

Test Report

Report No.: GZEE250700350431

Date: 2025-07-15

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

Applicant: Guangzhou Tianxin Photoelectric Co., Ltd
#15-1, JinGu Road South, Xiutang, Huadong Town, Huadu District, Guangzhou, China

Manufacturer: Guangzhou Tianxin Photoelectric Co., Ltd
#15-1, JinGu Road South, Xiutang, Huadong Town, Huadu District, Guangzhou, China

Factory: Guangzhou Tianxin Photoelectric Co., Ltd
#15-1, JinGu Road South, Xiutang, Huadong Town, Huadu District, Guangzhou, China

Testing location/address: SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch
198 Kezhu Road, Science City, Economic & Technology Development Area, Guangzhou, Guangdong, China

Standard(s): IEC TR 62778: 2014
Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires

Product Name: LED

Test item description: LED chip

Trade Mark/Brand: **TYANSHINE**

Model/Type reference: See page 3 **General product information**

Ratings: See page 3 **General product information**

Test result: The test sample belongs to RG2 for all distances < dmin 1,128 m, RG1 for all distances > dmin 1,128 m

Remark: Throughout this report a comma is used as the decimal separator.

Alex Tan

Alex Tan
Reviewer
E&E Safety Laboratory

Junny Huang / Rudy Chen

Junny Huang / Rudy Chen
Project Engineer



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| | |
|---|--|
| Copy of marking plate | |
| N/A | |
| Summary of testing: | |
| 1. The TX3570W40FSA4-NU3CD-A1 was selected for full tested since it has max. current for each die. 2. The TX3570W40FSA4-NU3CD-A1 was tested under 3200 mA input and meets the requirement of RG2 for all distances < dmin 1,128 m, RG1 for all distances > dmin 1,128 m 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 | <input checked="" type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp <input type="checkbox"/> Luminaire |
| Rated CCT (K) | 5500-6700 |
| Rated Luminance (Mcd/m²) | — |
| Component report data used | <input checked="" type="checkbox"/> Not applicable <input type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp |
| Report number: | |
| Possible test case verdicts: | |
| - test case does not apply to the test object : N/A | |
| - test object does meet the requirement | |
| - test object does not meet the requirement : F (Fail) | |
| Testing | |
| Date of receipt of test item | 2025-07-01 |
| Date (s) of performance of tests | 2025-07-01 to 2025-07-10 |
| General product information: | |
| LED chip, 5500-6700 K, contains several dies. | |



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| Type / model | Ratings | Technical parameter |
|-------------------------|---------------------------|-------------------------------|
| TX3570W40FSA4-NU3CD-A1 | DC 3200 mA; 13,0 - 14,0 V | Number of dies: 8 ; 4S2P |
| TX3570W30FSA3-NU4CD-06 | DC 3200 mA; 9,2 - 10,0 V | Number of dies: 6 ; 3S2P |
| TX3570W30FSA3-NU3CD-03 | DC 3200 mA; 9,2 - 10,0 V | Number of dies: 6 ; 3S2P |
| TX4575W45FSA15-NU3CD-01 | DC 1000 mA; 46,0 - 47,0 V | Number of dies: 15 ; 15S1P |
| TX4575W80FSA15-NU3CH-01 | DC 1500 mA; 46,0 - 47,0 V | Number of dies: 15 ; 15S1P |



SGS-CS Standards Technical Services Co., Ltd.
Guangzhou Branch, CMAF, CNAS, EEC Laboratory

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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: 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 (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: <input type="checkbox"/> RG0 unlimited <input type="checkbox"/> RG1 unlimited | | N/A |
| | E_{thr} of LED package applies to array | — | N/A |
| 8 | RISK GROUP CLASSIFICATION | | — |
| | Risk group achieved: | | P |
| | -...Risk Group 0 unlimited | | N/A |
| | -...Risk Group 1 unlimited | | N/A |
| | - E_{thr} (lx) : Distance to reach RG1 (m) : | 1180 1,128 | P |



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| TABLE: Spectroradiometric measurement | | | | |
|---|----------------|---|-------------------------|--------|
| Measurement performed on: | | <input checked="" type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp <input type="checkbox"/> Luminaire | | |
| Model number | | TX3570W40FSA4-NU3CD-A1 | | |
| Test voltage (V) | | — | | |
| Test current (mA) | | 3200 | | |
| Test frequency (Hz)..... | | — | | |
| Ambient, t (°C) | | 24,9 | | |
| Measurement distance | | <input checked="" type="checkbox"/> 20 cm <input type="checkbox"/> ... cm | | |
| Source size | | <input checked="" type="checkbox"/> Non-small: 4,3 mm <input type="checkbox"/> Small : mm | | |
| Field of view | | <input type="checkbox"/> 100 mrad <input checked="" type="checkbox"/> 11 mrad <input type="checkbox"/> 1,7 mrad (for small sources) | | |
| Item | Symbol | Units | Result | Remark |
| Correlated colour temperature | CCT | K | 6006 | — |
| x/y colour coordinates | | | X: 0,3215; Y: 0,3429 | — |
| Blue light hazard radiance | L _B | W/(m ² •sr ¹) | 7,094 x 10 ⁴ | — |
| Blue light hazard irradiance | E _B | W/m ² | — | — |
| Luminance | L | cd/m ² | 8,370 x 10 ⁷ | — |
| Illuminance | E | lx | 40121 | — |
| Supplementary information: | | | | |
| The product belongs to RG2 for all distances < dmin 1,128 m, RG1 for all distances > dmin 1,128 m | | | | |



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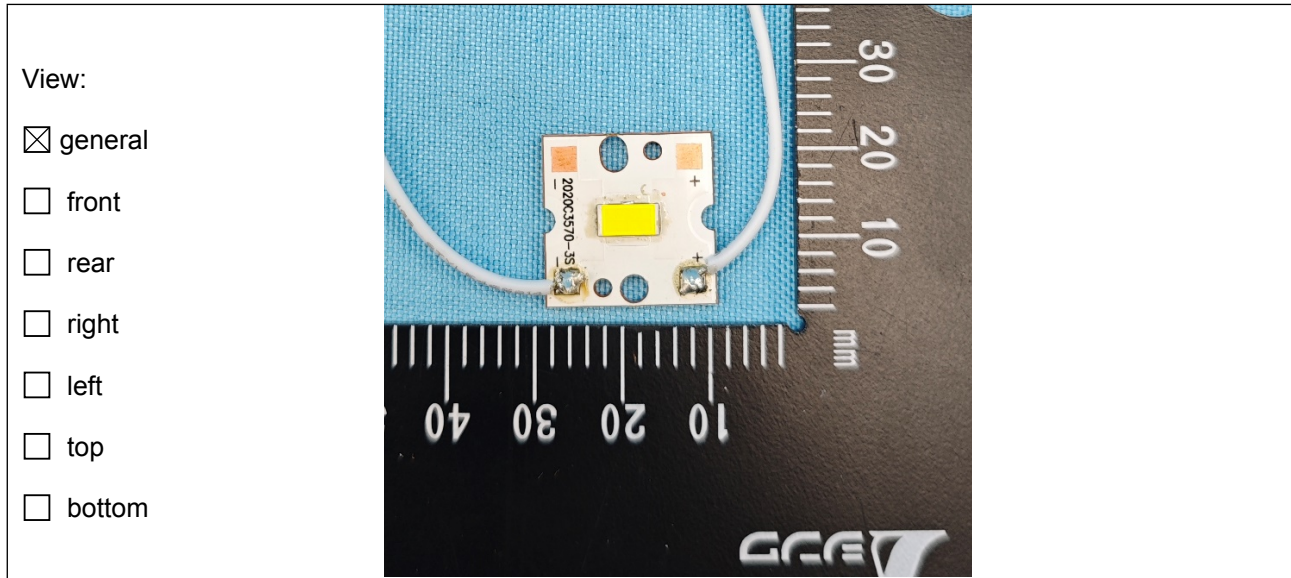
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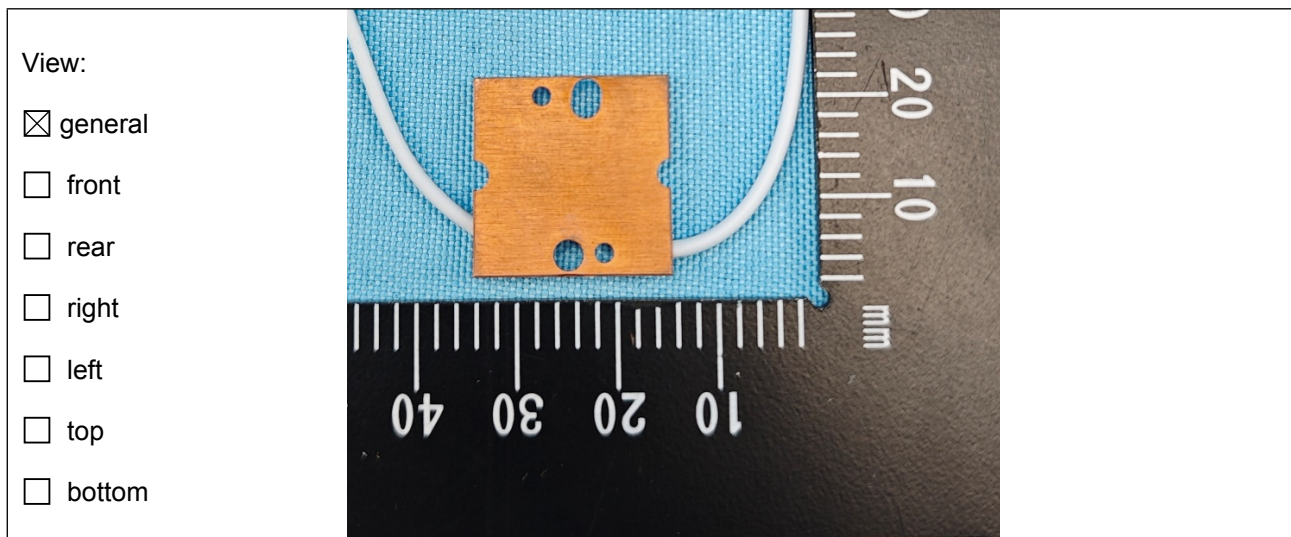
Date: 2025-07-15

Photo documentation:

Details of: View of the product



Details of: View of the product



--- End of Report ---



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