

TEST REPORT



Product name:	LED bulb
Model and Specification:	LED LAMP 20W E27 AP-05U-0020-01B AP-05V-0020-01A
Applicant:	Zhongshan Kerisheng supply chain Management Co., LTD
Factory:	Guangdong Shengpu Lighting Technology Co., Ltd.

Guangdong Tsaint Hi-tech Co., Ltd.

TEST REPORT IEC 62612:2013/AMD2:2018 Self-ballasted LED lamps for general lighting services with supply voltages 50 V - Performance requirements NB/COPANT 1737:2022 Eficiencia energética - Fuentes de iluminación LED - Especificaciones y etiquetado	
Report Number	TSGK-2025-1567-R
Date of issue	2025-06-11
Total number of pages	23 pages
Name of Testing Laboratory preparing the Report	Guangdong Tsaint Hi-tech Co., Ltd. 1,2,3,4,6,& -1/F., No.5, Gufeng South Road, Guzhen, Zhongshan, Guangdong, China
Applicant's name	Zhongshan Kerisheng supply chain Management Co., LTD
Address	Card 04, 33rd Floor, Lihe Commercial Center, 98 Tongxing Road, Guzhen Town, Zhongshan City
Test specification:	
Standard	IEC 62612:2013/AMD2:2018 NB/COPANT 1737:2022 Applicant's special requirements
Test procedure	--
Non-standard test method	N/A
Test Report Form No	--
Test Report Form(s) Originator	--
Master TRF	--
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Test item description	LED bulb
Trade Mark	
Name and address of manufacturer:	Guangdong Shengpu Lighting Technology Co., Ltd. Factory No. 03, 1st Floor, Building 2, No. 11, Gaoxin East Road, Jianghai District, Jiangmen City (Multiple Business Licenses at One Address)
Model/Type reference	LED LAMP 20W E27 AP-05U-0020-01B AP-05V-0020-01A
Ratings	See 'General product information and other remarks'

List of Attachments (including a total number of pages in each attachment):

- 1.This test report includes: cover page, 1 page; NB/COPANT 1737:2022 and IEC 62612 report, 14 pages.
- 2.Appendix I: Photos of tested samples, totally 2 pages.

Summary of testing:

Tests performed (name of test and test clause):

- Cl. 5, Marking;
- Cl. 6, Dimensions;
- Cl. 8, Lamp input;
- Cl. 9, Light output;
- Cl. 10, Colour nomenclature, variation and rendering;
- Cl. 11, Lamp life.

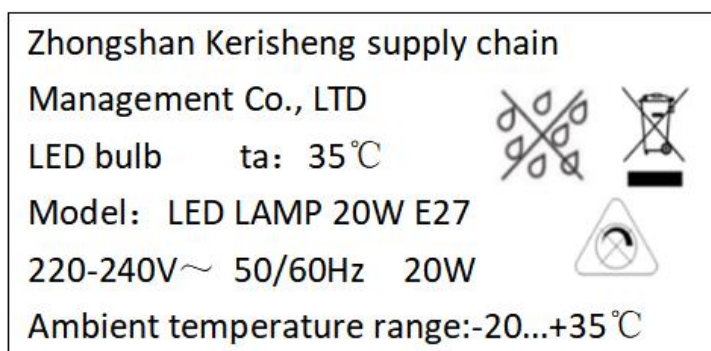
Testing location:

Guangdong Tsaint Hi-tech Co.,Ltd.
1,2,3,4,6,& -1/F., No.5, Gufeng South Road,
Guzhen, Zhongshan, Guangdong, China

Copy of marking plate:

The artwork below maybe only a draft. The use of certification marks on a product must be authorized by the respective NCBs that own these marks.

Representative:



Rated luminous flux: 2300lm

CCT: 6000K

Photometric code: 860/669

Remark:

1. The marking labels for other models are identical as above expect model name and ratings.

Test item particulars..... :	
Classification of installation and use..... :	For indoor use only
Supply Connection..... :	Connection by cable
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..... :	2024-09-09
Date (s) of performance of tests..... :	2024-09-09 to 2025-05-27
Tested by (name + signature)..... :	
Liu guangming	<i>Liu guang ming</i>
Compiled by (+ signature)..... :	
Wang juan	<i>Wangjuan</i>
Approved by (+ signature)..... :	
Fuyu Jiang	<i>Fuyu Jiang</i>
General remarks:	
<p>"(See Enclosure #)" refers to additional information appended to the report. "(See appended table)" refers to a table appended to the report.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p>	
Name and address of factory (ies)..... :	Guangdong Shengpu Lighting Technology Co., Ltd. Factory No. 03, 1st Floor, Building 2, No. 11, Gaoxin East Road, Jianghai District, Jiangmen City (Multiple Business Licenses at One Address)
General product information and other remarks:	
<p>1. The products covered by this report are LED bulb, used for general lighting applications. 2. All measurements were conducted at 230V~, 50Hz; other conditions were not considered in this report.</p>	

Model number	LED LAMP 20W E27	AP-05U-0020-01B	AP-05V-0020-01A
Rated input	220-240V~, 50/60Hz	220-240V~, 50/60Hz	220-240V~, 50/60Hz
Rated power	20W	20W	20W
Rated luminous flux	2300lm	2300lm	2300lm
Photometric code	860/669	865/669	865/669
Rated lifetime (L _{70B50})	25000h	25000W	25000W
Lumen maintenance code	9	9	9
Categories of rated chromaticity coordinate values	6-step	6-step	6-step
CCT	6000K	6500K	6500K
CRI - Ra	80	80	80
Rated efficacy	115.0lm/W	115.0lm/W	115.0lm/W
Directionality	Non-directional	Non-directional	Non-directional
Dimensions	(Ø80*140)mm	(Ø80*140)mm	(Ø80*140)mm
Displacement factor	0.7	0.7	0.7
Temperature ramping	1K/min	1K/min	1K/min
LED name	2835_9V-0.5W	2835_9V-0.5W	2835_9V-0.5W
Quantity of LEDs	28pcs	28pcs	28pcs

Note: The centre chromaticity coordinates is: 6000K (cx=0.313, cy=0.337); 6500K (cx=0.313, cy=0.337).

For Energy requirement:

Model number	LED LAMP 20W E27		AP-05U-0020-01B		AP-05V-0020-01A		
	Requiremen	Rated value	Measured value	Rated value	Measured value	Rated value	Measured value
Power		20 W	19.79 W	20 W	19.84 W	20 W	19.81 W
Luminous flux		2300 lm	2338.9 lm	2300 lm	2365.8 lm	2300 lm	2352.6 lm
CCT		6000 K	6047 K	6500 K	6457 K	6500 K	6455 K
CRI - Ra		80	80.7	80	83.0	80	83.0
Power factor		0.7	0.76	0.7	0.76	0.7	0.76
EC		20	20	20	20	20	20
(kWh/1000h)		kWh/1000h	kWh/1000h	kWh/1000h	kWh/1000h	kWh/1000h	kWh/1000h
efficacy η_{TM}		115.0 lm/W	118.2 lm/W	115.0 lm/W	119.2 lm/W	115.0 lm/W	118.8 lm/W
EE class		E	E	E	E	E	E

Energy efficiency class	Total mains efficacy η_{TM} (lm/W)
A (most efficient)	$210 \leq \eta_{TM}$
B	$185 \leq \eta_{TM} < 210$
C	$160 \leq \eta_{TM} < 185$
D	$135 \leq \eta_{TM} < 160$
E	$110 \leq \eta_{TM} < 135$
F	$85 \leq \eta_{TM} < 110$
G (least efficient)	$\eta_{TM} < 85$

LED specification

No.	Model name	Manufacturer	VF (V)	IF (mA)	CCT (K)
1	2835_9V-0.5W	Zhongshan Kangye Lighting Appliance Co., Ltd	36-38	30	6000/6500

IEC 62612			
NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict
5	MARKING		P
	- rated luminous flux (lm).....:	See general product information	P
	- rated colour.....:	See general product information	P
	- rated beam angle.....:	Non-directional	N/A
	- lamp photometric code.....:	See general product information	P
	- colour variation category.....:	See general product information	P
	- rated life and the rated lumen maintenance factor(L _x)	See general product information	P
	- Failure rate (F _x).....:	See general product information	P
	- peak intensity (cd).....:	Non-directional	N/A
	- rated colour rendering index.....:	See general product information	P
	- ageing time.....:	0h	N/A
	- rated efficacy (lm/W).....:	See general product information	P
	- dimensions	See general product information	P
	- displacement factor.....:	See general product information	P
	- power factor.....:	See general product information	P
	- Location of the marking	Attached on lamp surface	P

6	DIMENSIONS		P
	Dimensions as indicated by manufacturer or responsible vendor	Measured value (average): (Ø80*140)mm	P
	Not exceed the outlines of the lamp to be replaced	Not decided by client	N/A

8	LAMP INPUT		P
8.1	Lamp power		P
	Measured lamp power.....:	See annex 1	—
	The power dissipated by the LED-lamp do not exceed the rated wattage by more than 10%		P
8.2	Displacement factor		P

IEC 62612			
NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict
	Measured displacement factor.....:	See annex 1	—
	The measured displacement factor for each individual lamp of the sample is not less than the marked value by more than 0,05.		P

9	LIGHT OUTPUT		P
9.1	Luminous flux		P
	Measured total luminous flux (lm).....:	See annex 1	—
	The initial luminous flux of a LED lamp measured is not less than 90% of the rated luminous flux.....:	See annex 1	P
9.2	Luminous intensity distribution, peak intensity and beam angle		—
9.2.3	Luminous intensity distribution	Non-directional	—
9.2.4	Peak intensity value	Non-directional	—
9.2.5	Beam angle value	Non-directional	—
9.3	EFFICACY		P
	The lamp efficacy is calculated from the measured luminous flux divided by the measured input power. Measured efficacy (lm/W)	See annex 1	—
	The efficacy of LED luminaire is not less than 80% of the rated efficacy	See annex 1	P

10	CORRELATED COLOUR TEMPERATURE AND COLOUR RENDERING		P
10.1	Measured initial CCT..... :	See annex 1	—
	Measured CCT after an operation time of 25% of rated lamp life (max 6000 hours)		—
	Not move beyond the CCT tolerance category		P
10.2	Measured initial CRI.....:	See annex 1	—
	Not have decreased by more than 3 points from the rated CRI value		P

11	LAMP LIFE		P
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IEC 62612			
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Clause	Requirement + Test	Result - Remark	Verdict
11.2	Lumen maintenance		P
	Measured initial luminous flux	See annex 1	—
	Measured luminous flux after an operation time of 25% of rated lamp life (max 6000 hours)	See annex 2	—
	The measured flux value after an operation time of 25% of rated lamp life (max 6000 hours) not less than the maximum lumen maintenance related to the rated life	Rated lifetime (L _{70B50}): 25000h Measured time: 6000h	P
	The measured lumen maintenance corresponds with the "lumen maintenance category"		P
11.3	Endurance tests		P
11.3.2	Temperature cycling shock test	1000h	P
	At the end of the test all the LED lamps operate and have a luminous flux within the lumen maintenance code for 15 min and show no cracks or delaminating of the label.		P
11.3.3	Supply voltage switching test	12500 cycles	P
	At the end of the test all the LED lamps operate and have a luminous flux within the lumen maintenance code for 15 min		P
11.3.4	Operational high temperature stress test	1000h @ 45°C	P
	After cooling down to room temperature, all the lamps have a luminous flux of at least 70% of the initial value for 15 min.		P

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1		TABLE: Initial Test Results for model LED LAMP 20W E27												P
Sample No	Test Voltage (V)	Test Current (A)	Lamp wattage (W)	Displacement factor	Power factor	Φ_{total} (lm)	Φ_{use} (lm)	Lamp efficacy (lm/W)	R9	CRI	CCT (K)	chromaticity		Colour consistency (SDCM)
												x	y	
1	230	0.114	19.85	0.92	0.76	2332.2	2332.2	117.49	12	81.0	6054	0.320	0.345	5.1
2	230	0.115	19.93	0.93	0.75	2341.5	2341.5	117.49	12	81.1	6060	0.320	0.344	5.0
3	230	0.114	19.78	0.92	0.76	2336.2	2336.2	118.11	9	80.7	6076	0.320	0.345	4.9
4	230	0.114	19.70	0.92	0.75	2330.9	2330.9	118.32	8	80.4	6018	0.321	0.347	5.8
5	230	0.114	19.93	0.93	0.76	2337.7	2337.7	117.30	12	81.1	6056	0.320	0.345	5.1
6	230	0.114	19.75	0.93	0.76	2362.3	2362.3	119.61	8	80.4	6024	0.321	0.347	5.7
7	230	0.113	19.77	0.92	0.76	2333.6	2333.6	118.04	11	80.9	6044	0.320	0.345	5.3
8	230	0.114	19.81	0.91	0.76	2350.5	2350.5	118.65	11	80.8	6018	0.321	0.346	5.6
9	230	0.114	19.80	0.93	0.75	2320.3	2320.3	117.19	9	80.7	6074	0.320	0.345	4.9
10	230	0.113	19.70	0.92	0.76	2336.9	2336.9	118.62	8	80.5	6048	0.320	0.346	5.3
11	230	0.113	19.70	0.93	0.76	2340.7	2340.7	118.82	7	80.3	6012	0.321	0.347	5.9
12	230	0.113	19.69	0.92	0.76	2343.8	2343.8	119.04	9	80.6	6064	0.320	0.346	5.1
13	230	0.114	19.82	0.92	0.76	2348.2	2348.2	118.48	8	80.5	6032	0.320	0.347	5.6
14	230	0.114	19.73	0.93	0.75	2358.3	2358.3	119.53	11	80.9	6036	0.320	0.345	5.4
15	230	0.114	19.75	0.92	0.76	2351.9	2351.9	119.08	9	80.7	6066	0.320	0.345	5.0
16	230	0.114	19.78	0.92	0.76	2314.7	2314.7	117.02	8	80.5	6042	0.320	0.346	5.5
17	230	0.114	19.74	0.92	0.76	2341.6	2341.6	118.62	11	80.9	6030	0.321	0.345	5.5
18	230	0.114	19.80	0.93	0.76	2320.1	2320.1	117.18	9	80.7	6078	0.320	0.345	4.9
19	230	0.114	19.79	0.92	0.76	2357.5	2357.5	119.13	9	80.6	6062	0.320	0.346	5.1
20	230	0.114	19.92	0.92	0.76	2318.3	2318.3	116.38	8	80.6	6046	0.320	0.346	5.4
Average	230	0.114	19.79	0.92	0.76	2338.9	2338.9	118.20	9	80.7	6047	0.320	0.346	5.3

IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Test Result of Lumen Maintenance and Survival factor for model LED LAMP 20W E27				P
Sample No	Test voltage (V)	Initial Φ_{total} (lm)	3000H Φ_{total} (lm)	Lumen maintenance (3000H)	Lamp survival factor
1	230	2332.2	2278.3	97.69%	P
2	230	2341.5	2298.7	98.17%	P
3	230	2336.2	2294.9	98.23%	P
4	230	2330.9	2311.6	99.17%	P
5	230	2337.7	2297.3	98.27%	P
6	230	2362.3	2316.2	98.05%	P
7	230	2333.6	2311.0	99.03%	P
8	230	2350.5	2315.0	98.49%	P
9	230	2320.3	2268.6	97.77%	P
10	230	2336.9	2296.5	98.27%	P
11	230	2340.7	2315.7	98.93%	P
12	230	2343.8	2290.1	97.71%	P
13	230	2348.2	2319.8	98.79%	P
14	230	2358.3	2326.5	98.65%	P
15	230	2351.9	2295.7	97.61%	P
16	230	2314.7	2296.0	99.19%	P
17	230	2341.6	2281.0	97.41%	P
18	230	2320.1	2260.5	97.43%	P
19	230	2357.5	2298.8	97.51%	P
20	230	2318.3	2294.0	98.95%	P
Average	230	2338.9	2298.3	98.27%	100%

IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Test Result of Lumen Maintenance and Survival factor for model LED LAMP 20W E27				P
Sample No	Test voltage (V)	Initial Φ_{total} (lm)	6000H Φ_{total} (lm)	Lumen maintenance (6000H)	Lamp survival factor
1	230	2332.2	2260.1	96.91%	P
2	230	2341.5	2284.1	97.55%	P
3	230	2336.2	2268.2	97.09%	P
4	230	2330.9	2258.4	96.89%	P
5	230	2337.7	2279.5	97.51%	P
6	230	2362.3	2304.9	97.57%	P
7	230	2333.6	2275.0	97.49%	P
8	230	2350.5	2284.5	97.19%	P
9	230	2320.3	2259.3	97.37%	P
10	230	2336.9	2281.1	97.61%	P
11	230	2340.7	2275.9	97.23%	P
12	230	2343.8	2288.7	97.65%	P
13	230	2348.2	2271.9	96.75%	P
14	230	2358.3	2274.6	96.45%	P
15	230	2351.9	2289.6	97.35%	P
16	230	2314.7	2250.1	97.21%	P
17	230	2341.6	2259.9	96.51%	P
18	230	2320.1	2254.9	97.19%	P
19	230	2357.5	2280.4	96.73%	P
20	230	2318.3	2248.5	96.99%	P
Average	230	2338.9	2272.5	97.16%	100%

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1		TABLE: Initial Test Results for model AP-05U-0020-01B												P
Sample No	Test Voltage (V)	Test Current (A)	Lamp wattage (W)	Displacement factor	Power factor	Φ_{total} (lm)	Φ_{use} (lm)	Lamp efficacy (lm/W)	R9	CRI	CCT (K)	chromaticity		Colour consistency (SDCM)
												x	y	
1	230	0.113	19.87	0.92	0.76	2368.8	2368.8	119.21	20	82.7	6462	0.313	0.337	0.5
2	230	0.115	19.92	0.92	0.76	2347.9	2347.9	117.87	23	83.1	6474	0.312	0.336	0.6
3	230	0.115	19.94	0.91	0.75	2391.1	2391.1	119.91	21	82.8	6446	0.313	0.337	0.2
4	230	0.114	19.90	0.92	0.76	2377.5	2377.5	119.47	22	82.9	6456	0.313	0.337	0.3
5	230	0.114	19.91	0.93	0.76	2374.5	2374.5	119.26	22	82.9	6438	0.313	0.337	0.2
6	230	0.115	19.90	0.91	0.75	2360.9	2360.9	118.64	21	82.8	6442	0.313	0.337	0.1
7	230	0.114	19.79	0.91	0.76	2353.6	2353.6	118.93	22	83.1	6486	0.312	0.336	0.7
8	230	0.114	19.73	0.93	0.75	2377.1	2377.1	120.48	22	83.0	6462	0.313	0.336	0.4
9	230	0.114	19.85	0.93	0.76	2370.7	2370.7	119.43	22	82.9	6450	0.313	0.337	0.3
10	230	0.115	19.95	0.93	0.75	2337.2	2337.2	117.15	22	82.9	6434	0.313	0.337	0.2
11	230	0.115	19.89	0.92	0.75	2352.7	2352.7	118.29	22	83.0	6470	0.312	0.336	0.4
12	230	0.114	19.69	0.93	0.75	2361.6	2361.6	119.94	22	83.1	6468	0.313	0.336	0.5
13	230	0.113	19.70	0.91	0.76	2354.4	2354.4	119.51	22	83.1	6460	0.313	0.337	0.3
14	230	0.114	19.73	0.93	0.75	2365.1	2365.1	119.87	22	83.0	6480	0.312	0.336	0.6
15	230	0.115	19.94	0.93	0.75	2387.1	2387.1	119.71	22	83.0	6446	0.313	0.337	0.2
16	230	0.115	19.82	0.92	0.75	2369.5	2369.5	119.55	22	82.9	6452	0.313	0.337	0.2
17	230	0.114	19.86	0.93	0.76	2372.9	2372.9	119.48	22	82.9	6442	0.313	0.337	0.2
18	230	0.114	19.84	0.93	0.75	2383.4	2383.4	120.13	22	83.0	6464	0.313	0.336	0.5
19	230	0.114	19.85	0.92	0.76	2351.2	2351.2	118.45	22	83.0	6458	0.313	0.337	0.3
20	230	0.113	19.72	0.92	0.76	2358.3	2358.3	119.59	22	83.0	6452	0.313	0.337	0.2
Average	230	0.114	19.84	0.92	0.76	2365.8	2365.8	119.24	22	83.0	6457	0.313	0.337	0.3

IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Test Result of Lumen Maintenance and Survival factor for model AP-05U-0020-01B				P
Sample No	Test voltage (V)	Initial Φ_{total} (lm)	3000H Φ_{total} (lm)	Lumen maintenance (3000H)	Lamp survival factor
1	230	2368.8	2337.1	98.66%	P
2	230	2347.9	2319.7	98.80%	P
3	230	2391.1	2353.8	98.44%	P
4	230	2377.5	2331.4	98.06%	P
5	230	2374.5	2358.4	99.32%	P
6	230	2360.9	2305.2	97.64%	P
7	230	2353.6	2323.5	98.72%	P
8	230	2377.1	2329.1	97.98%	P
9	230	2370.7	2324.2	98.04%	P
10	230	2337.2	2313.8	99.00%	P
11	230	2352.7	2316.0	98.44%	P
12	230	2361.6	2340.4	99.10%	P
13	230	2354.4	2293.7	97.42%	P
14	230	2365.1	2338.1	98.86%	P
15	230	2387.1	2355.6	98.68%	P
16	230	2369.5	2318.3	97.84%	P
17	230	2372.9	2341.6	98.68%	P
18	230	2383.4	2367.7	99.34%	P
19	230	2351.2	2300.4	97.84%	P
20	230	2358.3	2314.4	98.14%	P
Average	230	2365.8	2329.1	98.45%	100%

IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Test Result of Lumen Maintenance and Survival factor for model AP-05U-0020-01B				P
Sample No	Test voltage (V)	Initial Φ_{total} (lm)	6000H Φ_{total} (lm)	Lumen maintenance (6000H)	Lamp survival factor
1	230	2368.8	2295.1	96.89%	P
2	230	2347.9	2279.1	97.07%	P
3	230	2391.1	2334.4	97.63%	P
4	230	2377.5	2332.6	98.11%	P
5	230	2374.5	2297.3	96.75%	P
6	230	2360.9	2302.1	97.51%	P
7	230	2353.6	2288.9	97.25%	P
8	230	2377.1	2298.9	96.71%	P
9	230	2370.7	2318.6	97.80%	P
10	230	2337.2	2267.3	97.01%	P
11	230	2352.7	2302.1	97.85%	P
12	230	2361.6	2309.4	97.79%	P
13	230	2354.4	2313.2	98.25%	P
14	230	2365.1	2296.3	97.09%	P
15	230	2387.1	2316.7	97.05%	P
16	230	2369.5	2323.3	98.05%	P
17	230	2372.9	2301.0	96.97%	P
18	230	2383.4	2330.3	97.77%	P
19	230	2351.2	2295.5	97.63%	P
20	230	2358.3	2314.7	98.15%	P
Average	230	2365.8	2305.8	97.47%	100%

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Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 1		TABLE: Initial Test Results for model AP-05V-0020-01A												P
Sample No	Test Voltage (V)	Test Current (A)	Lamp wattage (W)	Displacement factor	Power factor	Φ_{total} (lm)	Φ_{use} (lm)	Lamp efficacy (lm/W)	R9	CRI	CCT (K)	chromaticity		Colour consistency (SDCM)
												x	y	
1	230	0.114	19.76	0.92	0.75	2358.5	2358.5	119.36	22	82.9	6456	0.313	0.337	0.3
2	230	0.113	19.63	0.92	0.75	2366.2	2366.2	120.54	22	83.1	6472	0.312	0.336	0.5
3	230	0.113	19.71	0.92	0.76	2330.9	2330.9	118.26	22	83.0	6440	0.313	0.337	0.1
4	230	0.114	19.90	0.91	0.76	2339.1	2339.1	117.54	22	82.9	6450	0.313	0.337	0.3
5	230	0.114	19.87	0.91	0.76	2362.5	2362.5	118.90	22	82.9	6432	0.313	0.337	0.2
6	230	0.115	19.82	0.93	0.75	2341.8	2341.8	118.15	22	82.9	6428	0.313	0.337	0.3
7	230	0.115	19.93	0.91	0.75	2349.9	2349.9	117.91	22	83.1	6464	0.313	0.337	0.4
8	230	0.114	19.84	0.93	0.76	2368.2	2368.2	119.36	23	83.1	6476	0.312	0.336	0.6
9	230	0.114	19.89	0.93	0.76	2331.9	2331.9	117.24	22	83.0	6450	0.313	0.337	0.2
10	230	0.114	19.81	0.91	0.76	2350.3	2350.3	118.64	22	83.1	6468	0.312	0.336	0.4
11	230	0.114	19.79	0.92	0.76	2341.2	2341.2	118.30	22	83.0	6476	0.312	0.336	0.5
12	230	0.114	19.78	0.92	0.76	2370.8	2370.8	119.86	22	83.0	6480	0.312	0.336	0.6
13	230	0.114	19.92	0.92	0.76	2377.1	2377.1	119.33	22	83.0	6448	0.313	0.337	0.2
14	230	0.115	19.89	0.93	0.75	2340.6	2340.6	117.68	22	83.0	6460	0.313	0.336	0.4
15	230	0.113	19.65	0.92	0.76	2334.2	2334.2	118.79	21	82.8	6424	0.313	0.338	0.3
16	230	0.114	19.77	0.92	0.75	2353.6	2353.6	119.05	22	83.1	6460	0.313	0.337	0.3
17	230	0.113	19.68	0.92	0.76	2369.5	2369.5	120.40	22	82.9	6436	0.313	0.337	0.2
18	230	0.113	19.73	0.92	0.76	2345.2	2345.2	118.86	22	83.0	6464	0.313	0.336	0.5
19	230	0.115	19.90	0.93	0.76	2365.3	2365.3	118.86	21	82.8	6440	0.313	0.337	0.1
20	230	0.114	19.86	0.92	0.76	2354.5	2354.5	118.55	22	83.1	6468	0.313	0.336	0.5
Average	230	0.114	19.81	0.92	0.76	2352.6	2352.6	118.78	22	83.0	6455	0.313	0.337	0.3

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Clause	Requirement + Test	Result - Remark	Verdict

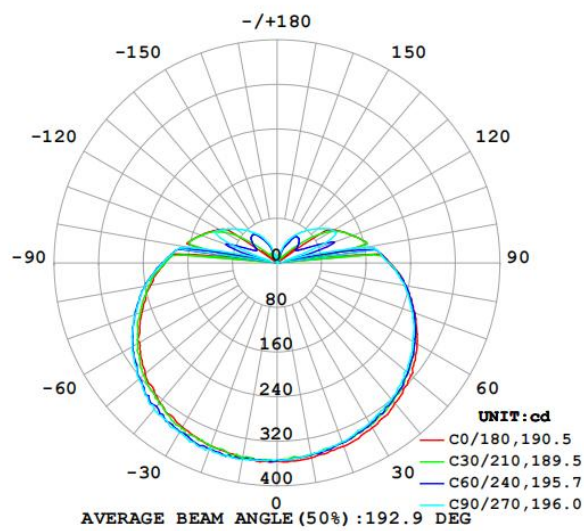
ANNEX 2	TABLE: Test Result of Lumen Maintenance and Survival factor for model AP-05V-0020-01A				P
Sample No	Test voltage (V)	Initial Φ_{total} (lm)	3000H Φ_{total} (lm)	Lumen maintenance (3000H)	Lamp survival factor
1	230	2358.5	2332.8	98.91%	P
2	230	2366.2	2345.6	99.13%	P
3	230	2330.9	2296.4	98.52%	P
4	230	2339.1	2293.0	98.03%	P
5	230	2362.5	2324.9	98.41%	P
6	230	2341.8	2310.7	98.67%	P
7	230	2349.9	2329.5	99.13%	P
8	230	2368.2	2321.1	98.01%	P
9	230	2331.9	2272.4	97.45%	P
10	230	2350.3	2313.9	98.45%	P
11	230	2341.2	2292.7	97.93%	P
12	230	2370.8	2320.8	97.89%	P
13	230	2377.1	2336.9	98.31%	P
14	230	2340.6	2312.8	98.81%	P
15	230	2334.2	2297.6	98.43%	P
16	230	2353.6	2322.3	98.67%	P
17	230	2369.5	2325.2	98.13%	P
18	230	2345.2	2286.8	97.51%	P
19	230	2365.3	2323.9	98.25%	P
20	230	2354.5	2316.4	98.38%	P
Average	230	2352.6	2313.8	98.35%	100%

IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 2	TABLE: Test Result of Lumen Maintenance and Survival factor for model AP-05V-0020-01A				P
Sample No	Test voltage (V)	Initial Φ_{total} (lm)	6000H Φ_{total} (lm)	Lumen maintenance (6000H)	Lamp survival factor
1	230	2358.5	2304.5	97.71%	P
2	230	2366.2	2297.3	97.09%	P
3	230	2330.9	2251.9	96.61%	P
4	230	2339.1	2271.5	97.11%	P
5	230	2362.5	2295.2	97.15%	P
6	230	2341.8	2264.8	96.71%	P
7	230	2349.9	2282.0	97.11%	P
8	230	2368.2	2305.9	97.37%	P
9	230	2331.9	2273.4	97.49%	P
10	230	2350.3	2270.6	96.61%	P
11	230	2341.2	2288.1	97.73%	P
12	230	2370.8	2286.2	96.43%	P
13	230	2377.1	2306.5	97.03%	P
14	230	2340.6	2264.5	96.75%	P
15	230	2334.2	2266.3	97.09%	P
16	230	2353.6	2285.1	97.09%	P
17	230	2369.5	2291.1	96.69%	P
18	230	2345.2	2271.3	96.85%	P
19	230	2365.3	2295.1	97.03%	P
20	230	2354.5	2280.3	96.85%	P
Average	230	2352.6	2282.6	97.03%	100%

IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3	TABLE: Luminous Intensity Distribution (Sample 1#) for model LED LAMP 20W E27					—
Io (cd)	I _{max} (cd)	Beam angle(°)	$\Phi_{90^\circ} / \Phi_{total}$	$\Phi_{120^\circ} / \Phi_{total}$	$\Phi_{total}(lm)$	Factor F _{TM}
356	359.5	192.9	26.7%	43.8%	2332.2	1.000



Remark:

1. Luminous Intensity Distribution for other models are identical as above expect model name and ratings.

IEC 62612 NB/COPANT 1737:2022					
Clause	Requirement + Test	Result - Remark			Verdict
ANNEX 3	TABLE: Photometric test (Sample 1#) for model LED LAMP 20W E27				—
CCT	Ra	R9	x	y	SDCM
6054K	81.0	12	0.3201	0.3446	5.1

Chromaticity coordinates: $x=0.3201$ $y=0.3446$ $u(u')=0.1971$ $v=0.3183$ $v'=0.4775$

CCT: $T_c=6054K$ ($duv=0.00748$)

Color Ratio: $R=0.133$ $G=0.816$ $B=0.051$

Peak Wavelength: 449.9nm

Half Bandwidth: 21.5nm

Dominant Wavelength: 503.2nm

Color Purity: 0.040

Color Render Index: $R_a=81.0$

$R_1=81$

$R_2=83$

$R_3=83$

$R_4=89$

$R_5=82$

$R_6=77$

$R_7=91$

$R_8=76$

$R_9=12$

$R_{10}=58$

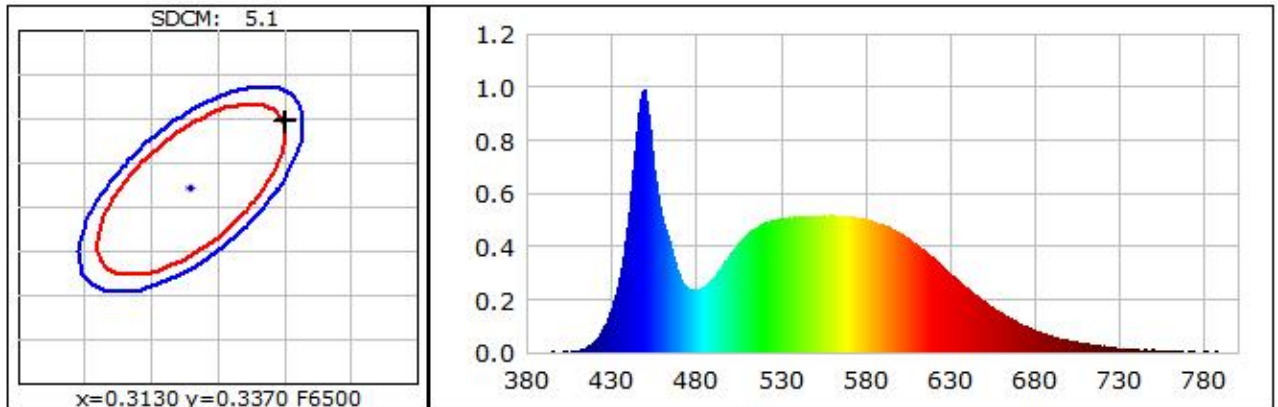
$R_{11}=88$

$R_{12}=51$

$R_{13}=81$

$R_{14}=91$

$R_{15}=78$



IEC 62612 NB/COPANT 1737:2022					
Clause	Requirement + Test	Result - Remark			Verdict
ANNEX 3	TABLE: Photometric test (Sample 1#) for model AP-05U-0020-01B				—
CCT	Ra	R9	x	y	SDCM
6462K	82.7	20	0.3125	0.3370	0.5

Chromaticity coordinates: $x=0.3125$ $y=0.3370$ $u(u')=0.1947$ $v=0.3150$ $v'=0.4725$

CCT: $T_c=6462K$ ($duv=0.00737$)

Color Ratio: $R=0.131$ $G=0.813$ $B=0.056$

Peak Wavelength: 450.9nm

Half Bandwidth: 24.2nm

Dominant Wavelength: 504.4nm

Color Purity: 0.068

Color Render Index: $R_a=82.7$

$R_1=83$

$R_2=85$

$R_3=85$

$R_4=89$

$R_5=83$

$R_6=79$

$R_7=93$

$R_8=79$

$R_9=20$

$R_{10}=63$

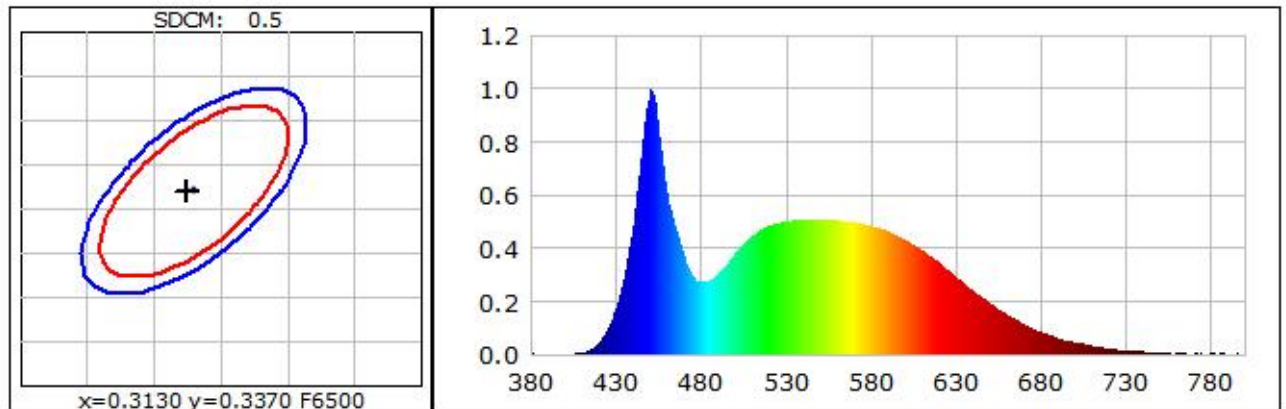
$R_{11}=89$

$R_{12}=52$

$R_{13}=83$

$R_{14}=92$

$R_{15}=80$



IEC 62612 NB/COPANT 1737:2022					
Clause	Requirement + Test	Result - Remark			Verdict
ANNEX 3	TABLE: Photometric test (Sample 1#) for model AP-05V-0020-01A				—
CCT	Ra	R9	x	y	SDCM
6456K	82.9	22	0.3126	0.3366	0.3

Chromaticity coordinates: $x=0.3126$ $y=0.3366$ $u(u')=0.1950$ $v=0.3149$ $v'=0.4723$

CCT: $T_c=6456K$ ($duv=0.00707$)

Color Ratio: $R=0.131$ $G=0.812$ $B=0.056$

Peak Wavelength: 450.9nm

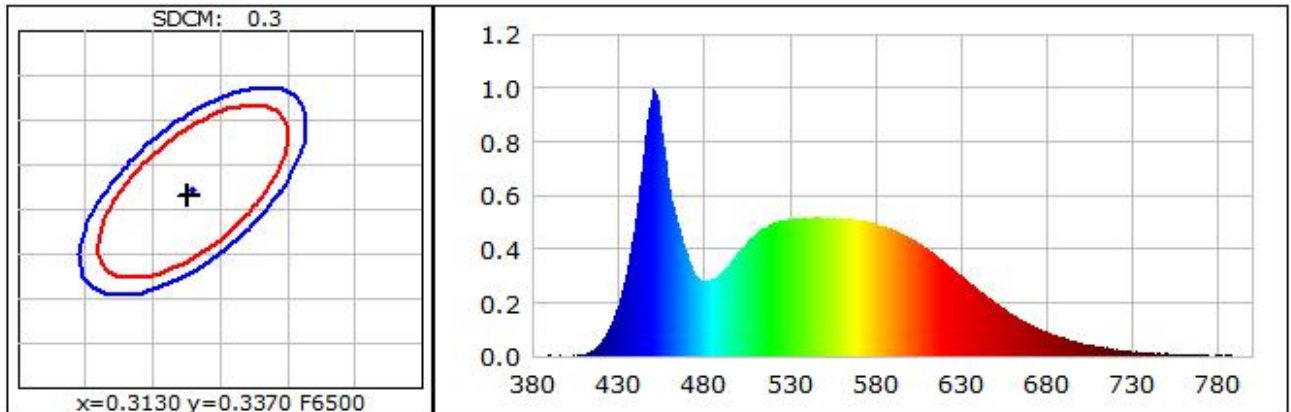
Half Bandwidth: 25.1nm

Dominant Wavelength: 493.7nm

Color Purity: 0.068

Color Render Index: $R_a=82.9$

R1 =83 R2 =85 R3 =85 R4 =90 R5 =84 R6 =79 R7 =93 R8 =79
 R9 =22 R10=63 R11=89 R12=53 R13=83 R14=92 R15=81



IEC 62612 NB/COPANT 1737:2022			
Clause	Requirement + Test	Result - Remark	Verdict

ANNEX 3						
TABLE:Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Bridge Rectifier	C	Shenzhen Sandaxin Electronics Co., Ltd	MB10F_0.8A_1KV	Current: 0.8A Voltage Rating: 1KV	--	Tested with appliance
IC	C	Shenzhen Longfusheng Technology Co., Ltd	MT7606EL_E SOP8	Current: 60MA Voltage Rating: 130°C	--	Tested with appliance
Lamp Cap	C	Yiyang Mingpai Electric Appliance Co., Ltd	E27	Material: Iron Plated Nickel PP	--	Tested with appliance
Lamp Board	C	Zhuhai Aila Electronics Co., Ltd	Aluminum Substrate	Thickness: 0.76mm	--	Tested with appliance
Lamp Housing Kit	C	Jiangmen Rongxingda Technology Co., Ltd	A80_ Lamp body _ PBTplastic coated aluminum	PBT	--	Tested with appliance
Lamp Housing Kit	C	Jiangmen Rongxingda Technology Co., Ltd	A80_Shield (PC)	PC	--	Tested with appliance

Supplementary information:

¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.

The codes above have the following meaning:

- A - The component is replaceable with another one, also certified, with equivalent characteristics
- B - The component is replaceable if authorised by the test house
- C - Integrated component tested together with the appliance
- D - Alternative component

Test equipment list

Equipment	Brand	Model	Serial No.	Calibration due date
Full-Field Speed Goniophotometer	Everfine	GO-R5000	TSGK-R-058	2025-06-19
High Accuracy Array Spectroradiometer	Everfine	HAAS-2000	TSGK-R-058-1	2025-06-19
High Accurate Intelligent Photometer Head	Everfine	ID-1000	TSGK-R-058-2	2025-06-19
High Accurate Intelligent Photometer Head	Everfine	ID-1000	TSGK-R-058-3	2025-06-19
Digital Power Meter	Everfine	PF2010	TSGK-R-058-4	2025-06-19
AC Testing Power Source	Everfine	PCR-1000WH	TSGK-R-058-5	2025-06-19
Digital CC&CV DC Power Supply	Everfine	WY12010	TSGK-R-058-6	2025-06-19
Total Spectral Radiant Flux Standard Lamp	Everfine	D908S	TSGK-R-058-7	2025-06-19
Digital Power Meter	Inventfine	WT500	TSGK-R-021	2026-04-23
Integral Sphere	Inventfine	2M(Z)	TSGK-R-022	2026-04-28
AC Power Source	Inventfine	CHP-500	TSGK-R-024	2026-04-23
Digital CC&CV DC Power Supply	Inventfine	WL3005	TSGK-R-025	2026-04-23
Standard Light Source	Everfine	D204	TSGK-R-038	2026-05-06
Auxiliary Lamp	Everfine	D204C	TSGK-R-039	2026-05-09
Digital Power Meter	Everfine	PF310A	TSGK-R-034	2026-04-23
AC Testing Power Source	Everfine	DPS1010	TSGK-R-036	2026-04-23
Electrical Life Test System	DCUU	ELTS-D	TSGK-R-005	2025-11-21
Light Flickering Analyzer	DUOPURUI	FPM100	TSGK-R-048	2025-11-28
Goniophotometers System	Everfine	GO-2000	TSGK-R-063	2025-11-20
AC&DC Digital Power Meter	Everfine	PF9802	TSGK-R-063-1	2025-11-20
Digital CC&CV DC Power Supply	Everfine	WY3010	TSGK-R-063-2	2025-11-20
Goniophotometer Controller	Everfine	CT400	TSGK-R-063-3	2025-11-20
AC Power Source	HengXinLong	HXL-1103	TSGK-R-063-4	2025-11-27
High Accurate Intelligent Photometer Head	Everfine	ID-1000	TSGK-R-063-5	2025-12-12

Appendix I: Photos of tested samples



Picture 1.: General view of LED LAMP 20W E27

Remark:

1. Photos of tested samples for other models are identical as above expect model name and ratings.