Test item particulars .....:

Tested lamp .....: LED
Tested lamp system .....: N.A.

Lamp classification group.....: Exempt Group
Lamp cap .....: N.A.
Bulb.....: N.A.
Rated of the lamp .....: N.A.
Furthermore marking on the lamp.....: N.A.
Seasoning of lamps according EN standard .....: No seasoning
Used measurement instrument.....: See appendix B for details
Temperature by measurement.....: 25.3°C
Information for safety use.....: N.A

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 relates only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.
"(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:
This report consists of 15 pages and following appendixes:
Appendix A EUT photos
Appendix B Test equipment list

General product information:
This product is LED chip, test model is HL-AT-2835FVW-S1-08-PCT-HR3. Rated input is 9.5Vdc, 150mA.

REMARK:
This report is based on the BACL report No.: RSZ160505550-03, the differences are that the Applicant and Manufacturer changed from " Guangzhou Hongli Opto-Electronic Co.,Ltd." to "Hongli Zhihui Group Co.,Ltd.", t, and model No. Changed to "HL-AT-2835FVW-S1-08-PCT-HR3". So it don't need to add tests.

IEC 62471:2006			
Clause	Requirement + Test	Result - Remark	Verdict
	$t_{max} \leq 10000/E_{UVA}$ s		N
4.3.3	Retinal blue light hazard exposure limit		P
	To protect against retinal photochemical injury from chronic blue-light exposure, the integrated spectral radiance of the light source weighted against the blue-light hazard function, B(_), i.e., the blue-light weighted radiance , LB, shall not exceed the levels defined by:	P	

IEC 62471:2006			
Clause	Requirement + Test	Result - Remark	Verdict
	$L_{IR} = \sum_{780}^{1400} L_\lambda \cdot R(\lambda) \cdot \Delta\lambda \le \frac{6000}{\alpha}$ $W \cdot m^{-2} \cdot sr^{-1}$	See the Table 6.1	P
4.3.7	Infrared radiation hazard exposure limits for the eye		P
	The avoid thermal injury of the cornea and		N
			N
			P
			P
			P
			P

IEC 62471:2006			
Clause	Requirement + Test	Result - Remark	Verdict
	To standardize interpolated values, use linear interpolation on the log of given values to obtain intermediate points at the wavelength intervals desired.		N
5.3.2	Calculations		P
	The calculation of source hazard values shall be performed by weighting the spectral scan by the appropriate function and calculating the total weighted energy.		P
5.3.3	Measurement uncertainty		P
	The quality of all measurement results must be quantified by an analysis of the uncertainty.		P
6	LAMP CLASSIFICATION		P
	For the purposes of this standard it was decided that the values shall be reported as follows:		P
	– for lamps intended for general lighting service, the hazard values shall be reported as either irradiance or radiance values at a distance which produces an illuminance of 500 lux, but not at a distance less than 200 mm		N
	– for all other light sources, including pulsed lamp sources, the hazard values shall be reported at a distance of 200 mm	At a distance of 200mm	P
6.1	Continuous wave lamps		P
6.1.1	Exempt Group		P
	In the except group are lamps, which does not pose any photobiological hazard. The requirement is met by any lamp that does not pose:		P
	– an actinic ultraviolet hazard (ES) within 8-hours exposure (30000 s), nor		P
	– a near-UV hazard (EUVA) within 1000 s, (about 16 min), nor		P

IEC 62471:2006			
Clause	Requirement + Test	Result - Remark	Verdict

Table 4.2	Spectral weighting functions for assessing retinal hazards from broadband optical sources	-

Wavelength nm	**Blue-light hazard function B( )**	**Burn hazard function R( )**
300	0.01	-
305	0.01	-
310	0.01	-
315	0.01	-
320	0.01	-
325	0.01	-
330	0.01	-
335	0.01	-
340	0.01	-
345	0.01	-
350	0.01	-
355	0.01	-
360	0.01	-
365	0.01	-
370	0.01	-
375	0.01	-
380	0.01	0.1
385	0.013	0.13
390	0.025	0.25
395	0.05	0.5
400	0.10	1.0
405	0.20	2.0
410	0.40	4.0
415	0.80	8.0
420	0.90	9.0
425	0.95	9.5
430	0.98	9.8
435	1.00	10.0
440	1.00	10.0
445	0.97	9.7
450	0.94	9.4
455	0.90	9.0
460	0.80	8.0
465	0.70	7.0
470	0.62	6.2
475	0.55	5.5
480	0.45	4.5
485	0.40	4.0
490	0.22	2.2
495	0.16	1.6
500-600	$10^{[(450-\lambda)/50]}$	1.0
600-700	0.001	1.0
700-1050	0.013	$10^{[(700-\lambda)/500]}$
1050-1150	0.025	0.2
1150-1200	0.05	$0.2^{100.02(1150-\lambda)}$
1200-1400	0.10	0.02

* 1 Wavelengths chosen are representative: other values should be obtained by logarithmic interpolationat intermediate wavelengths.