

<b>TEST REPORT</b> <b>IEC TR 62778</b> <b>Application of IEC 62471 for the assessment of blue light hazard to light sources and luminaires</b>	
Report Reference No.....	EED31J000375
Compiled by (+ signature).....	Sain Chen 
Reviewed by (+ signature).....	Torres He 
Approved by (+ signature).....	Amo Liu 
Date of issue.....	Feb. 28, 2017
<b>Testing Laboratory</b> .....	Centre Testing International Group Co., Ltd.
Address.....	Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China
<b>Applicant's name</b> .....	Shenzhen Runlite Technology Co.,Ltd
Address.....	Building A15, Tantou the 4th Industrial Estate, SongGang Town, BaoAn District, ShenZhen, China
<b>Manufacture's name</b> .....	Shenzhen Runlite Technology Co.,Ltd
Address.....	Building A15, Tantou the 4th Industrial Estate, SongGang Town, BaoAn District, ShenZhen, China
<b>Test specification:</b>	
Standard.....	IEC TR 62778:2014 (Second Edition)
Test procedure.....	Test report
Non-standard test method.....	N/A
<b>Test Report Form No.</b> .....	IEC62778A
TTRF Originator.....	CTI
Master TTRF.....	Dated 2016-02
<b>Test item description</b> .....	SMD LED
Model/Type reference.....	SMD LED
Ratings.....	60mA DC, 3V, 0,2W, Ra=80



Lab Supervisor

Check No.: 2447629933

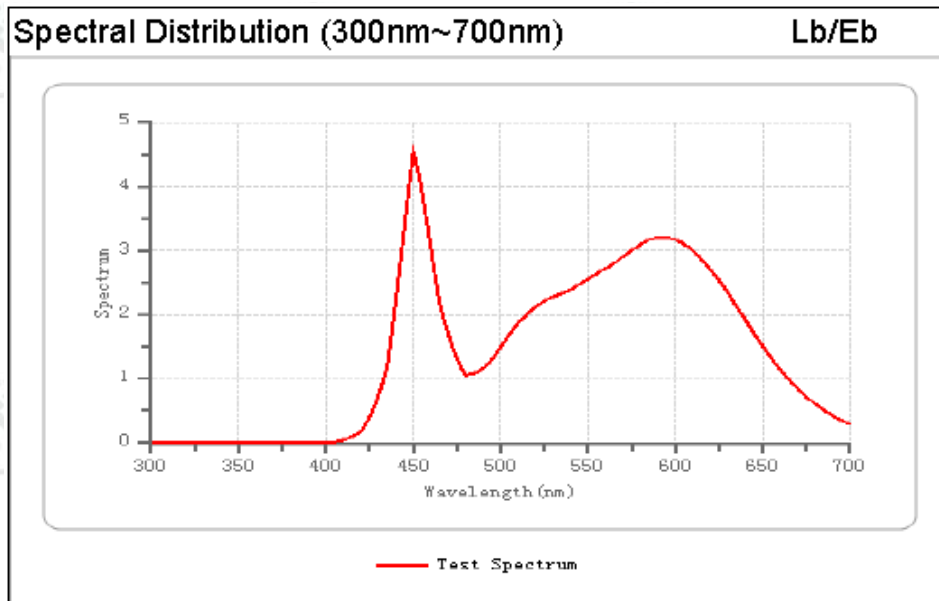
IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

**Summary of testing:**

**Test conditions:**

1. Ambient temperature: 25°C; Humidity: 49%;
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

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<b>Test item particulars..... :</b>	
Product evaluated..... :	<input checked="" type="checkbox"/> LED package <input type="checkbox"/> LED module <input type="checkbox"/> Lamp <input type="checkbox"/> Luminaire
Rated voltage (V)..... :	3
Rated current (mA)..... :	60
Rated CCT (K)..... :	N/A
Rated Luminance (Mcd/m <sup>2</sup> )..... :	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)	
<b>Testing</b>	
Date of receipt of test item..... :	Feb. 21, 2017
Date (s) of performance of tests..... :	Feb. 22, 2017
<b>General remarks:</b>	
"(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.	
<b>Manufacturer's Declaration per sub-clause 4.2.5 of IEC60060-2:</b>	
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
<b>When differences exist; they shall be identified in the General product information section.</b>	
Name and address of factory (ies)..... :	N/A
<b>General product information:</b>	
Test current is 60mA DC.	

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<b>7</b>	<b>MEASUREMENT INFORMATION FLOW</b>		P
<b>7.1</b>	<b>Basic flow</b>		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
<b>7.2</b>	<b>Conditions for the radiance measurement</b>		P
	Standard condition applied (200mm distance, 0,011rad field of view)		P
	Non-standard condition applied		N/A
<b>7.3</b>	<b>Special cases (I): Replacement by a lamp or LED module of another type</b>		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
<b>7.4</b>	<b>Special cases (II): Arrays and clusters of primary light sources</b>		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
<b>8</b>	<b>RISK GROUP CLASSIFICATION</b>		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

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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.....	SMD LED		
Test voltage (V).....	3,0		—
Test current (mA).....	60		—
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 : 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	/	/	/
Blue light hazard radiance	L <sub>B</sub>	W/(m <sup>2</sup> •sr <sup>1</sup> )	2,755E+01
Luminance	L	cd/m <sup>2</sup>	2,790E+06



Photo Document

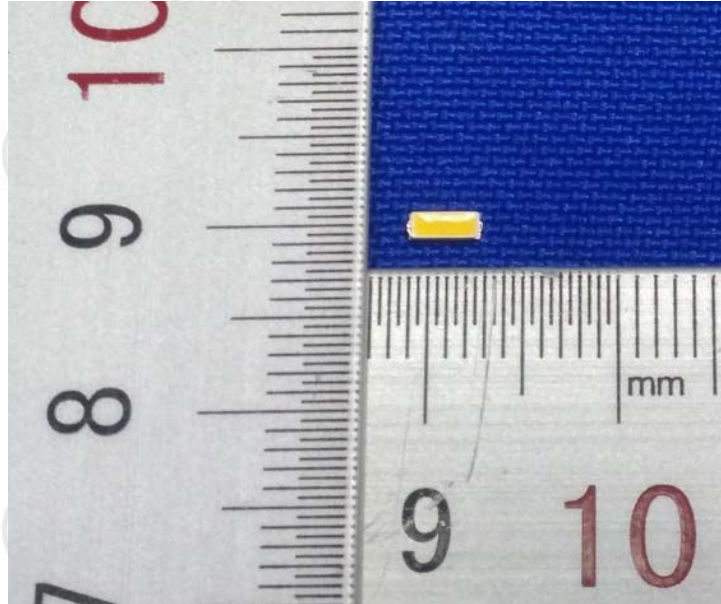


Fig. 1 - Overall view

\*\*\* End of Report \*\*\*

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