

FCC Part 15, Subpart B, Class B

TEST REPORT

ARTIKA FOR LIVING INC.

Arlo table lamp

Test Model: TL-AR

Additional Model No.: TL-AR-XXXXXX ("XXXXXX" can be A to Z and/or 0 to 9
and/or blank (commercial code))

Prepared for : ARTIKA FOR LIVING INC.
Address : 1756 50th avenue, Lachine, Qc, Canada H8T 2V5

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.
Address : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Shajing
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Date of receipt of test sample : December 2, 2020
Number of tested samples : 1
Serial number : Prototype
Date of Test : December 2, 2020 ~ December 23, 2020
Date of Report : December 23, 2020



FCC TEST REPORT

FCC Part 15, Subpart B, Class B

Report Reference No. : LCS201123204AE

Date Of Issue : December 23, 2020

Testing Laboratory Name : Shenzhen LCS Compliance Testing Laboratory Ltd.

Address : 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Shajing Street, Bao'an District, Shenzhen, Guangdong, China

Testing Location/ Procedure... : Full application of Harmonised standards
 Partial application of Harmonised standards
 Other standard testing method

Applicant's Name..... : ARTIKA FOR LIVING INC.

Address : 1756 50th avenue, Lachine, Qc, Canada H8T 2V5

Test Specification

Standard..... : FCC Part 15, Subpart B, Class B, ANSI C63.4 -2014

Test Report Form No..... : LCSEMC-1.0

TRF Originator..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF..... : Dated 2011-03

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Test Item Description..... : Arlo table lamp

Test Model : TL-AR

Trade Mark : Artika

Ratings : For Adapter: Input: AC 120V 50/60Hz 0.24A
 Output: DC 24V 500mA

Result : Positive

Compiled by:

Lh Li

Lh Li/ Administrators

Supervised by:

Jin Wang

Jin Wang/ Technique principal

Approved by:

Gavin Liang

Gavin Liang/ Manager

FCC -- TEST REPORT

Test Report No. : LCS201123204AE	<u>December 23, 2020</u> Date of issue
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Test Model : TL-AR
EUT..... : Arlo table lamp
Applicant..... : ARTIKA FOR LIVING INC. Address..... : 1756 50th avenue, Lachine, Qc, CanadaH8T 2V5 Telephone..... : / Fax..... : /
Manufacturer..... : Zhongshan C5 Lighting Co Ltd Address..... : 1# Henglong Road, Tongyi Industrial Area, Cao San, Guzhen, Zhongshan, Guangdong, China. Telephone..... : / Fax..... : /
Factory..... : Zhongshan C5 Lighting Co Ltd Address..... : 1# Henglong Road, Tongyi Industrial Area, Cao San, Guzhen, Zhongshan, Guangdong, China. Telephone..... : / Fax..... : /

Test Result according to the standards on page 6: Positive
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The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

Revision	Issue Date	Revisions	Revised By
000	December 23, 2020	Initial Issue	Gavin Liang

TABLE OF CONTENTS

Test Report Description	Page
1. SUMMARY OF STANDARDS AND RESULTS	6
1.1. Description of Standards and Results	6
2. GENERAL INFORMATION	7
2.1. Description of Device (EUT)	7
2.2. Description of Test Facility	7
2.3. Statement of the Measurement Uncertainty	8
2.4. Measurement Uncertainty	8
3. POWER LINE CONDUCTED EMISSION MEASUREMENT	9
3.1. Test Equipment	9
3.2. Block Diagram of Test Setup	9
3.3. Test Standard	9
3.4. EUT Configuration on Test	10
3.5. Operating Condition of EUT	10
3.6. Test Procedure	10
3.7. Test Results	10
4. RADIATED EMISSION MEASUREMENT	12
4.1. Test Equipment	12
4.2. Block Diagram of Test Setup	12
4.3. Radiated Emission Limit (Class B)	13
4.4. EUT Configuration on Measurement	13
4.5. Operating Condition of EUT	13
4.6. Test Procedure	14
4.7. Radiated Emission Noise Measurement Result	14
5. PHOTOGRAPH	16
5.1. Photo of Power Line Conducted Measurement	16
5.2. Photo of Radiated Measurement	16
6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT	17

1. SUMMARY OF STANDARDS AND RESULTS

1.1. Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below.

EMISSION			
Description of Test Item	Standard	Limits	Results
Conducted disturbance at mains terminals	FCC Part 15, Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
Radiated disturbance	FCC Part 15, Subpart B, Class B, ANSI C63.4 -2014	Class B	PASS
N/A is an abbreviation for Not Applicable.			

Test mode:		
Mode 1	Lighting ON	Record
***Note: All test modes were tested, but we only recorded the worst case in this report.		

2. GENERAL INFORMATION

2.1. Description of Device (EUT)

EUT	: Arlo table lamp
Trade Mark	: Artika
Test Model	: TL-AR
List Model No.	: TL-AR, TL-AR-XXXXXX ("XXXXXX" can be A to Z and/or 0 to 9 and/or blank (commercial code))
Model Declaration	: All models are identical to each other except for model name
Power Supply	: For Adapter: Input: AC 120V 50/60Hz 0.24A Output: DC 24V 500mA

Highest internal frequency (Fx)	Highest measured frequency
$F_x \leq 108 \text{ MHz}$ $108 \text{ MHz} < F_x \leq 500 \text{ MHz}$ $500 \text{ MHz} < F_x \leq 1 \text{ GHz}$ $F_x > 1 \text{ GHz}$	1 GHz 2 GHz 5 GHz $5 \times F_x$ up to a maximum of 6 GHz
NOTE 1 For FM and TV broadcast receivers, Fx is determined from the highest frequency generated or used excluding the local oscillator and tuned frequencies. NOTE 2 Fx is defined in EN 55032 Section 3.1.19. Where Fx is unknown, the radiated emission measurements shall be performed up to 6 GHz	

2.2. Description of Test Facility

Site Description	
EMC Lab.	: NVLAP Accreditation Code is 600167-0. FCC Designation Number is CN5024. CAB identifier is CN0071. CNAS Registration Number is L4595.

2.3. Statement of the Measurement Uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. To CISPR 16 – 4 “Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements” and is documented in the LCS quality system acc. To DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

2.4. Measurement Uncertainty

Test	Parameters	Expanded Uncertainty (U _{lab})	Expanded Uncertainty (U _{cispr})
Conducted Emission	Level accuracy (9kHz to 150kHz) (150kHz to 30MHz)	± 2.63 dB ± 2.35 dB	± 3.8 dB ± 3.4 dB
Power Disturbance	Level accuracy (30MHz to 300MHz)	± 2.90dB	± 4.5 dB
Electromagnetic Radiated Emission (3-loop)	Level accuracy (9kHz to 30MHz)	± 3.60 dB	± 3.3 dB
Radiated Emission	Level accuracy (9kHz to 30MHz)	± 3.68 dB	N/A
Radiated Emission	Level accuracy (30MHz to 1000MHz)	± 3.48 dB	± 5.3 dB
Radiated Emission	Level accuracy (above 1000MHz)	± 3.90 dB	± 5.2 dB
Mains Harmonic	Voltage	± 0.510%	N/A
Voltage Fluctuations & Flicker	Voltage	± 0.510%	N/A
EMF		± 21.59%	N/A

(1) Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus.

(2) The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor of k=2, which for a normal distribution corresponds to a coverage probability of approximately 95%.

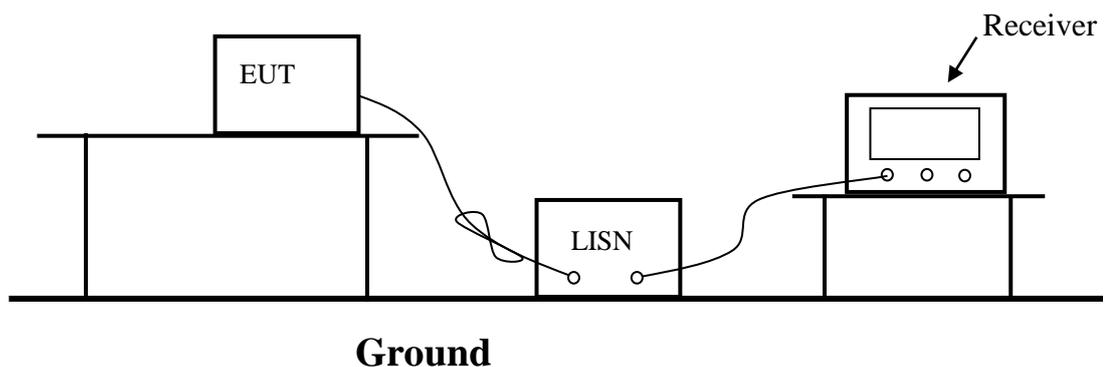
3. POWER LINE CONDUCTED EMISSION MEASUREMENT

3.1. Test Equipment

The following test equipments are used during the power line conducted measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Software	EZ	EZ-EMC	/	N/A
2	EMI Test Receiver	R&S	ESPI	101840	2021-06-21
3	Artificial Mains	R&S	ENV216	101288	2021-06-21
4	10dB Attenuator	SCHWARZBECK	MTS-IMP-136	261115-001-0032	2021-06-21
5	Impedance Stabilization Network	TESEQ	ISN T800	45130	2021-10-20

3.2. Block Diagram of Test Setup



3.3. Test Standard

Power Line Conducted Emission Limits (Class B)

Frequency (MHz)			Limit (dB μ V)	
			Quasi-peak Level	Average Level
0.15	~	0.50	66.0 ~ 56.0 *	56.0 ~ 46.0 *
0.50	~	5.00	56.0	46.0
5.00	~	30.00	60.0	50.0

NOTE1-The lower limit shall apply at the transition frequencies.

NOTE2-The limit decreases linearly with the logarithm of the frequency in the range 0.15MHz to 0.50MHz.

3.4.EUT Configuration on Test

The following equipments are installed on Power Line Conducted Emission Measurement to meet the commission requirement and operating regulations in a manner, which tends to maximize its emission characteristics in a normal application.

3.5.Operating Condition of EUT

3.5.1.Setup the EUT as shown on Section 3.2

3.5.2.Turn on the power of all equipments.

3.5.3.Let the EUT work in measuring mode (1) and measure it.

3.6.Test Procedure

The EUT system is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC line are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to FCC/ANSI C63.4-2014 on Conducted Emission Measurement.

The bandwidth of the test receiver is set at 9kHz.

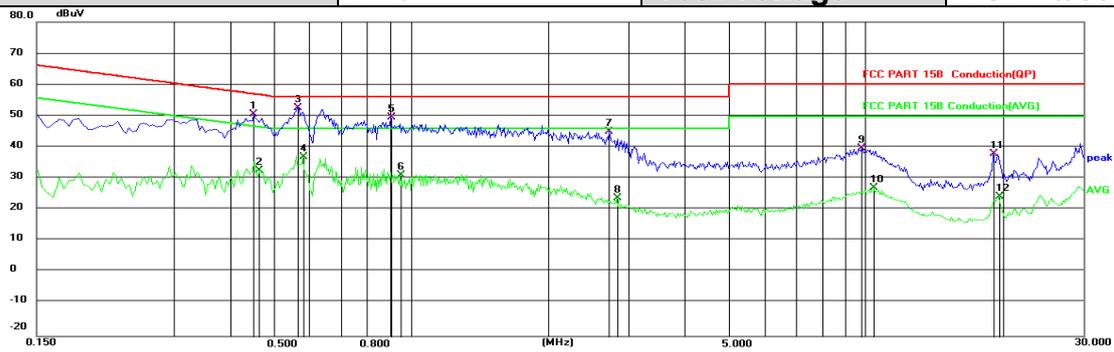
The frequency range from 150kHz to 30MHz is investigated

3.7.Test Results

PASS.

The test result please refer to the next page.

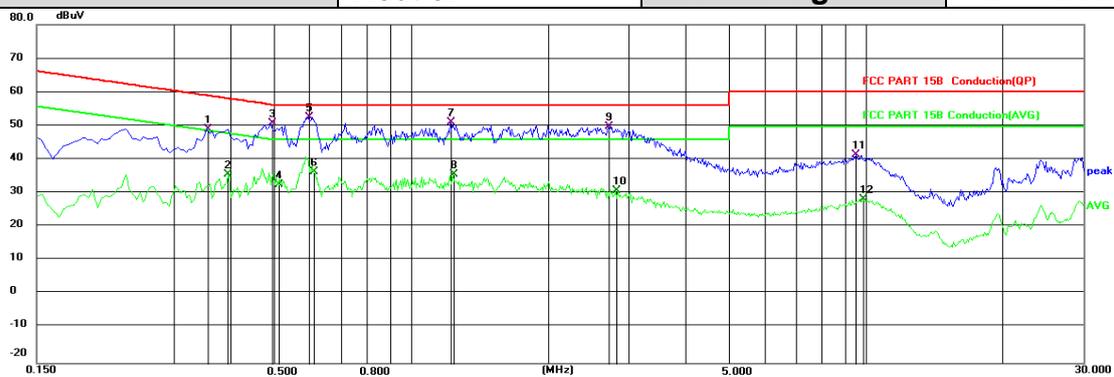
Test Model	TL-AR	Test Mode	Mode 1
Environmental Conditions	23.3°C, 53.7% RH	Test Engineer	CARL FU
Pol	Line	Test Voltage	AC 120/60Hz



Power Rating: AC 120V/60Hz Phase: L1 Temperature(C): 23.3(C)
 Limit: FCC PART 15B Conduction(QP) Humidity(%): 53.7%RH

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4515	31.38	19.32	50.70	56.85	-6.15	QP
2	0.4650	13.45	19.32	32.77	46.60	-13.83	AVG
3	0.5639	33.35	19.31	52.66	56.00	-3.34	QP
4	0.5775	17.81	19.30	37.11	46.00	-8.89	AVG
5	0.9015	30.25	19.29	49.54	56.00	-6.46	QP
6	0.9465	12.01	19.29	31.30	46.00	-14.70	AVG
7	2.7239	25.72	19.46	45.18	56.00	-10.82	QP
8	2.8320	4.59	19.46	24.05	46.00	-21.95	AVG
9	9.8070	20.04	19.69	39.73	60.00	-20.27	QP
10	10.4100	7.42	19.72	27.14	50.00	-22.86	AVG
11	19.1175	17.69	20.31	38.00	60.00	-22.00	QP
12	19.5540	4.10	20.30	24.40	50.00	-25.60	AVG

Test Model	TL-AR	Test Mode	Mode 1
Environmental Conditions	23.3°C, 53.7% RH	Test Engineer	CARL FU
Pol	Neutral	Test Voltage	AC 120/60Hz



Power Rating: AC 120V/60Hz Phase: N Temperature(C): 23.3(C)
 Limit: FCC PART 15B Conduction(QP) Humidity(%): 53.7%RH

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.3570	29.90	19.31	49.21	58.80	-9.59	QP
2	0.3975	16.36	19.31	35.67	47.91	-12.24	AVG
3	0.4920	31.48	19.32	50.80	56.13	-5.33	QP
4	0.5101	13.49	19.32	32.81	46.00	-13.19	AVG
5	0.5955	33.44	19.28	52.72	56.00	-3.28	QP
6	0.6090	17.30	19.27	36.57	46.00	-9.43	AVG
7	1.2210	31.77	19.29	51.06	56.00	-4.94	QP
8	1.2390	16.41	19.29	35.70	46.00	-10.30	AVG
9	2.7150	30.37	19.46	49.83	56.00	-6.17	QP
10	2.8095	11.64	19.46	31.10	46.00	-14.90	AVG
11	9.5370	21.91	19.68	41.59	60.00	-18.41	QP
12	9.8385	8.78	19.69	28.47	50.00	-21.53	AVG

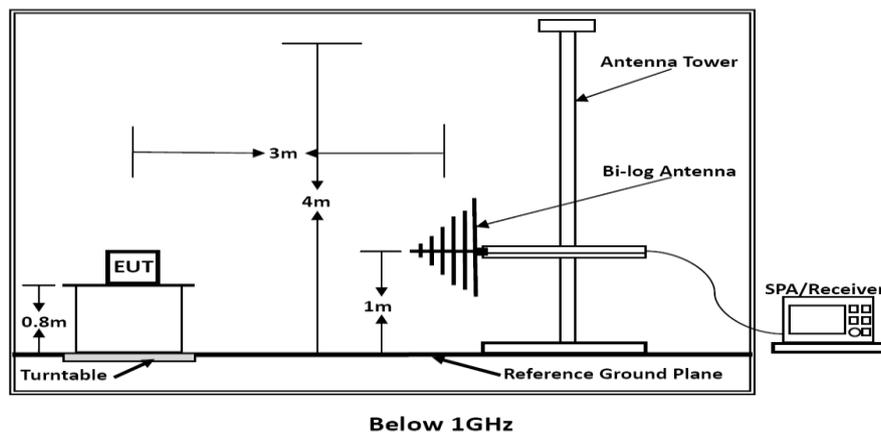
4. RADIATED EMISSION MEASUREMENT

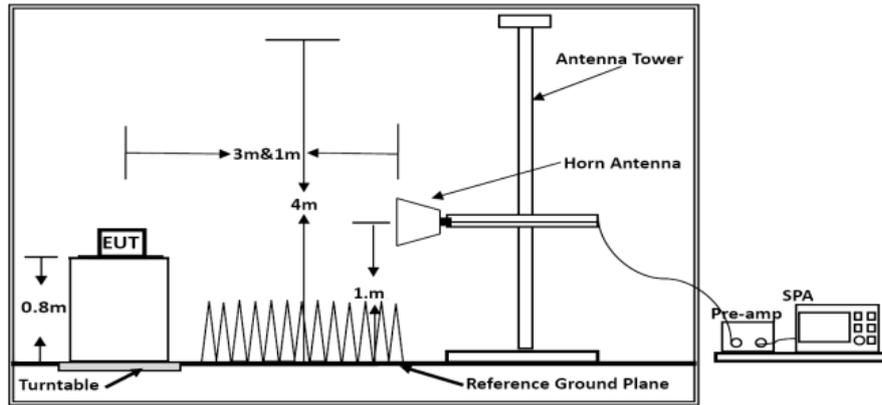
4.1. Test Equipment

The following test equipments are used during the radiated emission measurement:

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	EMI Test Software	EZ	EZ-EMC	/	N/A
2	3m Semi Anechoic Chamber	SIDT FRANKONIA	SAC-3M	03CH03-HY	2021-06-12
3	Positioning Controller	MF	MF-7082	/	2021-06-12
4	By-log Antenna	SCHWARZBECK	VULB9163	9163-470	2021-07-25
5	Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1925	2021-07-01
6	EMI Test Receiver	R&S	ESR 7	101181	2021-06-12
7	RS SPECTRUM ANALYZER	R&S	FSP40	100503	2021-11-14
8	Broadband Preamplifier	/	BP-01M18G	P190501	2021-07-01
9	RF Cable-R03m	Jye Bao	RG142	CB021	2021-06-12
10	RF Cable-HIGH	SUHNER	SUCOFLEX 106	03CH03-HY	2021-06-12

4.2. Block Diagram of Test Setup





Above 1GHz

4.3. Radiated Emission Limit (Class B)

Limits for Radiated Disturbance Below 1GHz

FREQUENCY MHz	DISTANCE Meters	FIELD STRENGTHS LIMIT	
		$\mu\text{V}/\text{m}$	$\text{dB}(\mu\text{V})/\text{m}$
30 ~ 88	3	100	40
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46
960 ~ 1000	3	500	54

Remark: (1) Emission level $(\text{dB})\mu\text{V} = 20 \log$ Emission level $\mu\text{V}/\text{m}$
 (2) The smaller limit shall apply at the cross point between two frequency bands.
 (3) Distance is the distance in meters between the measuring instrument, antenna and the closest point of any part of the device or system.

Limits for Radiated Emission Above 1GHz

Frequency (MHz)	Distance (Meters)	Peak Limit $(\text{dB})\mu\text{V}/\text{m}$	Average Limit $(\text{dB})\mu\text{V}/\text{m}$
1000 ~ 3000	3	70	50
3000 ~ 6000	3	74	54

***Note: The lower limit applies at the transition frequency.

4.4. EUT Configuration on Measurement

The following equipment are installed on Radiated Emission Measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application.

4.5. Operating Condition of EUT

4.5.1. Set up the EUT as shown in Section 4.2.

4.5.2. Let the EUT work in test mode (1) and measure it.

4.6. Test Procedure

EUT and its simulators are placed on a turntable, which is 0.8 meter high above ground. The turntable can rotate 360 degrees to determine the position of the maximum emission level. EUT is set 3.0 meters away from the receiving antenna, which is mounted on a antenna tower. The antenna can be moved up and down between 1.0 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated by-log antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on measurement. In order to find the maximum emission levels, all of the interface cables must be manipulated according to ANSI C63.4-2014 on radiated emission measurement.

The bandwidth of the EMI test receiver is set at 120kHz, 1000kHz.

The frequency range from 30MHz to 1000MHz is checked.

The bandwidth of the Spectrum analyzer is set at RBW/VBW=1MHz/3MHz.

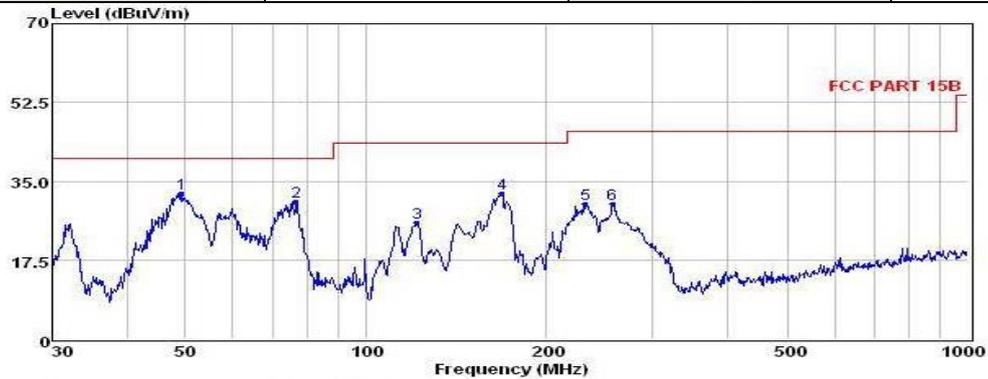
The frequency range from 1GHz to the frequency which about 5th carrier harmonic or 6GHz is checked.

4.7. Radiated Emission Noise Measurement Result

PASS.

The scanning waveforms please refer to the next page.

Test Model	TL-AR	Test Mode	Mode 1
Environmental Conditions	21.5°C, 51.9% RH	Detector Function	Quasi-peak
Pol	Vertical	Distance	3m
Test Engineer	CARL FU	Test Voltage	AC 120V/60Hz

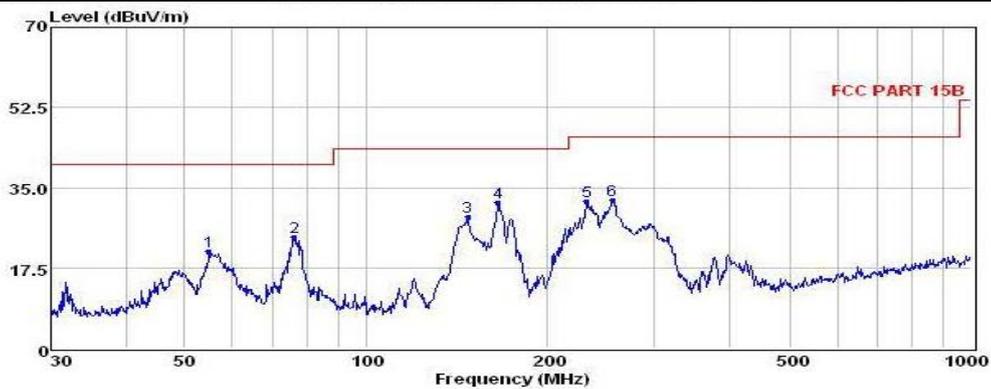


Env./Ins: 21.5°C/51.9%
 Power Rating: AC 120V/60Hz
 pol: VERTICAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	49.36	48.41	0.54	13.29	32.24	40.00	-7.76	QP
2	76.51	51.93	0.47	8.02	30.33	40.00	-9.67	QP
3	121.55	45.04	0.70	10.24	25.81	43.50	-17.69	QP
4	168.41	52.79	0.80	8.92	32.22	43.50	-11.28	QP
5	232.53	47.67	0.98	11.76	30.00	46.00	-16.00	QP
6	257.42	47.24	1.01	12.06	29.87	46.00	-16.13	QP

Note: 1. All readings are Quasi-peak values.
 2. Measured= Reading + Antenna Factor + Cable Loss
 3. The emission that are 20db below the official limit are not reported

Test Model	TL-AR	Test Mode	Mode 1
Environmental Conditions	21.5°C, 51.9% RH	Detector Function	Quasi-peak
Pol	Horizontal	Distance	3m
Test Engineer	CARL FU	Test Voltage	AC 120V/60Hz



Env./Ins: 21.5°C/51.9%
 Power Rating: AC 120V/60Hz
 pol: HORIZONTAL

	Freq	Reading	CabLos	Antfac	Measured	Limit	Over	Remark
	MHz	dBuV	dB	dB/m	dBuV/m	dBuV/m	dB	
1	54.83	37.73	0.46	13.03	21.20	40.00	-18.80	QP
2	75.98	45.81	0.54	7.94	24.20	40.00	-15.80	QP
3	147.40	49.79	0.86	8.24	28.65	43.50	-14.85	QP
4	165.49	52.42	0.77	8.83	31.74	43.50	-11.76	QP
5	232.53	49.76	0.98	11.76	32.09	46.00	-13.91	QP
6	255.62	49.55	1.02	12.06	32.19	46.00	-13.81	QP

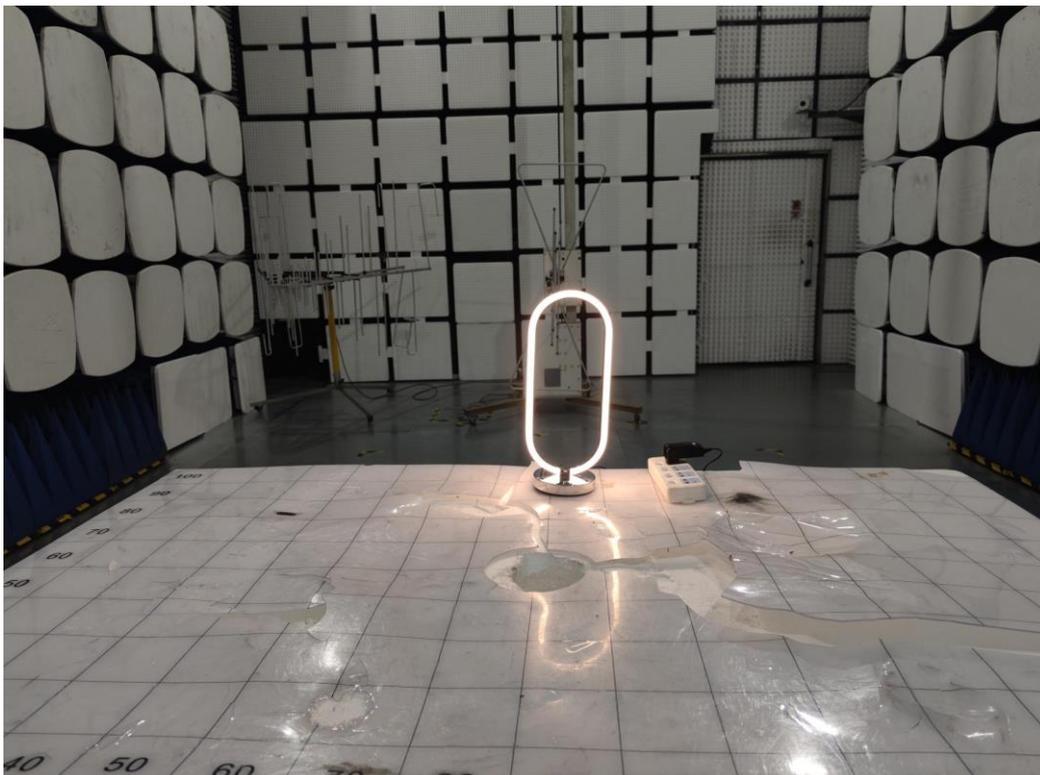
Note: 1. All readings are Quasi-peak values.
 2. Measured= Reading + Antenna Factor + Cable Loss
 3. The emission that are 20db below the official limit are not reported

5. PHOTOGRAPH

5.1. Photo of Power Line Conducted Measurement



5.2. Photo of Radiated Measurement



6. EXTERNAL AND INTERNAL PHOTOS OF THE EUT

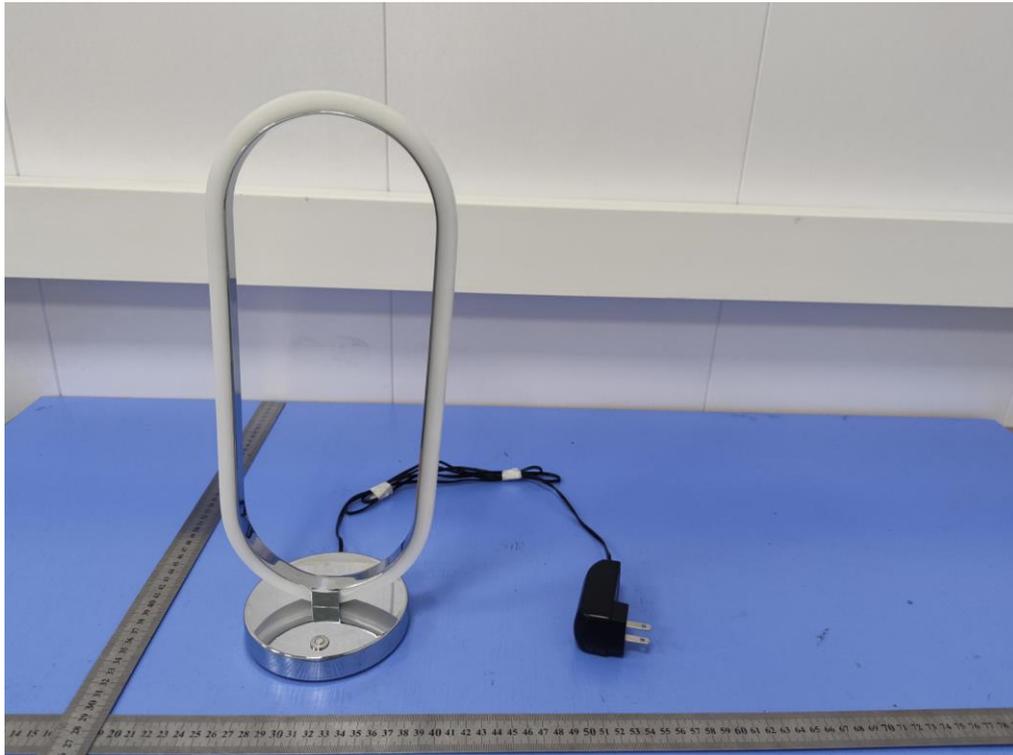


Fig.1

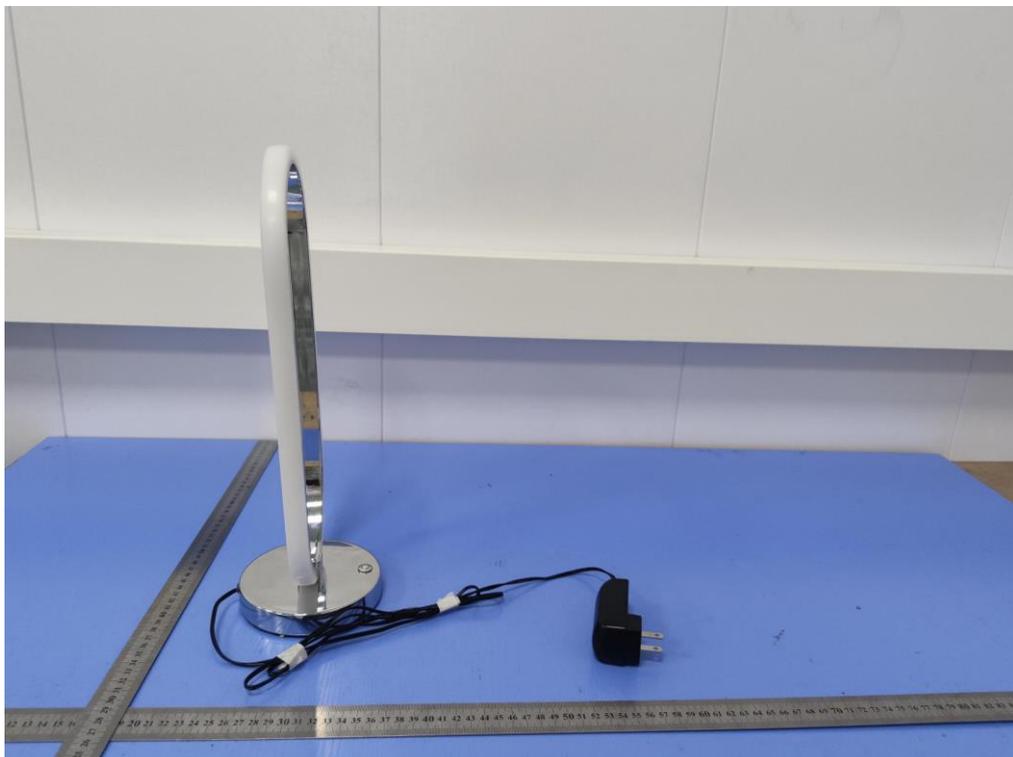


Fig.2

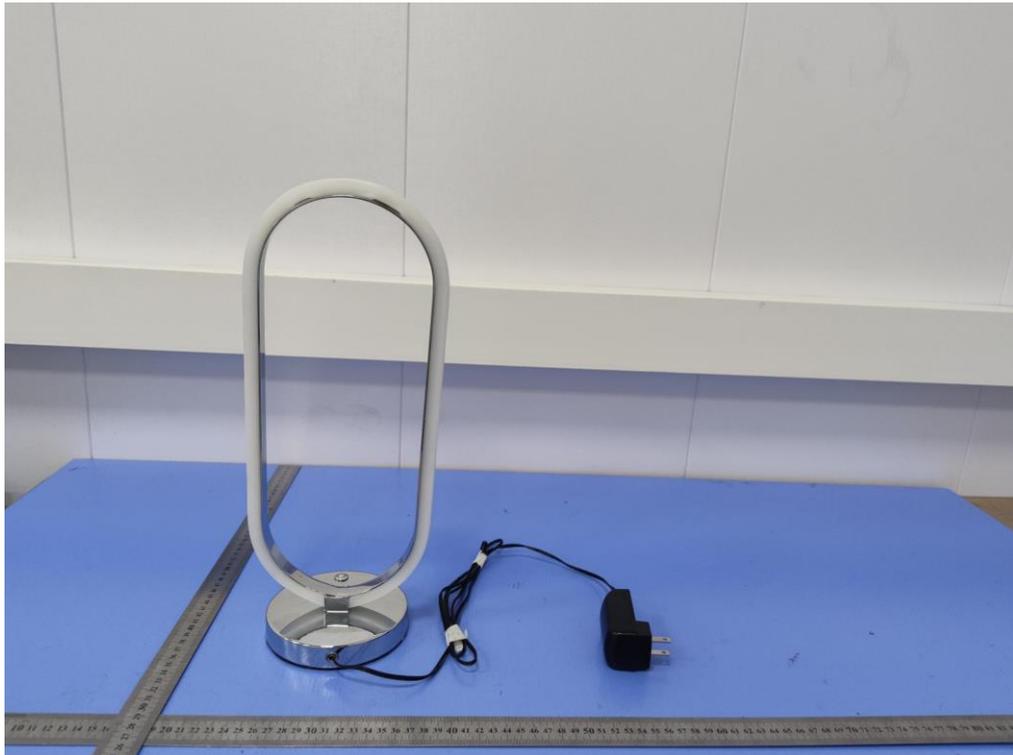


Fig.3

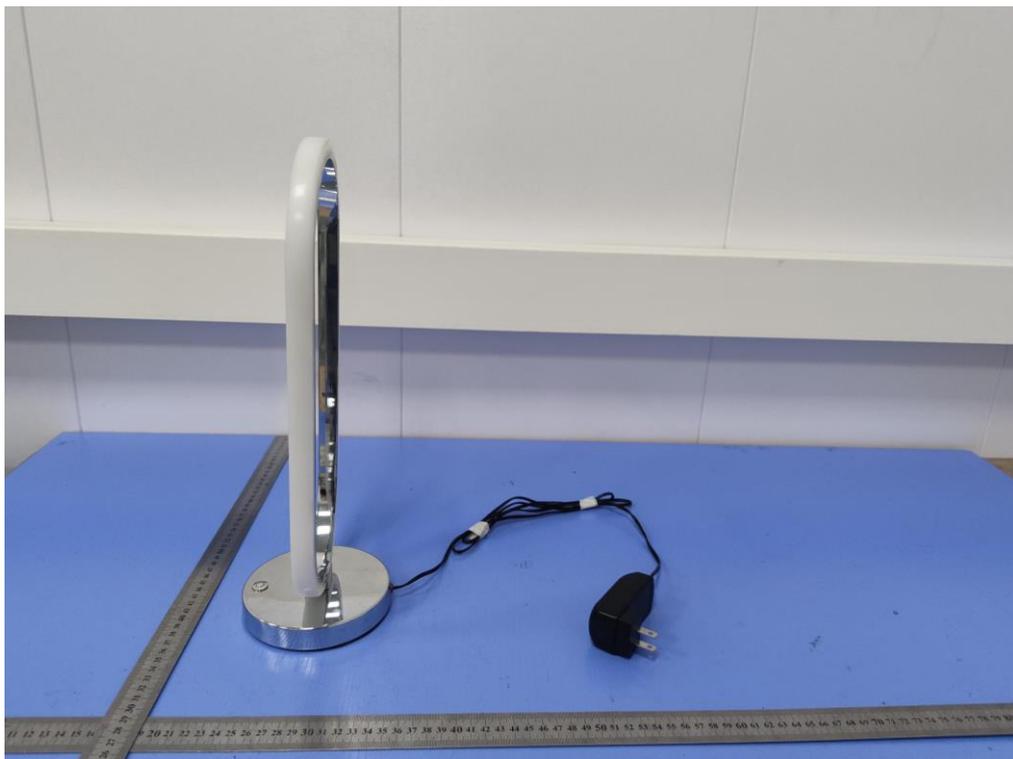


Fig.4



Fig.5

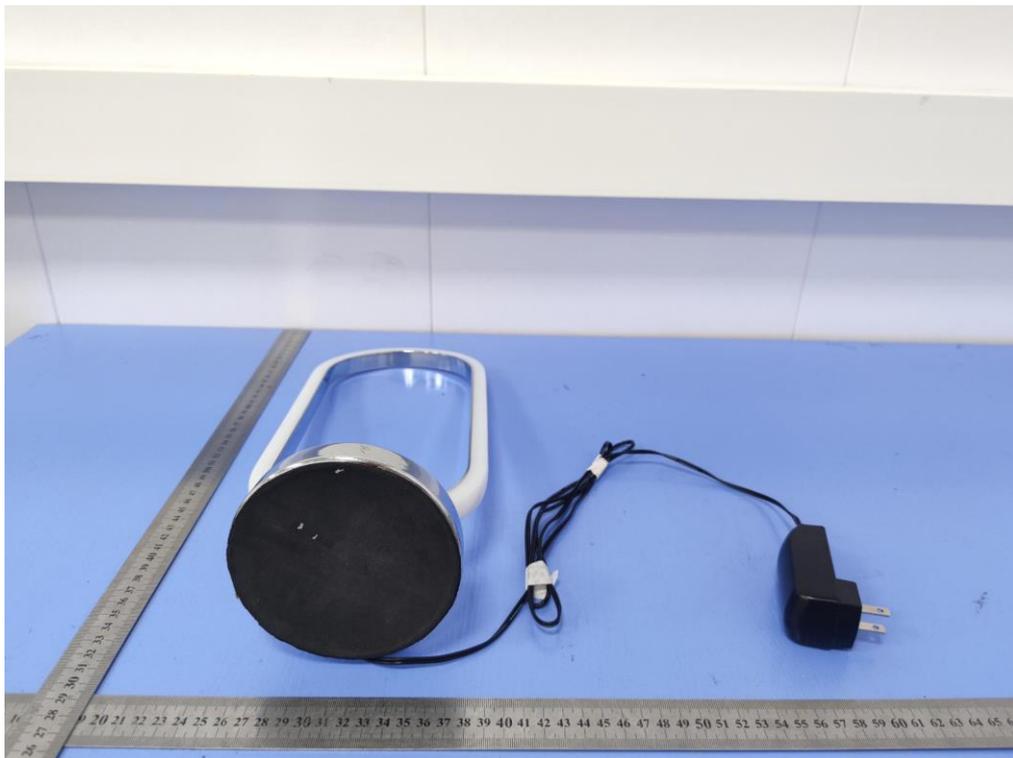


Fig.6

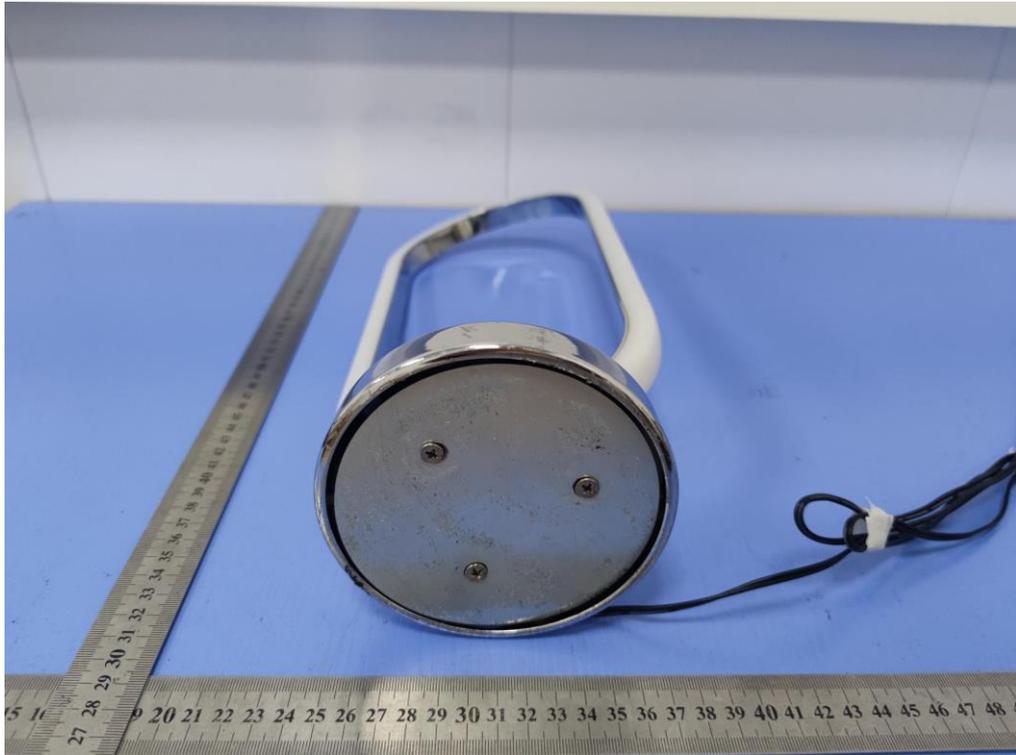


Fig.7



Fig.8



Fig.9



Fig.10

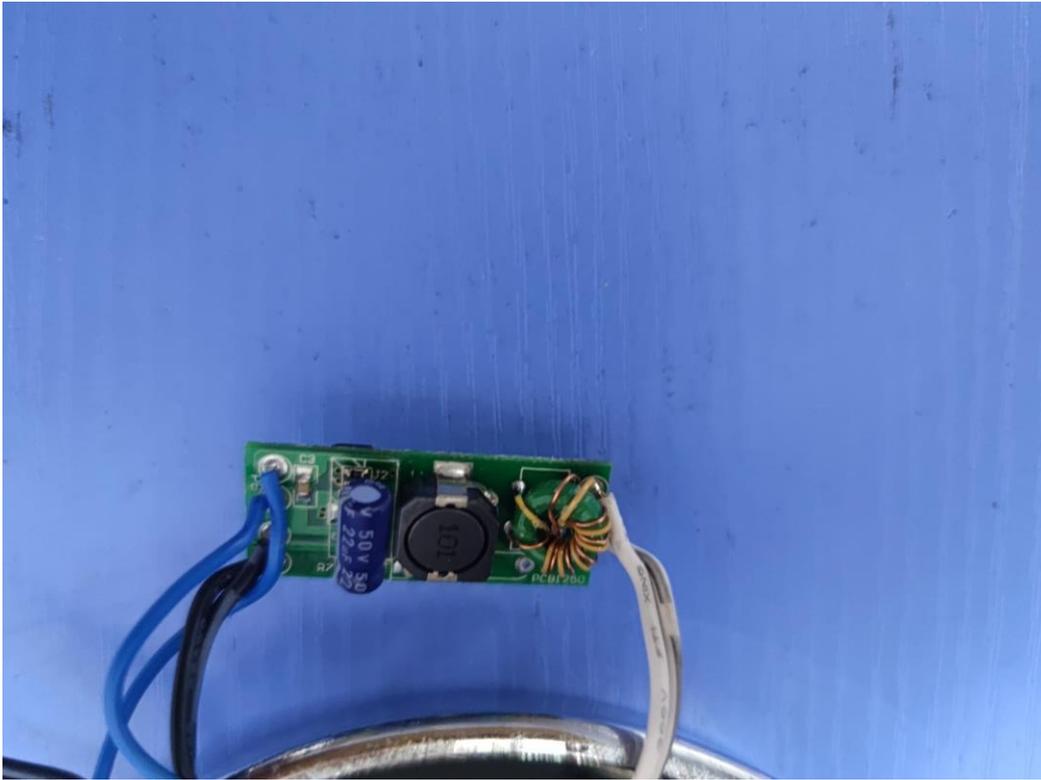


Fig.11



Fig.12

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