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 ..... :	RSZ201204554-SF
Compiled by (+ signature) ..... :	Test Engineer: Felix Fang
Approved by (+ signature) ..... :	Project Engineer: Harrison Huang
Date of issue ..... :	2020-12-22
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..... :	2020-12-14
Test in period..... :	2020-12-15
Procedure deviation ..... :	N.A.
Non-standard test method ..... :	N.A.
Type of test object ..... :	LED Package
Trademark ..... :	N.A.
Model/type reference ..... :	HL-AS-2835D46W-2-S1-08L-PCT-HR5-SP
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: 2.6-3.0Vdc, 60mA

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)

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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

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Clause	Requirement + Test	Result - Remark	Verdict

	TABLE: Spectroradiometric measurement		**P**
	Measurement performed on:	☒ **LED package** ☐ **LED module** ☐ **Lamp** ☐ **Luminaire**	—
	Model number	HL-AS-2835D46W-2-S1-08L-PCT-HR5-SP	—
	Test voltage (V)	2.6-3.0Vdc	—
	Test current (mA)	60 mA	—
	Test frequency (Hz)	--	—
	Ambient, t (°C)	20.7	—
	Measurement distance	☒ 20 cm ☐ ... cm	—
	Source size	☐ Non-small: mm ☒ Small: 1.7mm	—
	Field of view	☐ 100 mrad ☐ 11 mrad ☒ 8.3 mrad (for small sources)	—

Item	Symbol	Units	Result	Remark
Correlated colour temperature	CCT	K	3012	--
x/y colour coordinates	x/y		0.4405 / 0.4129	--
Blue light hazard radiance	L_B	$W/(m^2 \cdot sr^1)$	6.223×10^2	--
Blue light hazard irradiance	E_B	W/m^2	6.123×10^{-2}	--
Luminance	L_V	cd/m^2	2.274×10^6	--
Illuminance	E	lx	224	--
Supplementary information: NA				

Appendix A - EUT Photos

EUT- The overall view