TEST REPORT

IEC TR 62778

Application of IEC TR 62778 for the assessment of blue light hazard to light sources and luminaires

Report reference No .....:	RSZ200619550-SF
Compiled by (+ signature) .....:	Test Engineer: Zero Gao
Approved by (+ signature) .....:	Project Engineer: Harrison Huang
Date of issue .....:	2020-07-01
Testing laboratory .....:	Bay Area Compliance Laboratories Corp.(Dongguan)
Address .....:	No.69, Pulongcun, Puxinhu Industry Area, Tangxia, Dongguan, Guangdong, China
Testing location .....:	Same as above
Applicant .....:	Hongli Zhihui Group Co.,Ltd. Guangzhou Branch
Address .....:	Room 316, Building 2, No.1, Xianke Yi Road, Huadong Town, Huadu District, Guangzhou, China
Standard .....:	IEC TR 62778:2014
Test sample(s) received.....:	2020-06-26
Test in period.....:	2020-06-30
Procedure deviation .....:	N.A.
Non-standard test method .....:	N.A.
Type of test object .....:	LED package
Trademark .....:	N.A.
Model/type reference .....:	HL-AM-2835DW-S1-08-HR5
Manufacturer..... .....:	Hongli Zhihui Group Co.,Ltd. Guangzhou Branch Room 316, Building 2, No.1, Xianke Yi Road, Huadong Town, Huadu District, Guangzhou, China
Rating .....:	Input: 2.8-3.4Vdc, 150mA

Copy of marking plate:

None

Test item particulars ..... :	
Product evaluated ..... :	☒ **LED package** ☐ **LED module** ☐ **Lamp** ☐ **Luminaire**
Rated voltage (V) ..... :	See rating
Rated current (mA)..... :	See rating
Rated Luminance (Mcd/m^2)..... :	Not specified
Component report data used ..... :	☒ **Not applicable** ☐ **LED package** ☐ **LED module** ☐ **Lamp**

Possible test case verdicts:

-test case does not apply to the test object.....:N(.A.)

-test object does meet the requirement.....:P(ass)

-test object does not meet the requirement.....:F(ail)

General remarks:

The test results presented in this report relate only to the object tested.
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"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.
Throughout this report a point is used as the decimal separator.
List of test equipment must be kept on file and available for review.

Remark:

Appendix A EUT photos

General product information:

"EUT" as referred in this report is a LED package. And the input rating is 2.8-3.4Vdc, 150mA.

IEC TR 62778			
Clause	Requirement + Test	Result - Remark	Verdict

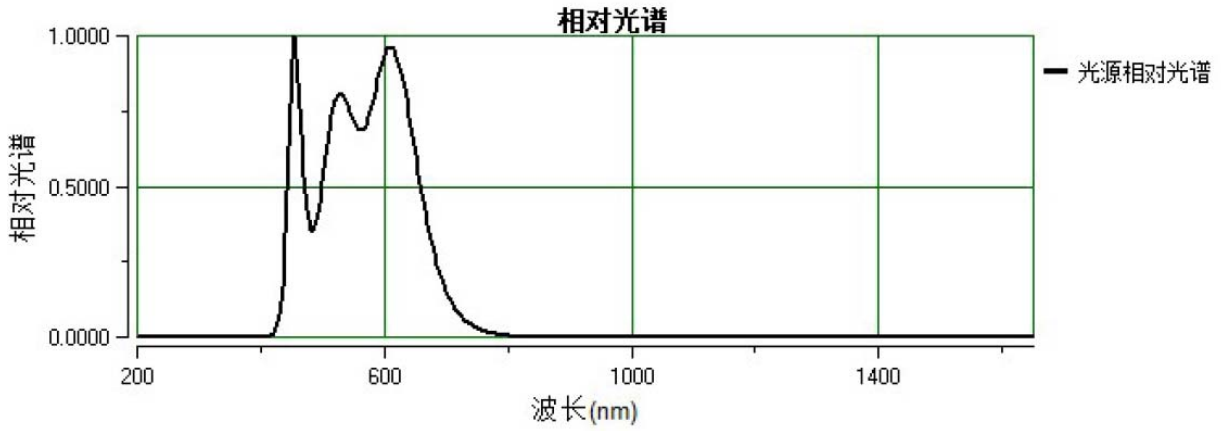
7	**MEASUREMENT INFORMATION FLOW**		**P**
7.1	**Basic flow**		**P**
	'Law of conservation of luminance' applied		P
	Use of only true luminance/radiance values		P
	In case of luminaire: The light source is operated in the luminaire under similar conditions as when tested as a component		P
	In case E_{thr} value for RG2 was established the peak value was derived from angular light distribution		N
7.2	**Conditions for the radiance measurement**		**P**
	Standard condition applied (200mm distance, 0,011rad field of view)		P
	Non-standard condition applied		N
7.3	**Special cases (I): Replacement by a lamp or LED module of another type**		**N**
	Light source is a white light source		N
	Evaluation done based on highest luminance		N
	Evaluation done based on CCT value		N
7.4	**Special cases (II): Arrays and clusters of primary light sources**		**N**
	LED package is evaluated as ..... :	☐ RG0 unlimited ☐ RG1 unlimited ☐ RG2 unlimited	N
	E_{thr} of LED package applies to array		N
8	**RISK GROUP CLASSIFICATION**		**P**
	Risk group achieved:		P
	- .. Risk Group 0 unlimited		N
	- .. Risk Group 1 unlimited		P
	- Risk Group 2 unlimited		N
	- E_{thr} ..... (lx) : Distance to reach RG1 .....(mm) :	1998 lx 87 mm	P

	TABLE: Spectroradiometric measurement		P
	Measurement performed on:	☒ **LED package** ☐ **LED module** ☐ **Lamp** ☐ **Luminaire**	—
	Model number	HL-AM-2835DW-S1-08-HR5	—
	Test voltage (V)	2.8-3.4Vdc	—
	Test current (mA).....	150mA	—
	Test frequency (Hz)	--	—
	Ambient, t (°C)	25.7℃	—
	Measurement distance.....	☒ 20 cm ☐ ... cm	—
	Source size	☐ Non-small: mm ☒ Small: 0.70 mm	—
	Field of view	☐ 100 mrad ☐ 11 mrad ☒ 3.5 mrad (for small sources)	—

Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	4129	--
x/y colour coordinates	x/y		0.3757/0.3765	--
Blue light hazard radiance	L_B	$W/(m^2 \cdot sr^1)$	5.627×10^3	--
Blue light hazard irradiance	E_B	W/m^2	1.900×10^{-1}	--
Luminance	L_V	cd/m^2	1.124×10^7	--
Illuminance	E	lx	380	--

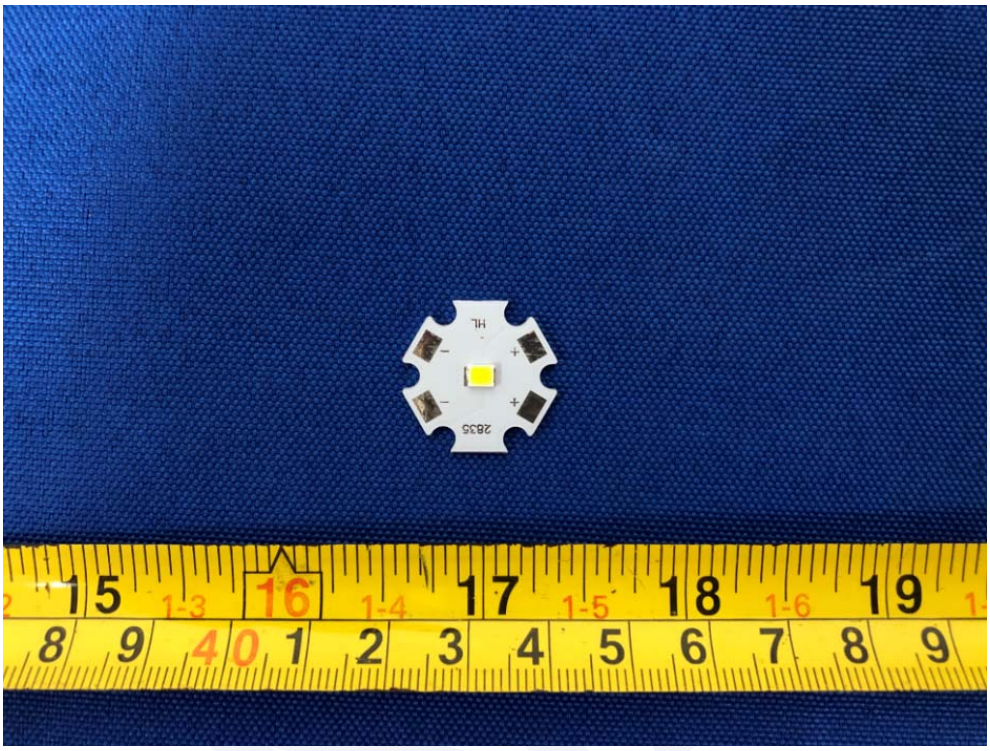
Supplementary information: NA

	TABLE: Angular light distribution	



Appendix A - EUT Photos

EUT- The overall view



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*****End of report*****