

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 Photoelectric Co., Ltd.
#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
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

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

Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions.

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/m²).....:

Component report data used : Not applicable
 LED package
 LED module
 Lamp
 Report number:

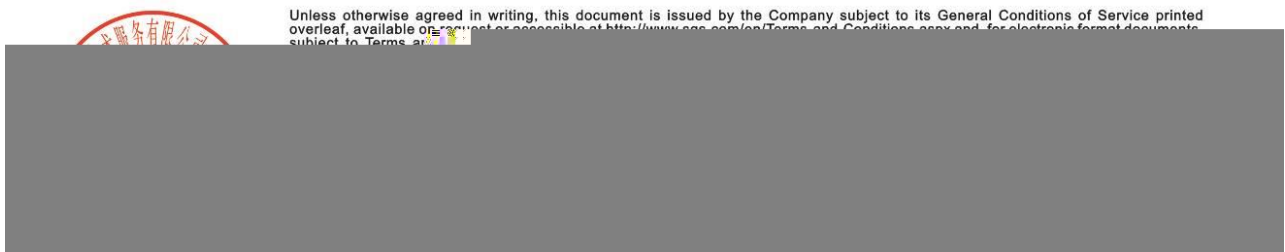
Possible test case verdicts:

- 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



General product information:

The LED chip can emit the white light when powered.
All models are the same except CCT.



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions.

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		P
	Risk group achieved:		N/A
	- ..Risk Group 0 unlimited		N/A
	- ..Risk Group 1 unlimited		N/A
	- E_{thr} (lx) : Distance to reach RG1..... (mm) :	861,61 840	P



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions.

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.....		TX-3570W15FC-NUFEZWB02DT		
Test voltage (V).....		N/A		
Test current (mA).....		1900		
Test frequency (Hz)		N/A		
Ambient, t (C)		25		
Measurement distance		<input checked="" type="checkbox"/> 20 cm <input type="checkbox"/> ... cm		
Source size		<input checked="" type="checkbox"/> Non-small <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		
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 •sr ¹)	71470	
Blue light hazard irradiance	E _B	W/m ²		
Luminance	L	cd/m ²	6,158 x 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.				



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions.

Test Report

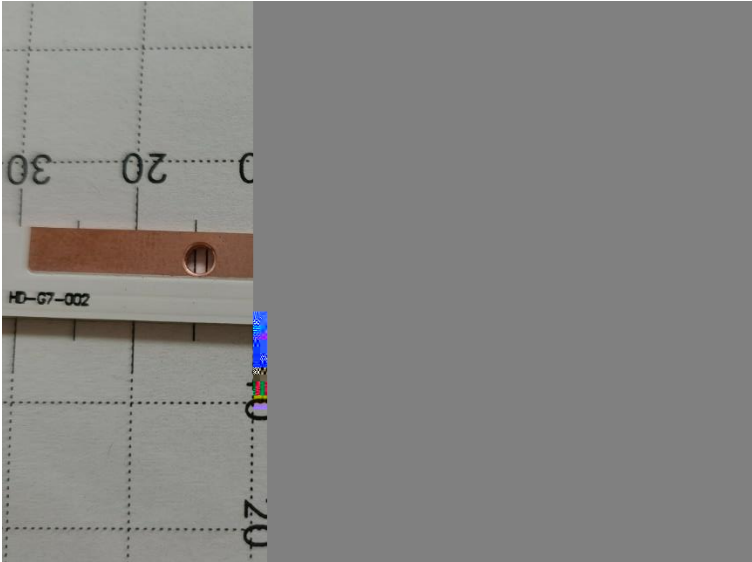
Report No.: GZEE220900345231
Date: 2022-10-11

Photo documentation:

Details of: View of the product

View:

- general
- front
- rear
- right
- left
- top
- bottom



--- End of Report ---



Unless otherwise agreed in writing, this document is issued by the Company subject to its General Conditions of Service printed overleaf, available on request or accessible at <http://www.sgs.com/en/Terms-and-Conditions.aspx> and, for electronic format documents, subject to Terms and Conditions.