dibutyl phthalate (DBP) | 0.1% (1000 ppm) |
| Diisobuty phthalate (DIBP) | 0.1% (1000 ppm) |

The above limits are reference with RoHS Directive 2011/65/EU and amendment 2015/863/EU.

(5) The Client specified material test.

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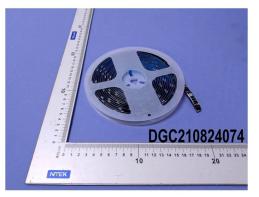
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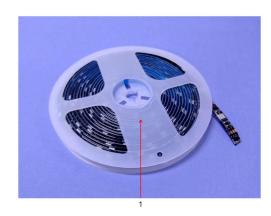
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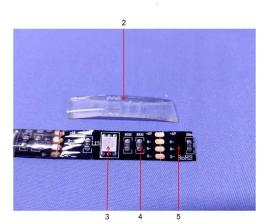
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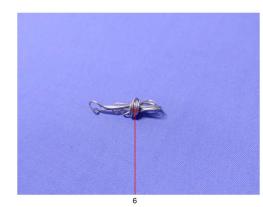
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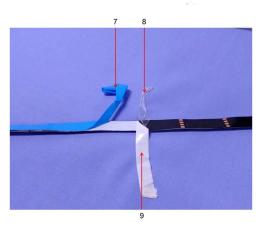
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End of Report

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