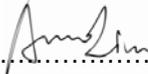


TEST REPORT IEC TR 62778	
Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires	
Report Reference No.....	EED31K000444
Compiled by (+ signature).....	Carrie Lin 
Reviewed by (+ signature).....	Torres He 
Approved by (+ signature).....	Amo Liu  Lab Supervisor
Date of issue.....	Mar. 09, 2018
Testing Laboratory	Centre Testing International Group Co., Ltd.
Address.....	Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China
Applicant's name	Shenzhen Runlite Technology Co., Ltd.
Address.....	Building A15, Tantou the 4 th Industrial Estate, SongGang Town, BaoAn District, Shenzhen, China
Manufacture's name	Shenzhen Runlite Technology Co., Ltd.
Address.....	Building A15, Tantou the 4 th Industrial Estate, SongGang Town, BaoAn District, Shenzhen, China
Test specification:	
Standard.....	IEC TR 62778:2014 (Second Edition)
Test procedure.....	Test report
Non-standard test method.....	N/A
Test Report Form No	IEC62778A
TTRF Originator.....	CTI
Master TTRF.....	Dated 2016-02
Test item description	
Model/Type reference.....	Filament LED
Ratings.....	51mm
	25mA, 75V DC



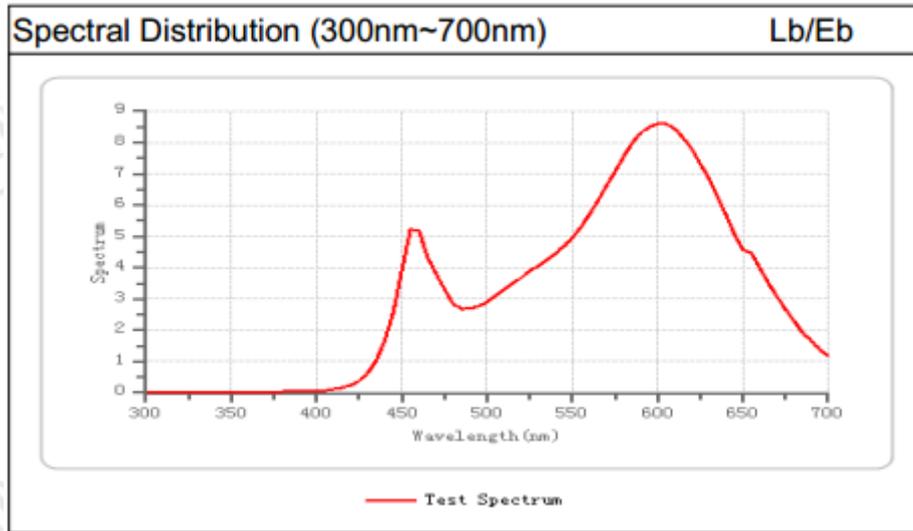
Check No.: 2457547188

Summary of testing:

Test conditions:

1. Ambient temperature: 24,6°C; Humidity: 59%;
2. Measurement distance: 200mm;
3. Aperture stop: 7mm

Spectral Distribution



Conclusion: Sample tested is considered as **Exempt Group**.

Tests performed (name of test and test clause):

All applicable tests as described in Test Case and Measurement Sections were performed.

Testing location:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District, Shenzhen,
Guangdong, China

Summary of compliance with National Differences:

N/A

Copy of marking plate:

N/A

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 voltage (V)..... :	75V DC
Rated current (mA)..... :	25mA
Rated CCT (K)..... :	N/A
Rated Luminance (Mcd/m ²)..... :	N/A
Component report data used	<input type="checkbox"/> Not applicable <input checked="" type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp
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..... :	Feb. 27, 2018
Date (s) of performance of tests..... :	Mar. 01, 2018
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report. The tested sample(s) and the sample information are provided by the client. Throughout this report a <input checked="" type="checkbox"/> comma / <input type="checkbox"/> point is used as the decimal separator.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC62471:	
The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided..... :	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> Not applicable
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... :	N/A
General product information:	
The test current is 25mA.	

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict
7	MEASUREMENT INFORMATION FLOW		P
7.1	Basic flow		N/A
	'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		P
	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		N/A
	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		P
	LED package is evaluated as : <input checked="" type="checkbox"/> RG0 unlimited <input type="checkbox"/> RG1 unlimited		P
	E_{thr} of LED package applies to array		N/A
8	RISK GROUP CLASSIFICATION		N/A
	Risk group achieved:		N/A
	-... Risk Group 0 unlimited		P
	-... Risk Group 1 unlimited		N/A
	- E_{thr} (lx) : Distance to reach RG1..... (m) :		N/A

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

TABLE: Spectroradiometric measurement			P
Measurement performed on:	<input checked="" type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp <input type="checkbox"/> Luminaire		
Model number.....	51mm		
Test voltage (V).....	67		—
Test current (mA).....	25		—
Test frequency (Hz).....	N/A		—
Ambient, t (°C).....	24,6		—
Measurement distance.....	<input checked="" type="checkbox"/> 20 cm <input type="checkbox"/> ... cm		—
Source size	<input checked="" type="checkbox"/> Non-small <input type="checkbox"/> Small : 17 mm		—
Field of view	<input checked="" type="checkbox"/> 100 mrad <input type="checkbox"/> 11 mrad <input type="checkbox"/> 1,7 mrad (for small sources)		—
Item	Symbol	Units	Result
Correlated colour temperature	CCT	K	/
x/y colour coordinates	0,4227	0,3864	1,094
Blue light hazard radiance	L _B	W/(m ² •sr ¹)	3,152E+01
Luminance	L	cd/m ²	5,990E+05

Photo Document

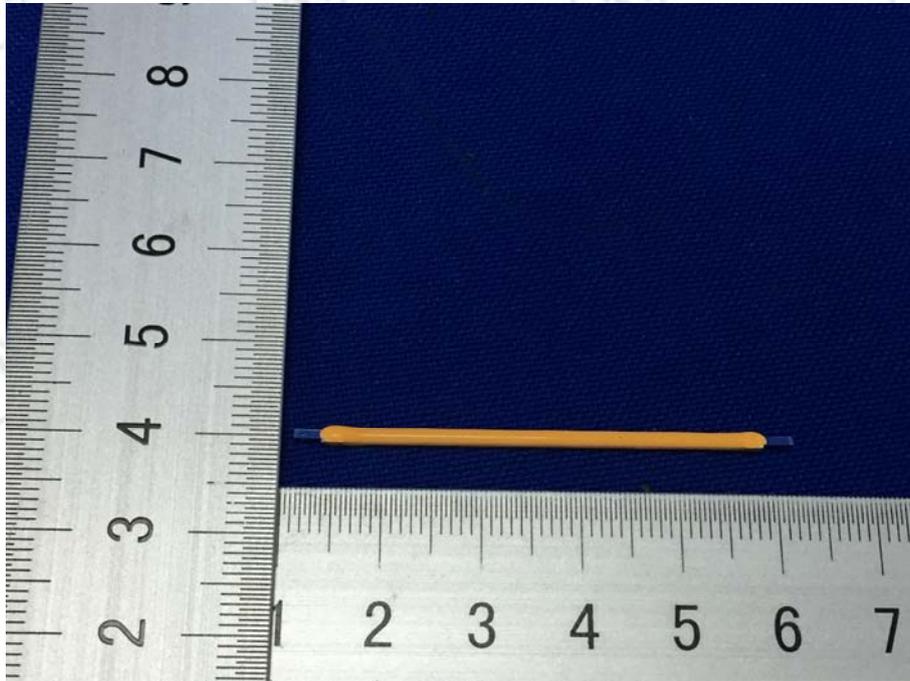


Fig. 1 - Overall view of the sample

*** End of Report ***

The test report is effective only with both signature and specialized stamp. The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.