



TEST REPORT
IEC 62560
Self-Ballasted LED-Lamp
for general lighting services by voltage > 50V Safety specifications

Report Number.....: AOC250522001S

Date of issue.....: 2025-05-23

Total number of pages.....: 20 pages

Name of Testing Laboratory preparing the Report.....: Shenzhen AOCE Electronic Technology Service Co., Ltd
Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

Applicant's name.....: Zhongshan Loreen Lighting Co.,Ltd.

Address.....: THE THIRD FLOOR OF DONGXING ROAD WORKSHOP(NEAR DONGXING TEST CENTER) GUZHEN TOWN,ZHONGSHAN CITY,GUANGDONG PROVINCE,CHINA

Test specification:

Standard.....: IEC 62560:2011+A1:2015

Test procedure.....: Type testing

Non-standard test method.....: N/A

Test Report Form No.....: IEC62560C

Test Report Form(s) Originator.....: DEKRA Certification B.V.

Master TRF.....: Dated 2018-12-21

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Test item description..... :	Led Bulb	
Trade Mark..... :	OMAR, BABL, ZAMZAM, ELAF, SMART, BLUE BIRD, SUNRISE, PANORAMA, VEGA, UNISTAR, LIKE, WE GO, MRYAN, GOLDY, CLEVER.SOLEEN.PRINCE.ANZO.LOREEN, JARAS, EDISON.QADICO,CLASSIC, 4EVER, ALMERA, BRIGHT	
Manufacturer..... :	Zhongshan Loreen Lighting Co.,Ltd. THE THIRD FLOOR OF DONGXING ROAD WORKSHOP(NEAR DONGXING TEST CENTER) GUZHEN TOWN,ZHONGSHAN CITY,GUANGDONG PROVINCE,CHINA	
Model/Type reference..... :	See Model List	
Ratings..... :	220-240V~, 50/60Hz, 60W, ta.25°C, IP20	
Responsible Testing Laboratory (as applicable), testing procedure and testing location(s):		
<input checked="" type="checkbox"/>	Testing Laboratory:	Shenzhen AOCE Electronic Technology Service Co., Ltd
Testing location/ address..... :		Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China
Tested by (name, function, signature)..... :		ZhiCong Xian Technical Engineer <i>ZhiCong Xian</i>
Approved by (name, function, signature)... :		Robin Liu Technical Manager <i>Robin Liu</i>
<input type="checkbox"/>	Testing procedure: CTF Stage 1:	N/A
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Approved by (name, function, signature)... :		
<input type="checkbox"/>	Testing procedure: CTF Stage 2:	N/A
Testing location/ address..... :		
Tested by (name + signature)..... :		
Witnessed by (name, function, signature).. :		
Approved by (name, function, signature)... :		
<input type="checkbox"/>	Testing procedure: CTF Stage 3:	N/A
<input type="checkbox"/>	Testing procedure: CTF Stage 4:	N/A
Testing location/ address..... :		
Tested by (name, function, signature)..... :		
Witnessed by (name, function, signature).. :		
Approved by (name, function, signature)... :		

Supervised by (name, function, signature) :		

List of Attachments (including a total number of pages in each attachment):**Attachment No.1:** Photo document.**Summary of testing:****Tests performed (name of test and test clause):**

All testing were performed on model LED BULB 60W

Testing location:

Shenzhen AOCE Electronic Technology Service Co., Ltd
Room 202, 2nd Floor, No.12th Building of Xinhe Tongfuyu Industrial Park, Fuhai Street, Baoan District, Shenzhen, Guangdong, China

Summary of compliance with National Differences (List of countries addressed):

None

Copy of marking plate:**Remarks:**

1. Representative markings of LED BULB 60W, markings of all models are identical except for the model name and rating.
2. Height of CE mark at least 5mm, height of WEEE symbol should not less than 7mm, height of other marks at least 5mm, height of letters and numerals at least 2mm.

According to the EU directives which have been aligned with EU NLF (new legislative framework), both of manufacturer and importer's name and address shall be affixed on the product or, where that is not possible, on its packaging or in a document accompanying the product before the product is placed on the EU market.

Test item particulars..... :	
Classification of installation and use.....: Self-Ballasted LED-Lamp for general lighting services by voltage > 50V, for indoor use	
Supply Connection.....: E27 Lamp cap	
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..... : 2025-05-08	
Date (s) of performance of tests..... : 2025-05-08 to 2025-05-23	
General remarks:	
<p>The tested sample(s) and the sample information are provided by the client.</p> <p>"(See Enclosure #)" refers to additional information appended to the report.</p> <p>"(See appended table)" refers to a table appended to the report.</p> <p>Note: National Conditions, if any, are in the Appendix to the main body of this TRF.</p> <p>Throughout this report a <input type="checkbox"/> comma / <input checked="" type="checkbox"/> point is used as the decimal separator.</p> <p>The test report only allows to be revised only within the report defined retention period unless standard or regulation was withdrawn or invalid.</p> <p>When determining for test conclusion, measurement uncertainty of tests has been considered.</p> <p>Note: clauses marked “*” not included in CNAS scope.</p>	
Manufacturer's Declaration per sub-clause 4.2.5 of IEC60335-1:	
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
When differences exist; they shall be identified in the General product information section.	
Name and address of factory (ies)..... : Same as manufacturer	

General product information and other remarks:

- *Self-ballasted LED-lamp and non-repairable.*


Model List:

Model	Rating
LED BULB 1W	Input: 220-240V~, 50/60Hz,1W
LED BULB 2W	Input: 220-240V~, 50/60Hz,2W
LED BULB 3W	Input: 220-240V~, 50/60Hz,3W
LED BULB 4W	Input: 220-240V~, 50/60Hz,4W
LED BULB 5W	Input: 220-240V~, 50/60Hz,5W
LED BULB 6W	Input: 220-240V~, 50/60Hz,6W
LED BULB 7W	Input: 220-240V~, 50/60Hz,7W
LED BULB 9W	Input: 220-240V~, 50/60Hz,9W
LED BULB 10W	Input: 220-240V~, 50/60Hz,10W
LED BULB 12W	Input: 220-240V~, 50/60Hz,12W
LED BULB 14W	Input: 220-240V~, 50/60Hz,14W
LED BULB 15W	Input: 220-240V~, 50/60Hz,15W
LED BULB 18W	Input: 220-240V~, 50/60Hz,18W
LED BULB 20W	Input: 220-240V~, 50/60Hz,20W
LED BULB 25W	Input: 220-240V~, 50/60Hz,25W
LED BULB 30W	Input: 220-240V~, 50/60Hz,30W
LED BULB 35W	Input: 220-240V~, 50/60Hz,35W
LED BULB 40W	Input: 220-240V~, 50/60Hz,40W
LED BULB 45W	Input: 220-240V~, 50/60Hz,45W
LED BULB 50W	Input: 220-240V~, 50/60Hz,50W
LED BULB 55W	Input: 220-240V~, 50/60Hz,55W
LED BULB 60W	Input: 220-240V~, 50/60Hz,60W
LED BULB 2.1W	Input: 220-240V~, 50/60Hz,2,1W
LED BULB 2.2W	Input: 220-240V~, 50/60Hz,2,2W
LED BULB 2.3W	Input: 220-240V~, 50/60Hz,2,3W
LED BULB 2.4W	Input: 220-240V~, 50/60Hz,2,4W
LED BULB 2.5W	Input: 220-240V~, 50/60Hz,2,5W
LED BULB 2.6W	Input: 220-240V~, 50/60Hz,2,6W
LED BULB 2.7W	Input: 220-240V~, 50/60Hz,2,7W
LED BULB 2.9W	Input: 220-240V~, 50/60Hz,2,9W
LED BULB 2.8W	Input: 220-240V~, 50/60Hz,2,8W
LED BULB 8W	Input: 220-240V~, 50/60Hz,8W
LED BULB 16W	Input: 220-240V~, 50/60Hz,16W
LED BULB 38W	Input: 220-240V~, 50/60Hz,38W
T80	Input: 220-240V~, 50/60Hz,20W
T100	Input: 220-240V~, 50/60Hz,30W
T125	Input: 220-240V~, 50/60Hz,50W
T115	Input: 220-240V~, 50/60Hz,40W
T135	Input: 220-240V~, 50/60Hz,60W
T8 LED TUBE 15W	Input: 220-240V~, 50/60Hz,15W
T8 LED TUBE 20W	Input: 220-240V~, 50/60Hz,20W

T8 LED TUBE 28W	Input: 220-240V~, 50/60Hz,28W
T8 LED TUBE 30W	Input: 220-240V~, 50/60Hz,30W
T8 LED TUBE 40W	Input: 220-240V~, 50/60Hz,40W
T8 LED TUBE 50W	Input: 220-240V~, 50/60Hz,50W
T8 LED TUBE 60W	Input: 220-240V~, 50/60Hz,60W

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

4	GENERAL REQUIREMENTS		P
4.1	The lamp shall be so designed and constructed that in normal use cause no danger to the user.		P
4.2	Self-ballasted LED-Lamp are non-repairable.		P

5	MARKING		P
5.1	Mandatory marking		P
	- mark of origin		P
	- rated supply voltage (V)..... :	220-240	P
	- rated wattage (W)..... :	60 W	P
	- rated frequency (Hz)..... :	50/60 Hz	P
5.2	Addition marking		P
	- rated current (A)..... :		P
	- weight significantly higher		P
	- special conditions or restrictions		N/A
	Not suitable for dimming; used	 symbol	P
	- not suitable for water contact		P
5.3	Marking durable and legible		P
	rubbing 15 s water, 15 s petroleum; marking legible		P

6	INTERCHANGEABILITY		P
6.1	Cap interchangeability in accordance with IEC 60061-1		P
	Gauge in accordance with IEC 60061-3	Gauges for E27 cap: 7006-27B; 7006-28A; 7006-27C; 7006-50	P
6.2	Bending moment and mass imparted by the lamp at the lampholder		P
	Bending moment imparted by the lamp at the lampholder (Nm)..... :	E27, 2 Nm	P
	Mass not exceeding value table 2 or as specified in IEC 60061-1 (kg)..... :	Max. 0,2kg	P

7	PROTECTION AGAINST ACCIDENTAL CONTACT WITH LIVE PARTS		P
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IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
	Internal, basic insulated or live metal parts not accessible		P
	Tested with a test finger with a force of 10 N	10N	P
	Compliance checked with appropriate gauges	7006-51A for E27 cap;	P
8	INSULATION RESISTANCE AND ELECTRIC STRENGTH		P
8.2	After storage 48 h at 91-95% relative humidity and 20-30 °C measuring of insulation resistance with d.c. 500 V (MΩ):		P
	≥ 4 MΩ for double or reinforced insulation.....:	>100 MΩ	P
8.3	Immediately after clause 8.2 electric strength test for 1 min		P
	Double or reinforced insulation, 4U + 2000 V	3000 V	P
	No flashover or breakdown		P

9	MECHANICAL STRENGTH		P
9.2.1	Torsion resistance of unused lamps		P
	B15d or E14 Cap..... 1,15 Nm		N/A
	B22d, E26, E26d or E27 Cap..... 3,0 Nm		P
	E11 or E12 Cap..... 0,8 Nm		N/A
	E17 Cap..... 1,5 Nm		N/A
	E39 or E40 Cap..... 5,0 Nm		N/A
	GX53 Cap..... 3,0 Nm		N/A
9.3	Compliance criteria		P
	Clause 8 shall comply after the mechanical strength test.		P
9.4	Axial strength of Edison caps		P
	After full insertion into the gauge an axial force of Table 4 is applied to the central contact (N).....:	120N for E27 cap;	P
	The insulation around the central contact shall remain intact		P

10	CAP TEMPERATURE RISE		P
	The cap temperature rise Δt_s of the lamp shall not exceed 120 K.		P

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict
11	RESISTANCE TO HEAT		P
	Parts of insulating material providing protection against electric shock, retaining live parts in position, ball-pressure test:	(see appended table)	P

12	RESISTANCE TO FLAME AND IGNITION		P
	External parts of insulating material preventing electric shock glow-wire test 650 °C	(see appended table)	P

13	FAULT CONDITIONS		P
13.2	Fault conditions: where diagram indicates fault condition impairs safety, electronic components have been short-circuited or disconnected	(see appended table)	P
13.3	When operated under fault conditions the lamp		P
	- does not emit flames or molten material		P
	- does not produce flammable gases or smoke		P
	- live parts not accessible		P
	After the tests the insulation resistance with d.c. 1000 V complies with requirements of Cl. 8.1.....:	>100 MΩ	P
14 (16)	CREEPAGE DISTANCES AND CLEARANCES		P
	Creepage distances and clearances according to IEC 61347-1	(see appended table)	P
	Conductive accessible parts according to IEC 60598-1	(see appended table)	P

15	ABNORMAL OPERATION		P
	Non-dimmable self-ballasted lamps are tested on a dimmer or an electronic switch according the test circuit shown in Figure 8		P
	Operate the lamp for 8 h at most onerous dimming level		P
	When operated under abnormal operation the lamp		P
	- does not catch fire		P
	- does not produce flammable gases		P
	- live parts not accessible		P

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

16	TEST CONDITIONS FOR DIMMABLE LAMPS		N/A
	Test are carried out at maximum power setting for Clause 10 and Clause 17		N/A

17	PHOTOBIOLOGICAL SAFETY		P
17.1	UV radiation		N/A
	The LED lamp doesn't exceed 2mW/klm		N/A
17.2	Blue light hazard		P
	Assessed according to IEC TR 62778		P
	LED lamps shall be RG0 or RG1	RG0	P

18	INGRESS PROTECTION		N/A
18.1	Lamps shall be suitable for water contact unless marked with Figure 6	IP 20	N/A
18.2	The lamp is subjected to an IPX4 test according to IEC 60598-1		N/A
	The lamp complies with the compliance provisions of 9.2 of IEC 60598-1		N/A
	Lamps constructed so that it is sealed to exclude water need not to be tested		N/A

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

11	TABLE: Ball Pressure Test of Thermoplastics			P
Allowed impression diameter (mm):		2		—
Object/ Part No./ Material	Manufacturer/ trademark	Test temperature (°C)	Impression diameter (mm)	
Translucent cover	See Annex 1	125°C	0.8mm	
Supplementary information:				

12	TABLE: Resistance to heat and fire - Glow wire tests				P
Object/ Part No./ Material	Manufacturer/ trademark	Glow wire test (GWT); (°C)		Verdict	
		650			
		te	ti		
Translucent cover	See ANNEX 1	0	0	pass	

13	TABLE: tests of fault conditions			P
Part	Simulated fault	Result		Hazard
Output	S-C	Shut down, recoverable, no damage		YES/NO
U1(1-8)	S-C	Shut down, recoverable, no damage		YES/NO
C1	S-C	Fuse opened. No hazard, No damage.		YES/NO
C3	S-C	Shut down, recoverable, no damage		YES/NO
D2	S-C	Fuse opened. No hazard, No damage.		YES/NO
BD1	S-C	Fuse opened. No hazard, No damage.		YES/NO

IEC 62560						
Clause	Requirement + Test			Result - Remark		Verdict
14	TABLE: Clearance And Creepage Distance Measurements					P
clearance cl and creepage distance dcr at/of:	Up (V)	U r.m.s. (V)	Required cl (mm)	cl (mm)	required dcr (mm)	dcr (mm)
Between L and N	-	240	1.5	>1.5	2.5	>2.5
Current-carrying parts and accessible parts	-	240	3.0	>3.0	5	>5.0
Supplementary information:						

ANNEX 1 TABLE: Critical components information						
Object / part No.	Code	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity¹⁾
Fuse	B	AEM COMPONENTS(SU ZHOU)CO,LTD	MF2410F2.0 00TM	250V; T2A	IEC/EN 60127-4	VDE 4003485 3
LED PCB	B	SHENZHEN CHENGZHIYI PCB CO LTD	CZY-R001	90°C; V-0	IEC/EN 62560	UL E354470 Test with appliance
LED	C	MLS CO., LTD	E2835UX26	IF=60mA; VF=2,8-3,8V; 2700-6500K	EN 62471	Tested with appliance
PCB Board	B	GOLDENMAX INTERNATIONAL TECHNOLOGY LTD	FR-4.0	V-0; 130°C	IEC/EN 62560	UL E224772 Test with appliance
Plastic enclosure	B	BAYER MATERIALSCIENCE AG	6487+(z)(f1)	V-0; 125°C	IEC/EN 62560	UL E41613 Test with appliance
Translucent cover	B	BAYER MATERIALSCIENCE AG	1899+(z)	V-0; 80°C	IEC/EN 62560	UL E41613 Test with appliance
Internal wire	B	SHENZHEN JINRUIHUA WIRE & CABLE CO	1015	22AWG; 300V; 105°C	IEC/EN 62560	UL E316944 Test with appliance
Bobbin of transformer	B	CHANG CHUN PLASTICS CO LTD	T375J	94V-0;150°C	IEC/EN 62560	UL E59481 Test with appliance

IEC 62560						
Clause	Requirement + Test			Result - Remark		Verdict
Magnetic coil of transformer	B	SHENZHEN CHENGWEI INDUSTRY CO LTD	2UEW	130°C	IEC/EN 62560	UL E227475 Test with appliance
Insulation tape of transformer	B	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	WF	130°C	IEC/EN 62560	UL E165111 Test with appliance
Varnish of transformer	B	DOW CORNING (SHANGHAI) CO LTD	CN-8760	130°C	IEC/EN 62560	UL E251343 Test with appliance
<p>Supplementary information:</p> <p>1) Provided evidence ensures the agreed level of compliance. See OD-CB2039. The codes above have the following meaning:</p> <p>A - The component is replaceable with another one, also certified, with equivalent characteristics</p> <p>B - The component is replaceable if authorised by the test house</p> <p>C - Integrated component tested together with the appliance</p> <p>D - Alternative component</p>						

IEC 62560			
Clause	Requirement + Test	Result - Remark	Verdict

	ANNEX 2: temperature measurements, thermal tests of Section 10		P
	Type referencet.....:	LED BULB 60W	—
	Used ballast.....:	/	—
	Mounting position of luminaire.....:	Cap Up and Cap down	—
	Supply wattage (W).....:	60 W	
	Supply current (A).....:	--	
	Calculated power factor.....:	--	
	Table: measured temperatures corrected for ta = 25°C:		—
	Test: rated voltage.....:	240 V	—
Temperature (°C) of part	Test value	Result	
	Normal (°C)	Abnormal(°C)	Limit(°C)
Lamp cap	25	37.3K	120K
LED PCB	25	88.7	90
Translucent cover	25	42.8	Ref
Plastic enclosure, inside, near LED	25	68.0	Ref.
Internal wire	25	76.2	105
C1	25	98.6	105
C3	25	95.1	105
Winding of transformer T1	25	105.8	130
PCB under T1	25	97.1	130

Attachment No.1

Product Photos

Details of: Fig. 1

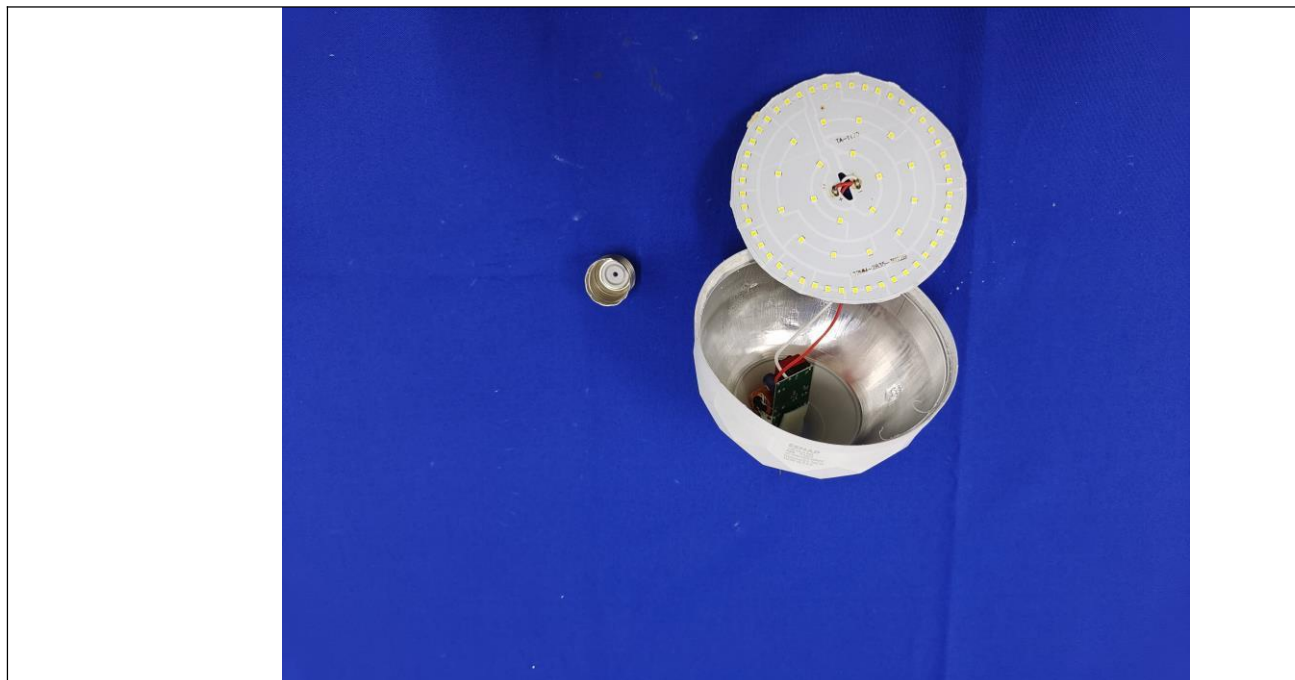


Details of: Fig. 2

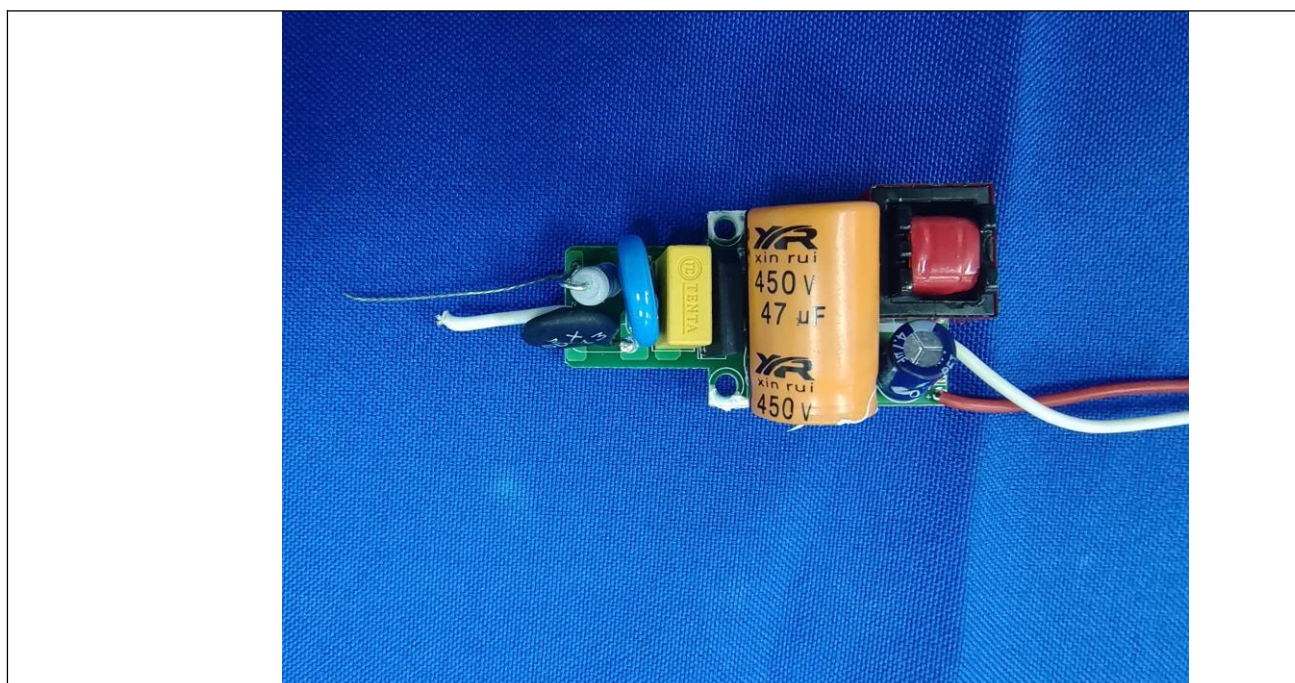


Attachment No.1**Product Photos**

Details of: Fig. 3



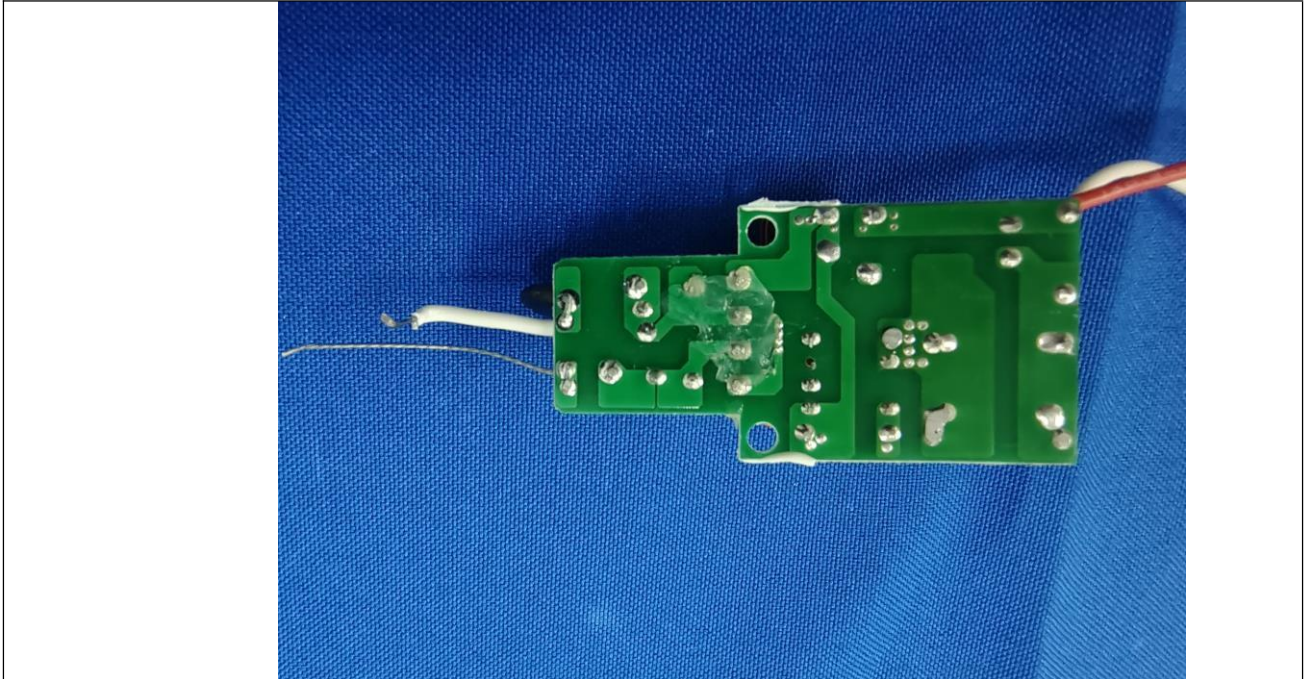
Details of: Fig. 4



Attachment No.1

Product Photos

Details of: Fig. 5



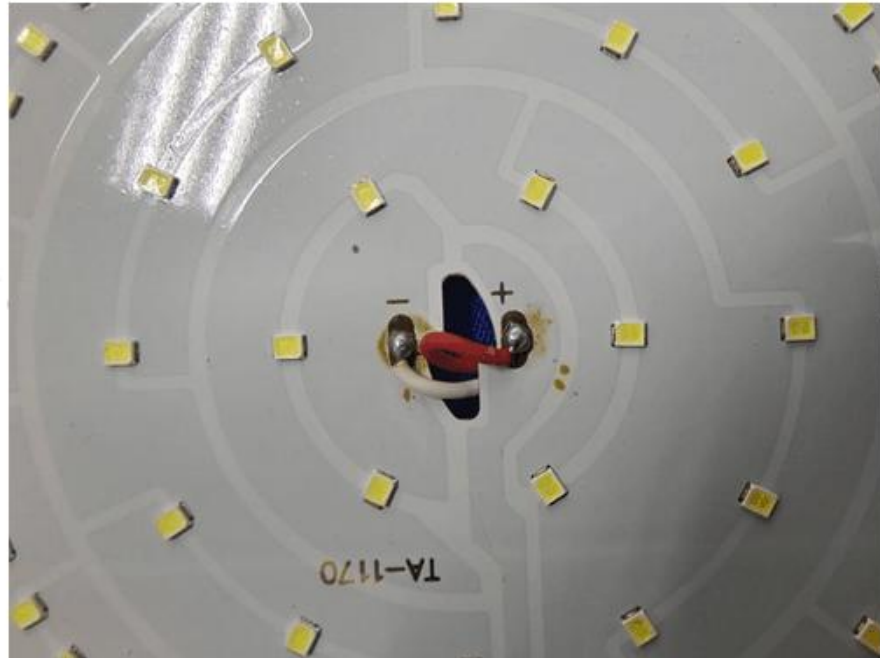
Details of: Fig. 6



Attachment No.1

Product Photos

Details of: Fig. 7



-- End of Report --