# Test Report

**Report No.: GZEE220900345231**
**Date: 2022-10-11**

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

| | |
|---|---|
| Applicant: | Guangzhou Tianxin Photoeletric Co., Ltd.<br>#15-1 JinGu Road, South,Xiutang, Huadong Town, Huadu District, Guangzhou, Guangdong, China |
| Manufacturer: | Same as applicant |
| Factory: | Same as applicant |
| Testing location/address: | SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch<br>198 Kezhu Road, Science City, Economic & Technology Development Area, Guangzhou, Guangdong, China |
| Standard(s): | IEC TR 62778: 2014<br>Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires |
| Test item description: | LED chip |
| Trade Mark/Brand: | |
| Model/Type reference: | TX-3570W15FC-NUFEZWB02DT, TX-3570W16FC120-NUFEZW-B04DT, TX-3570W21FSA3-NU3CD-01, TX-3570W30FSA3-NU4CD-01, TX-3570W30FSB3-NU4CD-02, TX-3570W30FSA3-NU4CD-03 |
| Ratings: | MAX DC 1,9 A; 18 W; 1600 – 1900 lm; 5600 - 6000 K |
| Test result: | The test sample belongs to RG2 unlimited for all distances < dmin 840 mm and belongs to RG1 unlimited for all distances > dmin 840 mm. |
| Remark: | Throughout this report a comma is used as the decimal separator. |

Alex Tan
Alex Tan
Reviewer
E&E Safety Laboratory

Junny Huang
Junny Huang
Sr Project Engineer

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**Copy of marking plate**
N/A

**Summary of testing:**
Tested model TX-3570W15FC-NUFEZWB02DT for represented, due to it is the highest CCT.
The LED chip was tested under DC 1,9 A and belong to RG2 unlimited for all distances < dmin 840 mm and belongs to RG1 unlimited for all distances > dmin 840 mm according to IEC TR 62778: 2014.

**Use of uncertainty of measurement for decisions on conformity (decision rule) :**
No decision rule is specified by the standard, when comparing the measurement result with the applicable limit according to the specification in that standard. The decisions on conformity are made without applying the measurement uncertainty ("simple acceptance" decision rule, previously known as "accuracy method").

| | |
|---|---|
| **Test item particulars** ..... : | |
| **Product evaluated .....:** | ☒ **LED package** |
| | ☐ **LED module** |
| | ☐ **Lamp** |
| | ☐ **Luminaire** |
| **Rated CCT (K).....:** | 6250 |
| **Rated Luminance (Mcd/m$^2$) .....:** | |
| **Component report data used .....:** | ☒ **Not applicable** |
| | ☐ **LED package** |
| | ☐ **LED module** |
| | ☐ **Lamp** |
| | Report number: |

**Possible test case verdicts:**

| | |
|---|---|
| **- test case does not apply to the test object :** | N/A |
| **- test object does meet the requirement ..... :** | P (Pass) |
| **- test object does not meet the requirement :** | F (Fail) |

**Testing**

| | |
|---|---|
| Date of receipt of test item ..... : | 2022-09-27 |
| Date (s) of performance of tests ..... : | 2022-09-28 to 2022-10-09 |

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**General product information:**
The LED chip can emit the white light when powered.
All models are the same except CCT.

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| IEC TR 62778 | | | |
|---|---|---|---|
| Clause | Requirement + Test | Result - Remark | Verdict |
| **7** | **MEASUREMENT INFORMATION FLOW** | | |
| **7.1** | **Basic flow** | | |
| | 'Law of conservation of luminance' applied | | N/A |
| | Use of only true luminance/radiance values | | N/A |
| | In case of luminaire:<br>The light source is operated in the luminaire under similar conditions as when tested as a component | | N/A |
| | In case $E_{thr}$ value for RG2 was established the peak value was derived from angular light distribution | | N/A |
| **7.2** | **Conditions for the radiance measurement** | | |
| | Standard condition applied<br>(200mm distance, 0,011rad field of view) | | P |
| | Non-standard condition applied | | N/A |
| **7.3** | **Special cases (I): Replacement by a lamp or LED module of another type** | | |
| | Light source is a white light source | | N/A |
| | Evaluation done based on highest luminance | | N/A |
| | Evaluation done based on CCT value | | N/A |
| **7.4** | **Special cases (II): Arrays and clusters of primary light sources** | | |
| | LED package is evaluated as ..... : | ☐ RG0 unlimited<br>☐ RG1 unlimited | N/A |
| | $E_{thr}$ of LED package applies to array | | N/A |
| **8** | **RISK GROUP CLASSIFICATION** | | **P** |
| | Risk group achieved: | | N/A |
| | - ..Risk Group 0 unlimited | | N/A |
| | - ..Risk Group 1 unlimited | | N/A |
| | - $E_{thr}$ ..... (lx) :<br>Distance to reach RG1..... (mm) : | 861,61<br>840 | P |

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| | | | |
|---|---|---|---|
| | **TABLE: Spectroradiometric measurement** | | |
| | **Measurement performed on:** | ☒ **LED package**<br>☐ **LED module**<br>☐ **Lamp**<br>☐ **Luminaire** | |
| | **Model number..... :** | TX-3570W15FC-NUFEZWB02DT | |
| | **Test voltage (V)..... :** | N/A | |
| | **Test current (mA)..... :** | 1900 | |
| | **Test frequency (Hz) ..... :** | N/A | |
| | **Ambient, t ( C) ..... :** | 25 | |
| | **Measurement distance ..... :** | ☒ 20 cm<br>☐ ... cm | |
| | **Source size ..... :** | ☒ Non-small<br>☐ Small : .... mm | |
| | **Field of view ..... :** | ☐ 100 mrad<br>☒ 11 mrad<br>☐ 1,7 mrad | |

| Item | Symbol | Units | Result | Remark |
|---|---|---|---|---|
| Correlated colour temperature | CCT | K | 8262 | |
| x/y colour coordinates | | | 0,2935 / 0,3001 | |
| Blue light hazard radiance | $L_B$ | $W/(m^2 \cdot sr^1)$ | 71470 | |
| Blue light hazard irradiance | $E_B$ | $W/m^2$ | | |
| Luminance | L | $cd/m^2$ | $6{,}158 \times 10^7$ | |
| Illuminance | E | lx | 14765 | |

Supplementary information:
The product belongs to RG2 unlimited for all distances < $d_{min}$ 840 mm.
The product belongs to RG1 unlimited for all distances > $d_{min}$ 840 mm.

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**Photo documentation:**

Details of: View of the product

View:

☒ general

☐ front

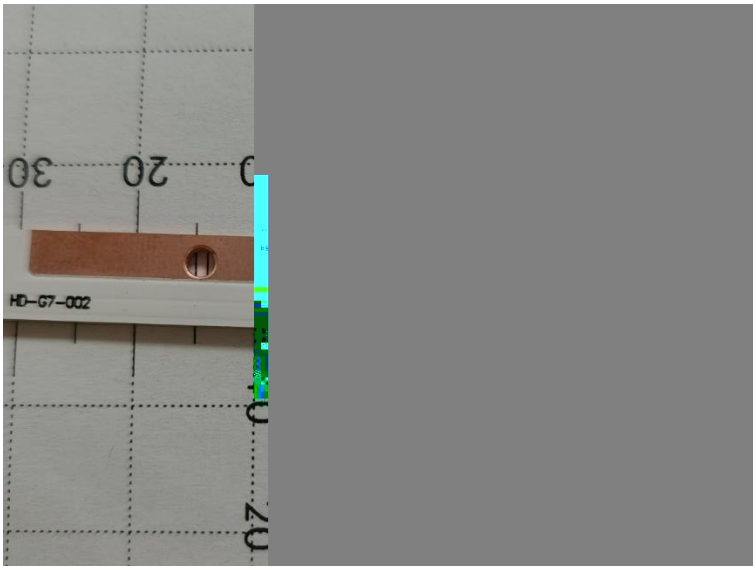
☐ rear

☐ right

☐ left

☐ top

☐ bottom

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