

# TEST REPORT

**Product Name** : LED Table Lamp  
**Model Number** : PBG-0613

**Prepared for** : Power beauty (Dong Guan) Industrial Co., Ltd.  
**Address** : No.1, Eastern Industry Park, Shujiu Village, Changping Town, Dongguan City, China

**Prepared by** : EMTEK(DONGGUAN) CO., LTD.  
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**Report Number** : EDG2307270237E00501R  
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**Date of issue** : August 07, 2023

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## TEST REPORT VERIFICATION

Applicant : Power beauty (Dong Guan) Industrial Co., Ltd.  
Manufacturer : Power beauty (Dong Guan) Industrial Co., Ltd.  
EUT : LED Table Lamp  
Model No. : PBG-0613  
Rating : DC 5V 1A

## Measurement Procedure Used:

BS EN IEC 55015:2019+A11:2020  
BS EN IEC 61000-3-2: 2019+A1:2021  
BS EN 61000-3-3:2013+A2:2021  
BS EN 61547: 2009  
(IEC 61000-4-2: 2008, IEC 61000-4-3:2020, IEC 61000-4-4: 2012,  
IEC 61000-4-5: 2014+AMD1:2017, IEC 61000-4-6:2013/COR1:2015, IEC 61000-4-11: 2020)

The device described above is tested by EMTEK (DONGGUAN) CO., LTD. and EMTEK(SHENZHEN) CO., LTD to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. The measurement results are contained in this test report and EMTEK (DONGGUAN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these measurements. Also, this report shows that the EUT to be technically compliant with the BS EN IEC 55015, BS EN IEC 61000-3-2, BS EN 61000-3-3 and BS EN 61547 requirements.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK (DONGGUAN) CO., LTD.

Date of Test : July 27, 2023 to August 04, 2023

Prepared by : Galen Xiao / Editor

Reviewer : Tim Dong / Supervisor

Approved & Authorized Signer : Sam Lv / Manager

Modified Information

Version	Summary	Revision Date	Report No.
	Original Report	/	EDG2307270237E00501R

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## 1. DESCRIPTION OF STANDARDS AND RESULTS

EMISSION				
Description of Test Item		Standard	Limits	Results
Wired network ports	Disturbance voltage at the electric power supply interface	BS EN IEC 55015	Table 1	Pass
	Disturbance voltage other than power supply interface		Table 2	N/A
	Disturbance current other than power supply interface		Table 3	N/A
Local wired ports	Disturbance voltage limits of local wired ports (electrical power supply interface of non-restricted ELV lamps)		Table 4	N/A
	Disturbance voltage limits of local wired ports (local wired ports other than electrical power supply interface of ELV lamp)		Table 5	N/A
	Disturbance current limits at local wired ports (local wired ports other than electrical power supply interface of ELV lamp)		Table 6	N/A
Radiated disturbance (9 kHz~30 Mhz)			Table 8	Pass
Radiated disturbance (30 MHz~1 Ghz)			Table 10	Pass
Harmonic Current Emissions		BS EN IEC 61000-3-2	Class C	N/A
Voltage Fluctuation and Flicker		BS EN 61000-3-3	Section 5	Pass
IMMUNITY (BS EN 61547)				
Description of Test Item		Basic Standard	Performance Criteria	Results
Electrostatic Discharge (ESD)		IEC 61000-4-2: 2008	B	Pass
Radio-frequency Electromagnetic Fields (R/S)		IEC 61000-4-3:2020	A	Pass
Fast Transients (EFT)		IEC 61000-4-4: 2012	B	Pass
Surges		IEC 61000-4-5: 2014+AMD1:2017	C	Pass
Injected Currents (radio-frequency common mode)		IEC 61000-4-6:2013/COR1:2015	A	Pass
Power Frequency Magnetic Field		IEC 61000-4-8: 2009	A	N/A
Voltage Interruptions, 100%		IEC 61000-4-11: 2020	B	Pass
Voltage Dips, 30% Reduction		IEC 61000-4-2: 2008	C	
Note: N/A is an abbreviation for Not Applicable.				

## 2. GENERAL INFORMATION

### 2.1. Description of Device (EUT)

EUT : LED Table Lamp

Model Number : PBG-0613

Trade Mark : N/A

Power Supply for Test : AC 230V 50Hz, DC 3.7V from internal battery

Operate mode : ON

Applicant : Power beauty (Dong Guan) Industrial Co., Ltd.

Address : N o.1, Eastern Industry Park, Shujiu Village, Changping Town, Dong guan City, China

Manufacturer : Power beauty (Dong Guan) Industrial Co., Ltd.

Address : N o.1, Eastern Industry Park, Shujiu Village, Changping Town, Dong guan City, China

Date of sample received : July 27, 2023

Date of Test : July 27, 2023 to August 04, 2023

### 2.2. Input / Output Ports

Port #	Name	Type*	Cable Max. >3m	Cable Shielded	Comments
0	Enclosure	N/E	--	--	None
1	DC Cable	DC	No	--	None
* Note: Use abbreviations: AC= AC Power Port; DC= DC Power Port; N/E= Non-Electrical; I/O= Signal Input or Output Port (Not Involved in Process Control); TP= Telecommunication Ports					



### 2.3. Description of Support Device

Adapter : Model : YSV6-0501000  
Input: AC 100-240V, 50/60Hz  
Output: DC 5V, 1000mA

### 2.4. Description of Test Facility

Site Description  
EMC Lab. : Accredited by CNAS, 2020.08.27  
The certificate is valid until 2024.07.05  
The Laboratory has been assessed and proved to be in  
compliance with CNAS/CL01:2018  
The Certificate Registration Number is L3150

Name of Firm : EMTEK(DONGGUAN) CO., LTD.  
Site Location : -1&2/F., Building 2, Zone A, Zhongda Marine Biotechnology  
Research and Development Base, N.9, Xincheng  
Avenue, Songshanhu High-technology Industrial Development  
Zone, Dongguan, Guangdong, China

### 2.5. Measurement Uncertainty

Test Item	Uncertainty
Conducted Emission	: 2.08dB(9K-150KHz) 2.42dB(150K-30MHz)
Radiated Emission (3m Chamber)	: 3.32dB (30M~1GHz Polarize: H) 3.34dB (30M~1GHz Polarize: V)
Uncertainty for Flicker test	: 0.07%
Uncertainty for Harmonic test	: 1.8%
Uncertainty for test site temperature and humidity	: 0.6°C 4%

### 3. MEASURING DEVICES AND TEST EQUIPMENT

#### 3.1. For Disturbance voltage at the electric power supply interface

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde&Schwarz	ESCI	100137	2023/5/11	1 Year
2.	AMN	Rohde&Schwarz	ENV216	101209	2023/5/11	1 Year

#### 3.2. For Radiated disturbance (30 MHz~1 Ghz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde&Schwarz	ESCI	101415	2023/5/11	1 Year
2.	Bi-log Hybrid Antenna	Schwarzbeck	VULB9163	141	2023/5/15	1 Year
3.	Pre-Amplifie	HP	8447F	OPTH64	2023/5/11	1 Year

#### 3.3. For Radiated disturbance (9 kHz~30 Mhz)

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMI Test Receiver	Rohde&Schwarz	ESCI	100137	2023/5/11	1 Year
2.	Van Ween Loop Antenna	Laplace	RF300	SLOHYH	2023/5/11	1 Year

#### 3.4. For Harmonic Current / Flicker Measurement

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	AC variable frequency power supply	Teseq	100-CTS-230-TE SQ	1804A03259	2023/5/11	1 Year
2.	Harmonic current and voltage fluctuation analyzer	Teseq	5001IX-CTS-400-SCH	1805A03008	2023/5/11	1 Year

#### 3.5. For Electrostatic Discharge Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	ESD Tester	TESEQ	NSG 437	409	2023/5/15	1 Year

#### 3.6. For Radio-frequency Electromagnetic Fields Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Power Amplifier	MILMEGA	AS0102-55	1018770	2023/5/13	1 Year
2.	50ohm Diode Power Sensor	BOONTON	51011EMC	34236	2023/5/13	1 Year

3.	RF Power Meter. Dual Channel	BOONTON	4232A	10539	2023/5/13	1 Year
4.	Log.-Per. Antenna	SCHWARZBECK	STLP 9129-7/16	3050	N/A	N/A
5.	Signal Generator	Agilent	N5181A	MY50145187	2023/5/13	1 Year
6.	Broad-Band Horn Antenna	SCHWARZBECK	STLP 9149	9149-227	N/A	N/A
7.	Field Strength Meter	DARE	RSS1006A	10100037SNO 22	2023/5/13	1 Year
8.	Multi-function interface system	DARE	CTR1009B	12100250SNO 72	N/A	N/A
9.	Automatic switch group	DARE	RSW1004A	N/A	N/A	N/A
10.	Power Amplifier	MILMEGA	AS1860-50	1059346	2023/5/13	1 Year
11.	Power Amplifier	Vectawave	VBA 1000-600C	133627	2022/10/31	1 Year
12.	Directional Coupler	BONN	BDC 0810-50/1500	2229689	2022/10/31	1 Year
13.	Audio Analyzer	R&S	UPV	101473	2023/5/13	1 Year
14.	Audio Test System	AUDIO PRECISION	ATS-1	41100	2023/5/13	1 Year

### 3.7. For Fast Transients Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMS comprehensive tester	HTEC	HCOMPACT7	190305	2023/5/11	1 Year
2.	Capacitive Coupling Clamp	EMTEST	HFK	0605-10	2023/5/11	1 Year

### 3.8. For Surges Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMS comprehensive tester	HTEC	HCOMPACT7	190305	2023/5/11	1 Year

### 3.9. For Injected Currents (radio-frequency common mode) Test

Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	Signal generator	Rohde& Schwarz	SMB100A	103042	2023/5/11	1 Year
2.	Single channel power meter	Rohde& Schwarz	NRVS	101761	2023/5/11	1 Year
3.	6 db attenuator	AR-WORLDWIDE	6dB/50FH-006-10 0	324011	2023/5/11	1 Year
4.	CDN	SKET	CDN M2+M3	204303	2023/5/11	1 Year

5.	Power amplifier	BONN Elektronik	BSA 1515-25	97483	2023/5/11	1 Year
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### 3.10.For Voltage Dips and Short Interruptions Test

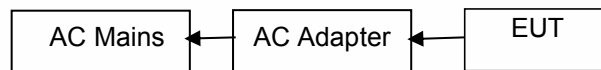
Item	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1.	EMS comprehensive tester	HTEC	HCOMPACT7	190305	2023/5/11	1 Year
2.	Dips module	HTEC	HV1P16T	190302	2023/5/11	1 Year

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## 4. DISTURBANCE VOLTAGE AT THE ELECTRIC POWER SUPPLY INTERFACE

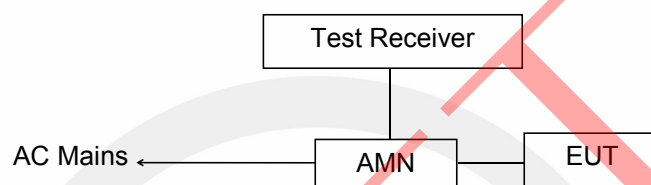
### 4.1. Block Diagram of Test Setup

#### 4.1.1. Block diagram of connection between the EUT and simulators



(EUT: LED Table Lamp)

#### 4.1.2. Block Diagram of Test Setup



(EUT: LED Table Lamp)

### 4.2. Measurement Standard and limit

#### 4.2.1. Test Standard

BS EN IEC 55015:2019+A11:2020

#### 4.2.2. Test Limits

Frequency	At mains terminals (dB $\mu$ V)	
	Quasi-peak Level	Average Level
9KHz ~ 50KHz	110	--
50KHz ~ 150KHz	90 ~ 80*	--
150KHz ~ 0.5MHz	66 ~ 56*	56 ~ 46*
0.5MHz ~ 5.0MHz	56	46
5.0MHz ~ 30MHz	60	50

1. At the transition frequency the lower limit applies.
2. \* decreasing linearly with logarithm of the frequency.

### 4.3. EUT Configuration on Measurement

The following equipments are installed on Disturbance voltage at the electric power supply interface Measurement to meet the commission requirement and operating regulations in a manner which tends to maximize its emission characteristics in a normal application.

EUT : LED Table Lamp  
Model Number : PBG-0613

### 4.4. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 4.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

#### 4.5. Test Procedure

The EUT is put on the table which is 0.8 meter high above the ground and connected to the AC mains through a Line Impedance Stabilization Network (L.I.S.N.). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission according to the BS EN IEC 55015 regulations during conducted emission measurement. And the voltage probe had been used for the load terminals measurement according to the EN55015 standard.

The bandwidth of the test receiver (ESCI) is set at 200Hz in 9KHz~150KHz range and 9KHz in 150KHz~30MHz range.

The frequency range from 9KHz to 30MHz is checked.

All the test results are listed in Section 4.6.

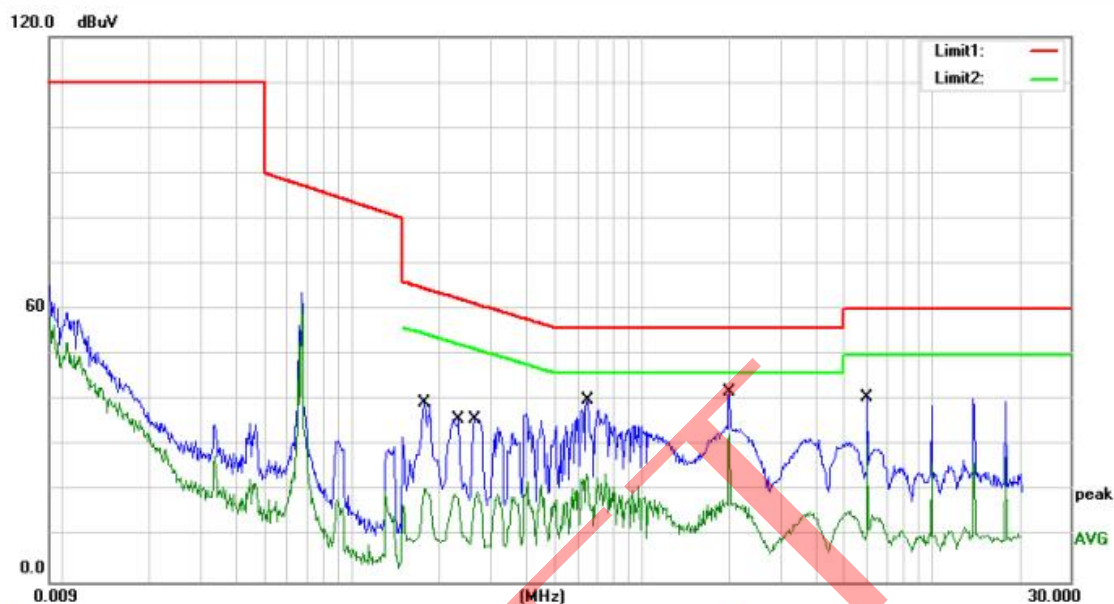
#### 4.6. Measurement Results

**PASS.**

The frequency range from 9KHz to 30MHz is investigated.

The test data are attached in the following pages.

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Site site #1

Limit: EN IEC 55015\_QP (CE)

Mode: ON

Note:

Phase: L1

Power: AC 230V/50Hz

Temperature: 26

Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1780	29.87	9.50	39.37	64.58	-25.21	QP	
2		0.1780	11.06	9.50	20.56	54.58	-34.02	AVG	
3		0.2340	26.48	9.50	35.98	62.31	-26.33	QP	
4		0.2340	9.74	9.50	19.24	52.31	-33.07	AVG	
5		0.2660	26.41	9.52	35.93	61.24	-25.31	QP	
6		0.2660	10.32	9.52	19.84	51.24	-31.40	AVG	
7		0.6500	30.40	9.58	39.98	56.00	-16.02	QP	
8		0.6500	14.24	9.58	23.82	46.00	-22.18	AVG	
9		1.9980	32.31	9.56	41.87	56.00	-14.13	QP	
10	*	1.9980	22.90	9.56	32.46	46.00	-13.54	AVG	
11		5.9940	31.26	9.50	40.76	60.00	-19.24	QP	
12		5.9940	21.36	9.50	30.86	50.00	-19.14	AVG	

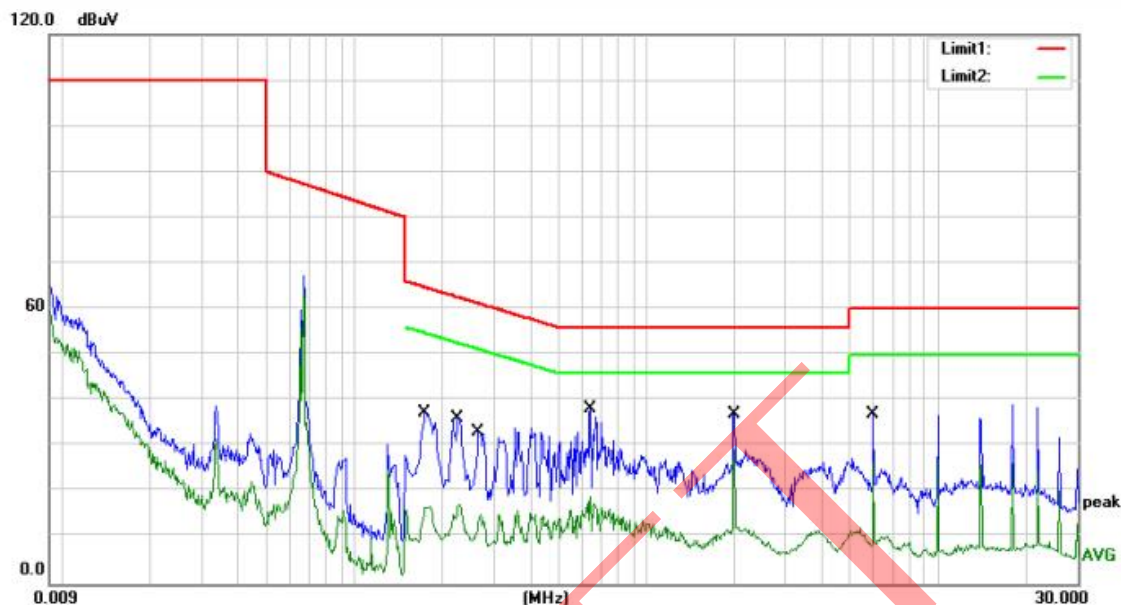
\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator:

Remark:

1. Measurement (dB  $\mu$  V) = AMN Factor (dB) + Cable Loss (dB) + Reading (dB  $\mu$  V)

2. Over (dB) = Measurement (dB  $\mu$  V) - Limit (dB  $\mu$  V)





Site site #1  
 Limit: EN IEC 55015\_QP (CE)  
 Mode: ON  
 Note:  
 Phase: N  
 Power: AC 230V/50Hz  
 Temperature: 26  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1		0.1740	27.97	9.50	37.47	64.77	-27.30	QP	
2		0.1740	7.50	9.50	17.00	54.77	-37.77	AVG	
3		0.2260	26.77	9.50	36.27	62.60	-26.33	QP	
4		0.2260	7.71	9.50	17.21	52.60	-35.39	AVG	
5		0.2660	23.53	9.52	33.05	61.24	-28.19	QP	
6		0.2660	5.66	9.52	15.18	51.24	-36.06	AVG	
7		0.6460	28.78	9.58	38.36	56.00	-17.64	QP	
8		0.6460	9.38	9.58	18.96	46.00	-27.04	AVG	
9		1.9980	27.59	9.56	37.15	56.00	-18.85	QP	
10	*	1.9980	19.67	9.56	29.23	46.00	-16.77	AVG	
11		6.0020	27.66	9.50	37.16	60.00	-22.84	QP	
12		6.0020	17.12	9.50	26.62	50.00	-23.38	AVG	

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator:

Remark:

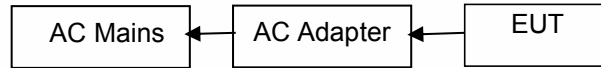
1. Measurement (dB  $\mu$  V) = AMN Factor (dB) + Cable Loss (dB) + Reading (dB  $\mu$  V)
2. Over (dB) = Measurement (dB  $\mu$  V) - Limit (dB  $\mu$  V)



## 5. RADIATED DISTURBANCE (30 MHZ~1 GHZ)

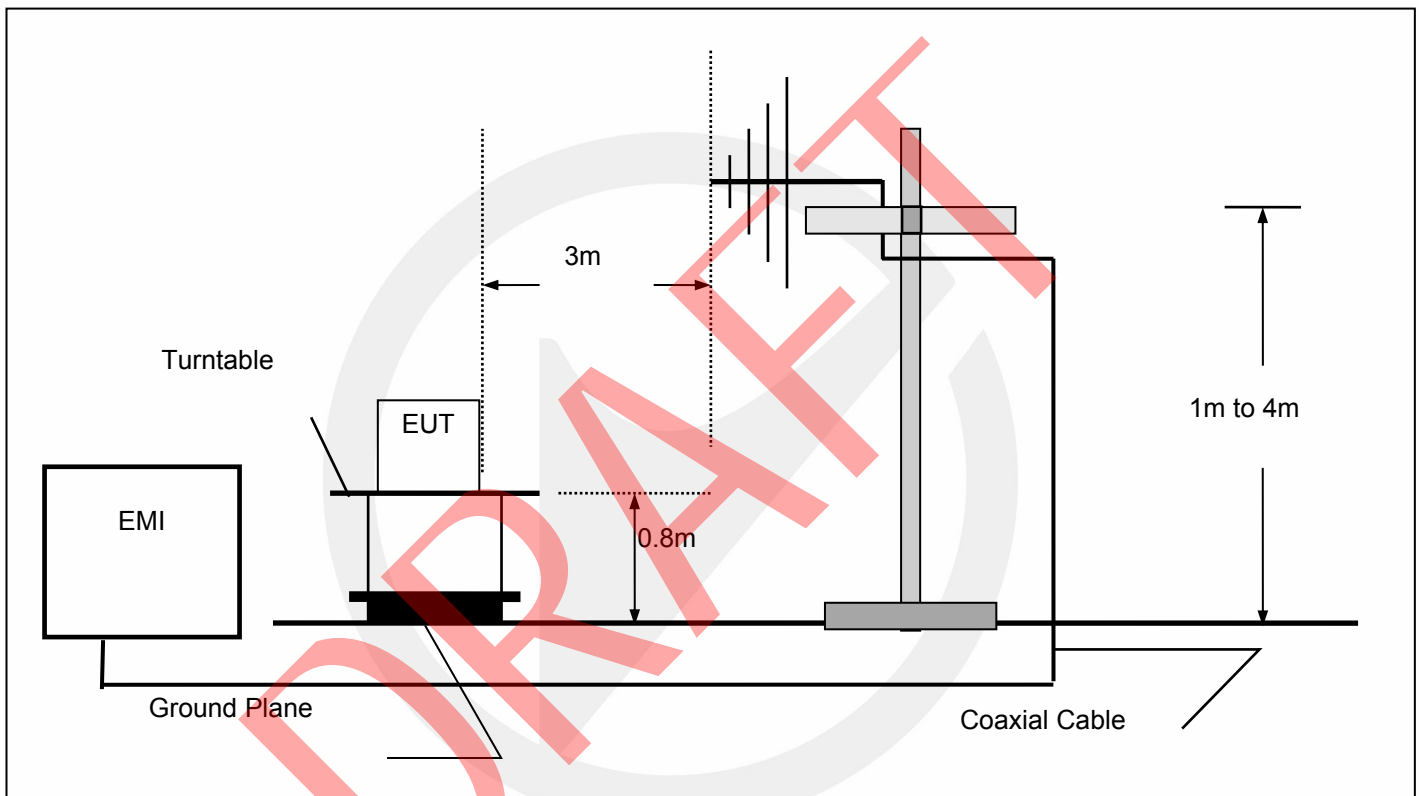
### 5.1. Block Diagram of Test

#### 5.1.1 Block diagram of connection between the EUT and simulators



(EUT: LED Table Lamp)

#### 5.1.2 Block diagram of test setup (In chamber)



(EUT: LED Table Lamp)

### 5.2. Measurement Standard and limit

#### 5.2.1. Test Standard

BS EN IEC 55015:2019+A11:2020

#### 5.2.2. Test Limits

All emanations from a device or system shall not exceed the level of field strengths specified below:

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMIT (DbmV/m)
30 ~ 230	3	40
230 ~ 1000	3	47

Note: (1) The smaller limit shall apply at the combination point between two frequency bands.  
(2) Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the EUT.

### 5.3. EUT Configuration on Measurement

The BS EN IEC 55015 regulations test method must be used to find the maximum emission during Radiated disturbance (30 MHz~1 GHz) at the enclosure port.

EUT : LED Table Lamp  
Model No. : PBG-0613

### 5.4. Operating Condition of EUT

Step 1: Turn on the power.

Step 2: Let the EUT work in test mode (ON) and measure it.

### 5.5. Test Procedure

The EUT is placed on a turn table which is 0.8 meter high above the ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level. The EUT is set 3 meters away from the receiving antenna which is mounted on a antenna tower. The antenna can be moved up and down from 1 to 4 meter to find out the maximum emission level. Bilog antenna (calibrated by Dipole Antenna) is used as a receiving antenna. Both horizontal and vertical polarizations of the antenna are set on test.

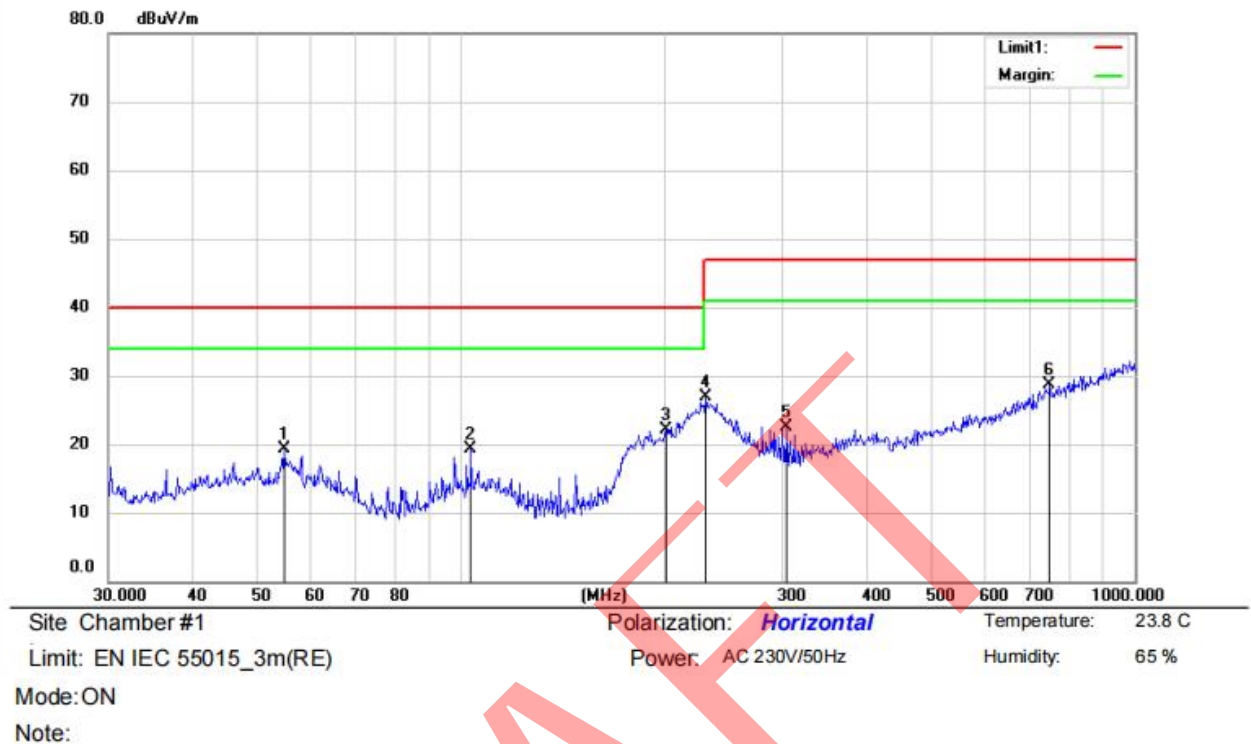
The bandwidth of the Receiver (ESCI) is set at 120kHz.

### 5.6. Test Results

**PASS.**

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

The worst test data are attached in the following pages.



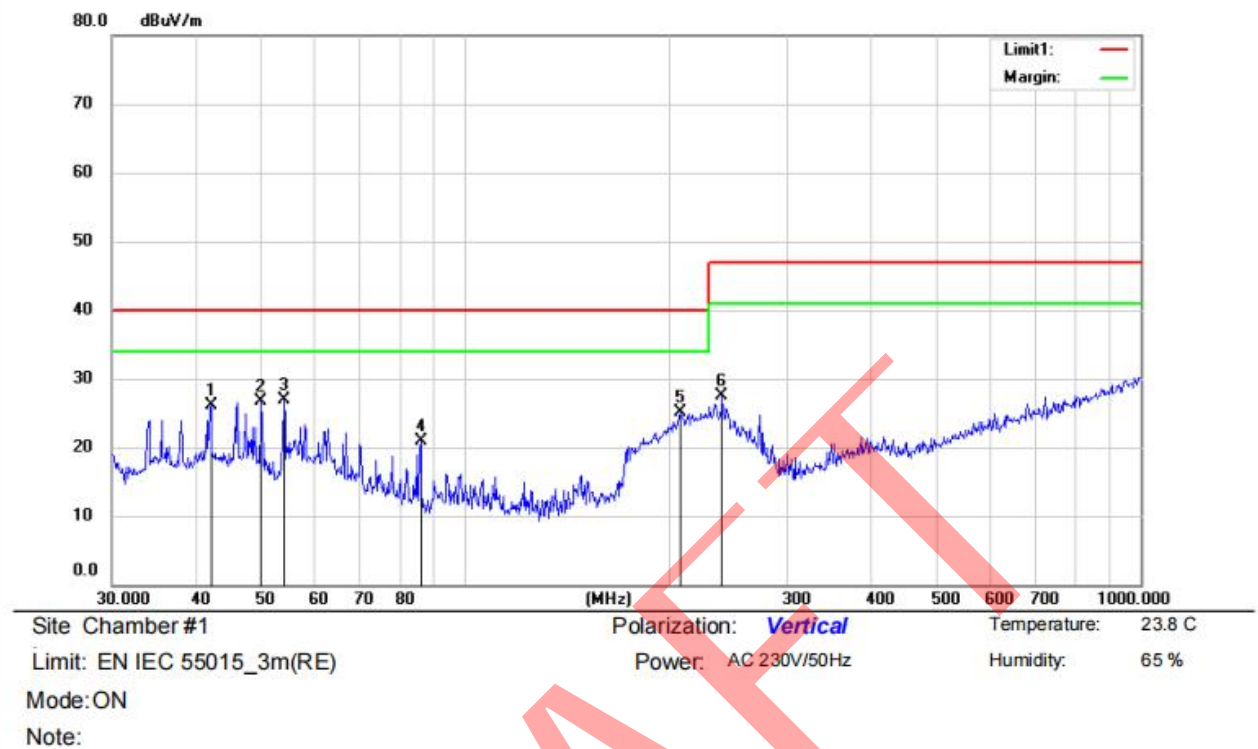
No.	Mk.	Freq. MHz	Reading Level dBuV	Ant. Factor dB/m	Pre Amp Gain dB	Cable loss dB	Measure- ment dBuV/m	Limit dBuV/m	Over dB	Detector	HI cm	Degree deg.	Comment
1		54.6430	35.38	13.54	30.5	0.91	19.33	40.00	-20.67	QP			
2		103.4421	37.55	11.53	30.87	1.1	19.31	40.00	-20.69	QP			
3	*	201.3930	39.07	11.64	30.35	1.71	22.07	40.00	-17.93	QP			
4		230.9068	42.65	12.47	30.2	1.97	26.89	47.00	-20.11	QP			
5		304.6100	36.09	14	29.83	2.18	22.44	47.00	-24.56	QP			
6		747.4825	34.42	20.76	30.17	3.77	28.78	47.00	-18.22	QP			

\*:Maximum data x:Over limit !:over margin

Operator: Ccyf

Remark:

1. Measurement (dB  $\mu$  V/m) = Antenna Factor(dB) -Amp Factor(dB) +Cable Loss(dB) + Reading(dB  $\mu$  V/m)
2. Over (dB) = Measurement (dB  $\mu$  V/m) - Limit (dB  $\mu$  V/m)



No.	Mk.	Freq.	Reading	Ant.	Pre Amp	Cable	Measure-	Limit	Over	HI	Degree
		MHz	Level	Factor	Gain	loss	ment			Detector	cm
			dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		deg.
1		42.0066	42.76	13.26	30.52	0.65	26.15	40.00	-13.85	QP	
2		49.8814	42.40	14	30.48	0.78	26.70	40.00	-13.30	QP	
3	*	53.8818	42.91	13.61	30.49	0.88	26.91	40.00	-13.09	QP	
4		85.8984	41.63	8.83	30.68	1.06	20.84	40.00	-19.16	QP	
5		207.8501	41.92	11.82	30.32	1.77	25.19	40.00	-14.81	QP	
6		239.9874	42.93	12.72	30.15	2.04	27.54	47.00	-19.46	QP	

\*:Maximum data x:Over limit !:over margin

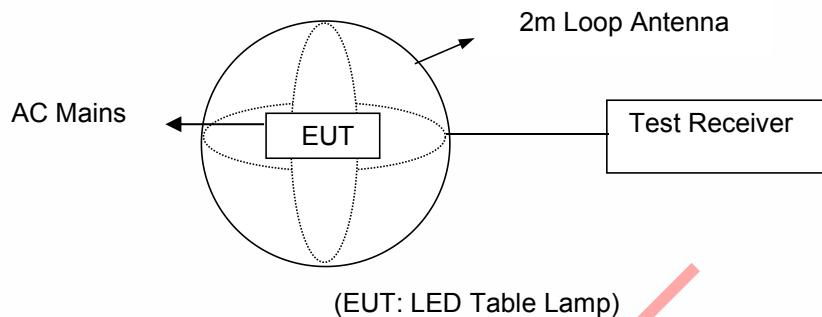
Operator: Ccyf

Remark:

1. Measurement (dB  $\mu$  V/m) = Antenna Factor(dB) -Amp Factor(dB) +Cable Loss(dB) + Reading(dB  $\mu$  V/m)
2. Over (dB) = Measurement (dB  $\mu$  V/m) - Limit (dB  $\mu$  V/m)

## 6. RADIATED DISTURBANCE (9 KHZ~30 MHZ)

### 6.1. Block Diagram of Test Setup



### 6.2. Measurement Standard and Limits

#### 6.2.1. Test Standard

BS EN IEC 55015:2019+A11:2020

#### 6.2.2. Test Limits

Frequency	Limits for loop diameter (dB $\mu$ A)
	2m
9KHz ~ 70KHz	88
70KHz ~ 150KHz	88 ~ 53*
150KHz ~ 3.0MHz	53 ~ 22*
3.0MHz ~ 30MHz	22

1. At the transition frequency the lower limit applies.
2. \* decreasing linearly with logarithm of the frequency.

### 6.3. EUT Configuration on Measurement

The configuration of the EUT is same as Section 6.1.

### 6.4. Operating Condition of EUT

Same as conducted measurement which is listed in Section 4.4, except that the test setup replaced by Section 6.1.

## 6.5. Test Procedure

The EUT is placed on a wood table in the center of a loop antenna. The induced current in the loop antenna is measured by means of a current probe and the test receiver.

Three field components are checked by means of a coaxial switch.

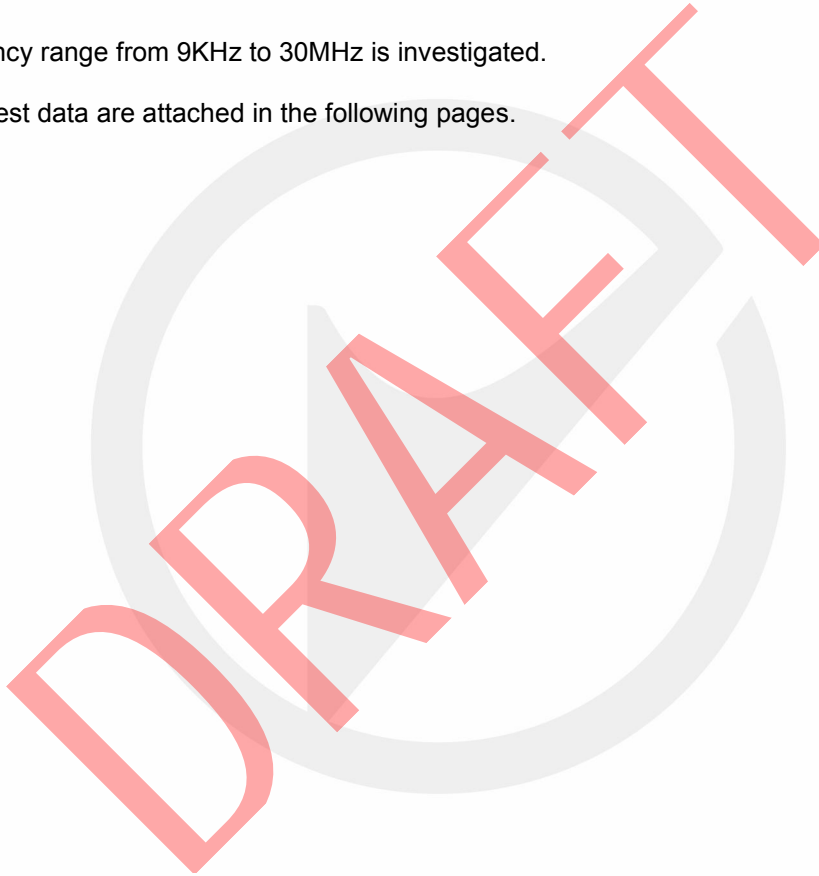
The frequency range from 9KHz to 30MHz is investigated. The receiver is measured with the quasi-peak detector. For frequency band 9KHz to 150KHz, the bandwidth of the field strength meter (test receiver ESCI) is set at 200Hz. For frequency band 150KHz to 30MHz, the bandwidth is set at 9KHz.

## 6.6. Test Results

**PASS.**

The frequency range from 9KHz to 30MHz is investigated.

The worst test data are attached in the following pages.







Site site #1  
 Limit: (ME)EN IEC 55015\_QP  
 Mode: ON  
 Note:

Phase: X  
 Power: AC 230V/50Hz  
 Temperature: 26  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		0.1500	19.56	9.67	29.23	58.00	-28.77	QP	
2		0.2363	15.82	9.55	25.37	52.54	-27.17	QP	
3		0.3650	8.69	9.57	18.26	47.31	-29.05	QP	
4		1.1050	4.08	9.59	13.67	34.00	-20.33	QP	
5		1.7450	1.52	9.59	11.11	28.51	-17.40	QP	
6	*	8.6500	1.42	9.75	11.17	22.00	-10.83	QP	

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator:

Remark:

1. Measurement (dB  $\mu$  A) = Antenna Factor (dB) + Cable Loss (dB) + Reading (dB  $\mu$  A)
2. Over (dB) = Measurement (dB  $\mu$  A) - Limit (dB  $\mu$  A)



Site site #1  
 Limit: (ME)EN IEC 55015\_QP  
 Mode: ON  
 Note:

Phase: Y  
 Power: AC 230V/50Hz  
 Temperature: 26  
 Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		0.1723	15.73	9.55	25.28	56.33	-31.05	QP	
2		0.3300	10.90	9.56	20.46	48.53	-28.07	QP	
3		0.7700	5.39	9.58	14.97	38.34	-23.37	QP	
4		1.7450	1.52	9.59	11.11	28.51	-17.40	QP	
5	*	2.9650	1.28	9.62	10.90	22.14	-11.24	QP	
6		20.2000	-1.21	10.18	8.97	22.00	-13.03	QP	

\*:Maximum data    x:Over limit    !:over margin    Comment: Factor build in receiver.    Operator:

Remark:

1. Measurement (dB  $\mu$  A) = Antenna Factor (dB) + Cable Loss (dB) + Reading (dB  $\mu$  A)
2. Over (dB) = Measurement (dB  $\mu$  A) - Limit (dB  $\mu$  A)





Site site #1  
Limit: (ME)EN IEC 55015\_QP  
Mode: ON  
Note:

Phase: Z  
Power: AC 230V/50Hz

Temperature: 26  
Humidity: 60 %

No.	Mk.	Freq. MHz	Reading Level dBuA	Correct Factor dB	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		0.1680	15.39	9.56	24.95	56.64	-31.69	QP	
2		0.3300	12.90	9.56	22.46	48.53	-26.07	QP	
3		0.4910	7.96	9.57	17.53	43.75	-26.22	QP	
4		1.2600	3.18	9.59	12.77	32.42	-19.65	QP	
5	*	2.3300	5.13	9.62	14.75	25.04	-10.29	QP	
6		7.7000	1.43	9.73	11.16	22.00	-10.84	QP	

\*:Maximum data x:Over limit !:over margin Comment: Factor build in receiver. Operator:

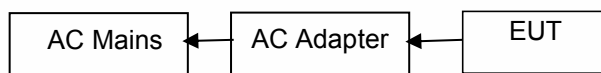
Remark:

1. Measurement (dB  $\mu$  A) = Antenna Factor (dB) + Cable Loss (dB) + Reading (dB  $\mu$  A)
2. Over (dB) = Measurement (dB  $\mu$  A) - Limit (dB  $\mu$  A)

## 7. HARMONIC CURRENT MEASUREMENT

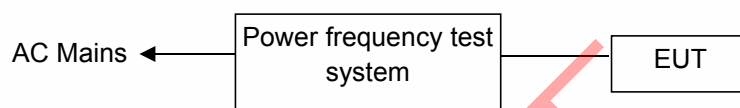
### 7.1. Block Diagram of Test Setup

#### 7.1.1. Block diagram of connection between the EUT and simulators



(EUT: LED Table Lamp)

#### 7.1.2. Block Diagram of Test Setup



(EUT: LED Table Lamp)

### 7.2. Measuring Standard

BS EN IEC 61000-3-2: 2019+A1:2021

Class C

Power<5W

### 7.3. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 7.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

### 7.4. Test Results

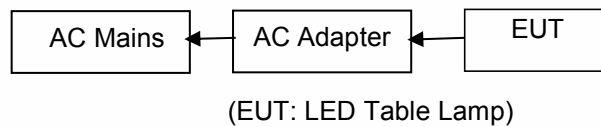
**N/A.**

Because operating power of EUT is less than 5W, according to standard BS EN IEC 61000-3-2, Harmonics Current is not required.

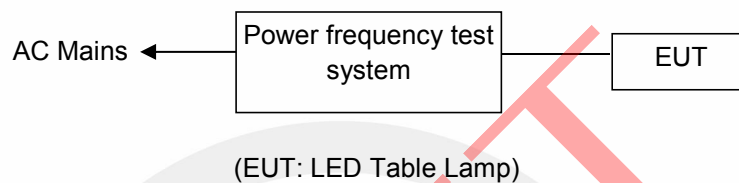
## 8. VOLTAGE FLUCTUATIONS & FLICKER MEASUREMENT

### 8.1. Block Diagram of Test Setup

#### 8.1.1. Block diagram of connection between the EUT and simulators



#### 8.1.2. Block Diagram of Test Setup



### 8.2. Measuring Standard

BS EN 61000-3-3:2013+A2:2021

### 8.3. Operating Condition of EUT

Step: Setup the EUT as shown in Section 8.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

### 8.4. Test Results

**PASS.**

Please refer to the following page.

## Flicker Test Summary per EN/IEC61000-3-3 Ed. 3.0 (2013) (Run time)

EUT: PBG-0613

Test category: All parameters (European limits)

Test date: 2023-8-3

Test duration (min): 10

Comment: ON

Customer: Customer information

Tested by: Lennard Lio

Test Margin: 100

End time: 17:17:49

Start time: 17:07:22

Data file name: F-000108.cts\_data

Test Result: Pass

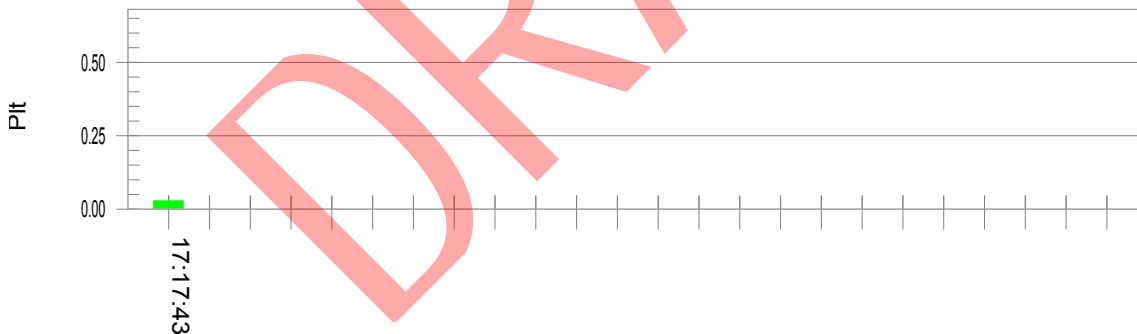
Status: Test Completed

### Pst<sub>i</sub> and limit line

### European Limits



### Plt and limit line



### Parameter values recorded during the test:

Vrms at the end of test (Volt): 229.88

T-max (mS): 0

Highest dc (%): 0.00

Highest dmax (%): 0.00

Highest Pst (10 min. period): 0.064

Test limit (mS): 500.0 Pass

Test limit (%): 3.30 Pass

Test limit (%): 4.00 Pass

Test limit: 1.000 Pass

## Immunity General performance criteria Description

General performance criteria are defined in BS EN 61547 clause 4. These criteria shall be used during the testing of primary functions where no relevant annex is applicable.

When assessing the impact of a disturbance on a function, the assessment should take into consideration the function's performance prior to the application of the disturbance and only identify as failures those changes in performance that are a result of the disturbance.

BS EN 61547:

Performance criterion A:

During the test, no change of the luminous intensity shall be observed and the regulating control, if any, shall operate during the test as intended.

Performance criterion B:

During the test, the luminous intensity may change to any value. After the test, the luminous intensity shall be restored to its initial value within 1 min. Regulating controls need not function during the test, but after the test, the mode of the control shall be the same as before the test provided that during the test no mode changing commands were given.

Performance criterion C:

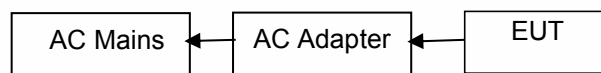
During and after the test, any change of the luminous intensity is allowed and the lamp(s) may be extinguished. After the test, within 30 min, all functions shall return to normal, if necessary by temporary interruption of the mains supply and/or operating the regulating control.

Additional requirement for lighting equipment incorporating a starting device: After the test, the lighting equipment is switched off. After half an hour, it is switched on again. The lighting equipment shall start and operate as intended.

## 9. ELECTROSTATIC DISCHARGE TEST

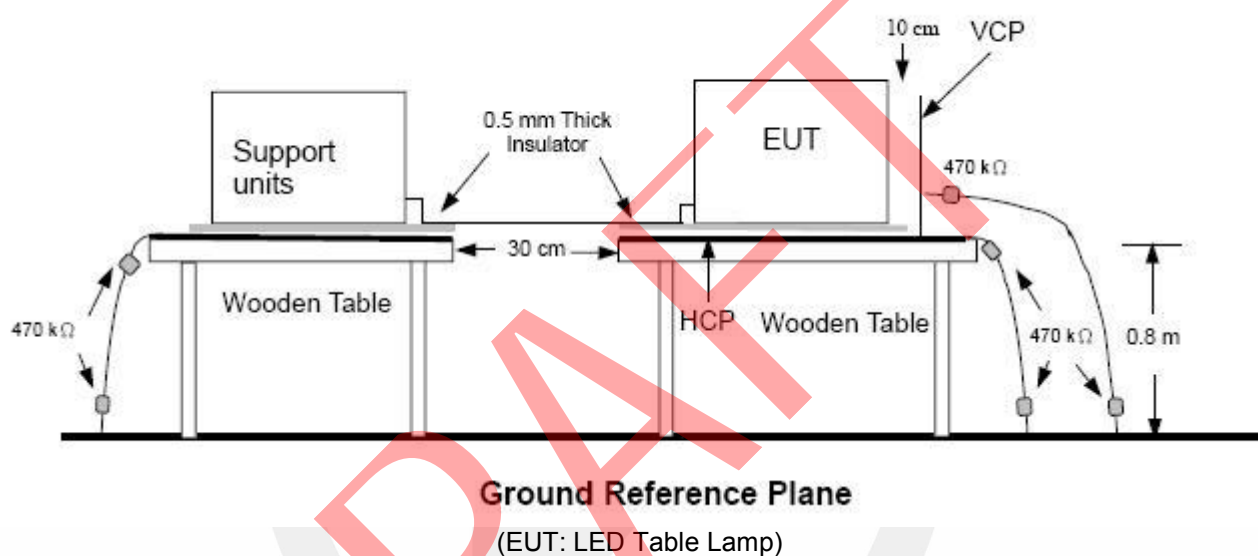
### 9.1. Block Diagram of Test Setup

#### 9.1.1. Block Diagram of the EUT



(EUT: LED Table Lamp)

#### 9.1.2. Block Diagram of ESD Test Setup



### 9.2. Test Standard

BS EN 61547: 2009

(IEC 61000-4-2: 2008, Severity Level: Air Discharge: Level 3,  $\pm 8$  KV/Contact Discharge: Level 2,  $\pm 4$  KV)

### 9.3. Severity Levels and Performance Criterion

#### 9.3.1. Severity level

Level	Test Voltage Contact Discharge (KV)	Test Voltage Air Discharge (KV)
1.	$\pm 2$	$\pm 2$
2.	$\pm 4$	$\pm 4$
3.	$\pm 6$	$\pm 8$
4.	$\pm 8$	$\pm 15$
X	Special	Special

**Performance criterion: B**

## 9.4. EUT Configuration

The configuration of EUT is listed in Section 9.1.

## 9.5. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 9.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

## 9.6. Test Procedure

### 9.6.1. Air Discharge

This test is done on a non-conductive surface. The round discharge tip of the discharge electrode shall be approached as fast as possible to touch the EUT. After each discharge, the discharge electrode shall be removed from the EUT. The generator is then re-triggered for a new single discharge and repeated 10 times for each pre-selected test point. This procedure shall be repeated until all the air discharge completed.

### 9.6.2. Contact Discharge

All the procedure shall be same as Section 9.6.1 except that the tip of the discharge electrode shall touch the EUT before the discharge switch is operated.

### 9.6.3. Indirect discharge for horizontal coupling plane

At least 20 single discharges shall be applied to the horizontal coupling plane, at points on each side of the EUT. The discharge electrode positions vertically at a distance of 0.1m from the EUT and with the discharge electrode touching the coupling plane.

### 9.6.4. Indirect discharge for vertical coupling plane

At least 20 single discharge shall be applied to the center of one vertical edge of the coupling plane. The coupling plane, of dimensions 0.5m X 0.5m, is placed parallel to, and positioned at a distance of 0.1m from the EUT. Discharges shall be applied to the coupling plane, with this plane in sufficient different positions that the four faces of the EUT are completely illuminated.

## 9.7. Test Results

**PASS.**

Please refer to the following page.

## Electrostatic Discharge Test Results

EMTEK(DONGGUAN) CO., LTD.

Applicant	: Power beauty (Dong Guan) Industrial Co., Ltd.	Test Date	: August 03, 2023
EUT	: LED Table Lamp	Temperature	: 25.4℃
M/N	: PBG-0613	Humidity	: 57.1%
Power Supply	: AC 230V 50Hz, DC 3.7V from internal battery	Test Engineer:	Chen Li
Test Mode	: ON	Criterion	: B
Air Discharge: ± 8KV			
Contact Discharge: ± 4KV # For each point positive 10 times and negative 10 times			
Location	Kind A-Air Discharge C-Contact Discharge	Result	
HCP	C	PASS	
VCP	C	PASS	
Conductive parts	C	PASS	
Non-conductive enclosure & Gap	A	PASS	
Note: No observable change during the test.			

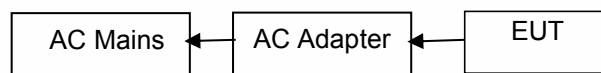
Discharge should be considered on Contact and Air and Horizontal Coupling Plane (HCP) and Vertical Coupling Plane (VCP).



## 10. RADIO-FREQUENCY ELECTROMAGNETIC FIELDS TEST

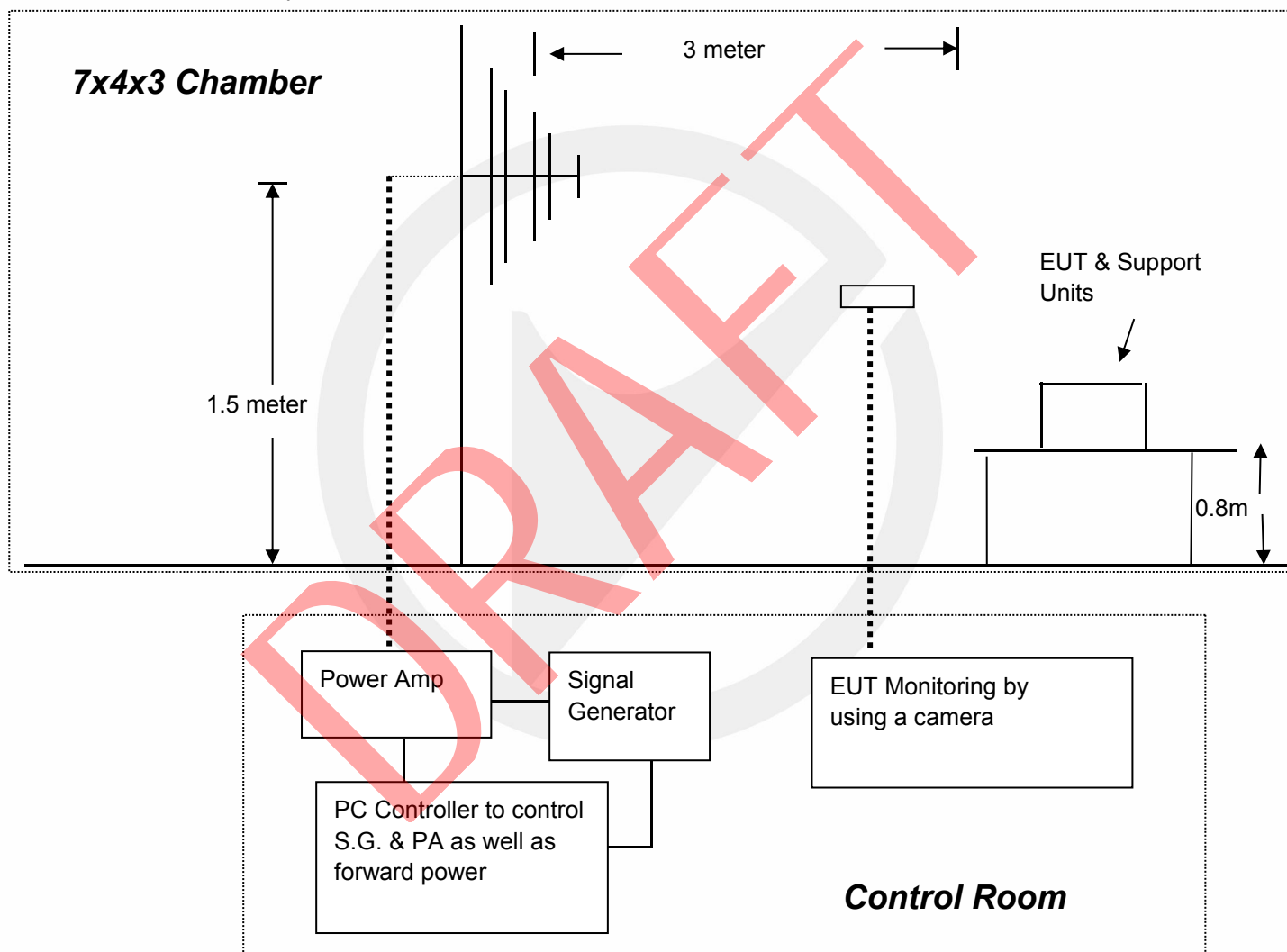
### 10.1. Block Diagram of Test Setup

#### 10.1.1. Block Diagram of the EUT and the simulators



(EUT: LED Table Lamp)

#### 10.1.2. R/S Test Setup



(EUT: LED Table Lamp)

### 10.2. Test Standard

BS EN 61547: 2009  
(IEC 61000-4-3:2020, Severity Level: 2, 3V / m)

### 10.3. Severity Levels and Performance Criterion

#### 10.3.1. Severity level

Level	Field Strength V/m
1.	1
2.	3
3.	10
X	Special

**Performance criterion: A**

### 10.4. EUT Configuration

The configurations of EUT are listed in Section 10.1.

### 10.5. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 10.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

### 10.6. Test Procedure

The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. EUT is set 3 meter away from the transmitting antenna which is mounted on an antenna tower. Both horizontal and vertical polarizations of the antenna are set on test. Each of the four sides of EUT must be faced this transmitting antenna and measured individually. In order to judge the EUT performance, a CCD camera is used to monitor EUT screen. All the scanning conditions are as follows:

Condition of Test	Remarks
1. Fielded Strength	3 V/m (Severity Level 2)
2. Radiated Signal	Modulated
3. Scanning Frequency	80 - 1000 MHz
4. Dwell time of radiated	0.0015 decade/s
5. Waiting Time	1 Sec.

### 10.7. Test Results

**PASS.**

These test result outsourced to EMTEK (SHENZHEN) CO., LTD

Please refer to the following page.

# Radio-frequency Electromagnetic Fields Test Results

## EMTEK(SHENZHEN) CO., LTD

Applicant: Power beauty (Dong Guan) Industrial Co., Ltd.Test Date : August 02, 2023EUT : LED Table LampTemperature : 24.8℃M/N : PBG-0613Humidity : 56.2%Field Strength: 3 V/mCriterion: APower Supply: AC 230V 50Hz, DC 3.7V from internal batteryFrequency Range: 80 MHz to 1000 MHzTest Engineer: Chen LiModulation: ☒ AM ☐ Pulse ☐ none 1 KHz 80%Test Mode : ON

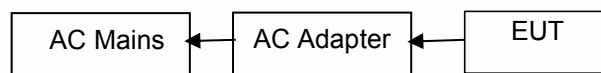
	Frequency Range : 80-1000MHz	
Steps	/ %	
	Horizontal	Vertical
Front	PASS	PASS
Right	PASS	PASS
Rear	PASS	PASS
Left	PASS	PASS

Note: No observable change during the test.

## 11. FAST TRANSIENTS TEST

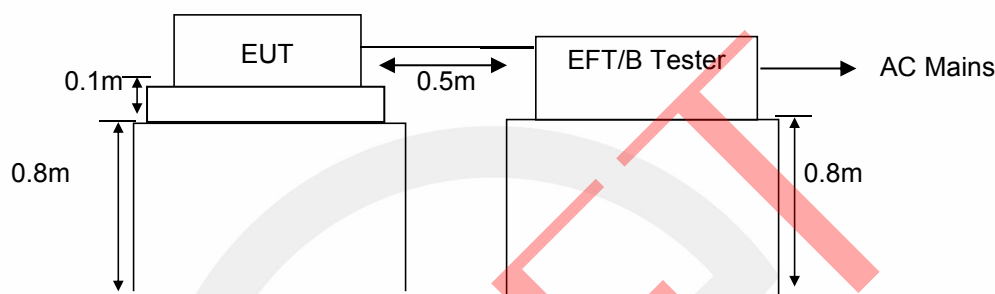
### 11.1. Block Diagram of Test Setup

#### 11.1.1. Block Diagram of the EUT and the simulators



(EUT: LED Table Lamp)

#### 11.1.2. Block Diagram of Test Setup



(EUT: LED Table Lamp)

### 11.2. Test Standard

BS EN 61547: 2009  
(IEC 61000-4-4: 2012, Severity Level, Level 2: 1KV)

### 11.3. Severity Levels and Performance Criterion

#### 11.3.1. Severity level

Open circuit output test voltage and repetition rate of the impulses				
Level	On power port, PE		On I/O (Input/Output) Signal data and control ports	
	Voltage peak KV	Repetition rate KHz	Voltage peak KV	Repetition rate KHz
1.	0.5 KV	5 or 100	0.25 KV	5 or 100
2.	1 KV	5 or 100	0.5 KV	5 or 100
3.	2 KV	5 or 100	1 KV	5 or 100
4.	4 KV	5 or 100	2 KV	5 or 100
X	Special	Special	Special	Special

NOTE 1 Use of 5 KHz repetition rates is traditional; however, 100 KHz is closer to reality. Product committees should determine which frequencies are relevant for specific products or product types.

NOTE 2 With some products, there may be no clear distinction, between power ports and I/O ports, in which case it is up to product committees to make this determination for test purposes.

“X” is an open level. The level has to be specified in the dedicated equipment specification.

**Performance criterion: B**

#### 11.4.EUT Configuration

The configurations of EUT are listed in Section 11.1.

#### 11.5.Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 11.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

#### 11.6.Test Procedure

The EUT is put on the table which is 0.8 meter high above the ground. This reference ground plane shall project beyond the EUT by at least 0.1m on all sides and the minimum distance between EUT and all other conductive structure, except the ground plane beneath the EUT, shall be more than 0.5m.

**For input and output AC power ports:**

The EUT is connected to the power mains by using a coupling device which couples the EFT interference signal to AC power lines. Both polarities of the test voltage should be applied during compliance test and the duration of the test is 2 mins.

**For signal lines and control lines ports:**

No I/O ports. It's unnecessary to test.

**For DC output line ports:**

No ports. It's unnecessary to test.

#### 11.7.Test Results

**PASS.**

Please refer to the following page.

## Fast Transients Test Results

EMTEK(DONGGUAN) CO., LTD.

Applicant : Power beauty (Dong Guan) Industrial Co., Ltd.

EUT : LED Table Lamp

M/N : PBG-0613

Power Supply: AC 230V 50Hz

Criterion : B

Ambient Condition : 24.9℃ 56.2% RH

Operation Mode : ON

Line : ☒ AC Mains

Line : ☐ Signal ☐ I/O Cable

Coupling : ☒ Direct

Coupling : ☐ Capacitive

Test Time : 120s

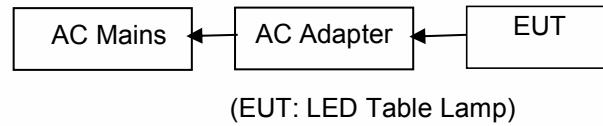
Line	Test Voltage	Result (+)	Result (-)
L	1KV	PASS	PASS
N	1KV	PASS	PASS
L+N	1KV	PASS	PASS

Note: No observable change during the test.

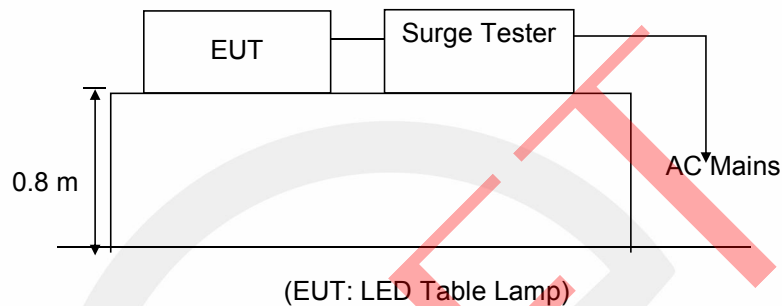
## 12. SURGES TEST

### 12.1. Block Diagram of Test Setup

#### 12.1.1. Block Diagram of the EUT



#### 12.1.2. Surge Test Setup



### 12.2. Test Standard

BS EN 61547: 2009  
(IEC 61000-4-5: 2014+AMD1:2017, Severity Level: Line to Line: Level 1, 0.5KV)

### 12.3. Severity Levels and Performance Criterion

#### 12.3.1. Severity level

Severity Level	Open-Circuit Test Voltage KV
1	0.5
2	1.0
3	2.0
4	4.0
*	Special

**Performance criterion: C**

### 12.4. EUT Configuration

The configurations of EUT are listed in Section 12.1.

### 12.5. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 12.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

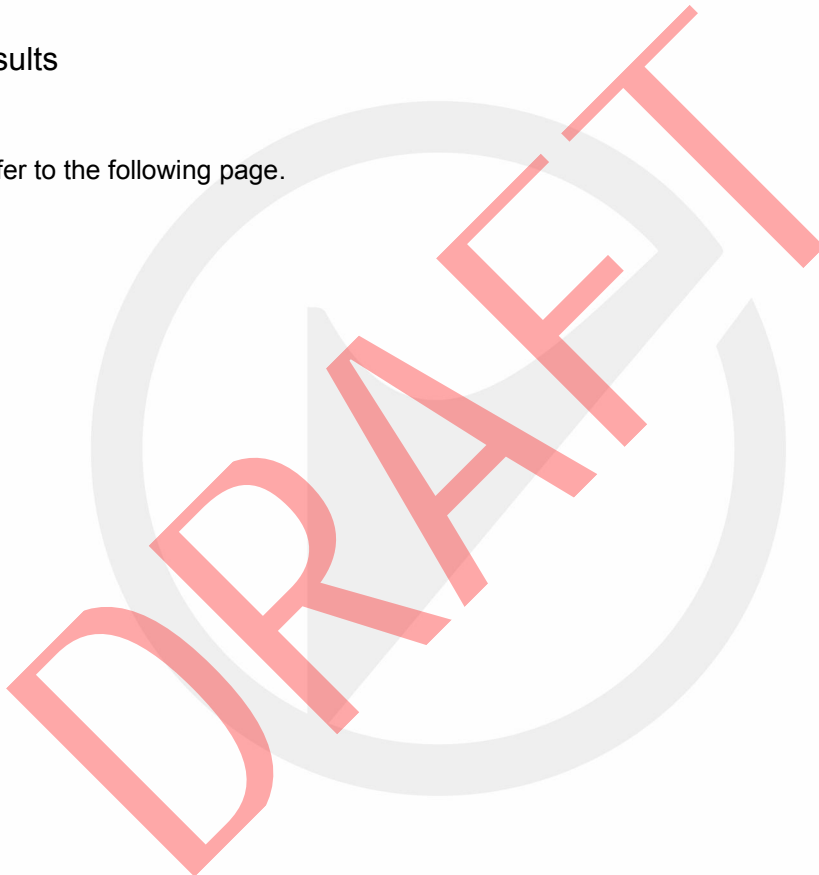
## 12.6. Test Procedure

- 1) Set up the EUT and test generator as shown on Section 12.1.2.
- 2) For line to line coupling mode, respectively provide 0.5KV 1.2/50us voltage surge (at open-circuit condition) and 8/20us current surge to EUT selected points.
- 3) At least 5 positive and 5 negative (polarity) tests with a maximum 1/min repetition rate are conducted during test.
- 4) Different phase angles are done individually.
- 5) Record the EUT operating situation during compliance test and decide the EUT immunity criterion for above each test.

## 12.7. Test Results

**PASS.**

Please refer to the following page.





## Surges Test Results

EMTEK(DONGGUAN) CO., LTD.

Applicant : <u>Power beauty (Dong Guan) Industrial Co., Ltd.</u>				Test Date : <u>August 04, 2023</u>	
EUT : <u>LED Table Lamp</u>				Temperature : <u>24.9℃</u>	
M/N : <u>PBG-0613</u>				Humidity : <u>56.2%</u>	
Power Supply : <u>AC 230V 50Hz</u>				Test Engineer : <u>Chen Li</u>	
Test Mode : <u>ON</u>				Criterion : <u>C</u>	

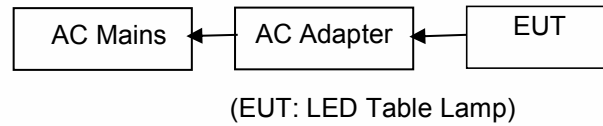
  

Location	Polarity	Phase Angle	No of Pulse	Pulse Voltage (KV)	Result
L-N	+	90 <sup>0</sup>	5	0.5	PASS
	-	270 <sup>0</sup>	5	0.5.	PASS
Note: No observable change during the test.					

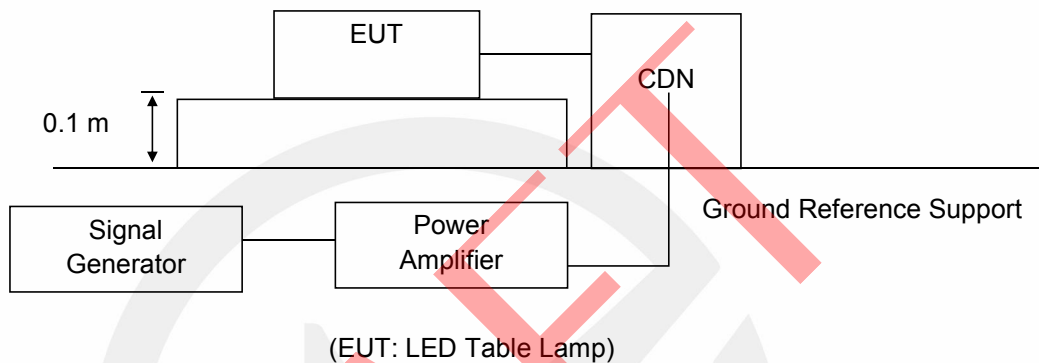
## 13. INJECTED CURRENTS TEST

### 13.1. Block Diagram of Test Setup

#### 13.1.1. Block Diagram of the EUT



#### 13.1.2. Block Diagram of Test Setup



### 13.2. Test Standard

BS EN 61547: 2009  
(IEC 61000-4-6:2013/COR1:2015, Severity Level 2: 3V (rms), 0.15MHz ~ 80MHz)

### 13.3. Severity Levels and Performance Criterion

#### 13.3.1. Severity level

Level	Field Strength V
1.	1
2.	3
3.	10
X	Special

**Performance criterion: A**

#### 13.4. EUT Configuration

The configurations of EUT are listed in Section 13.1.

#### 13.5. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 13.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

### 13.6. Test Procedure

- 1) Set up the EUT, CDN and test generators as shown on Section 13.1.2.
- 2) Let the EUT work in test mode and measure it.
- 3) The EUT are placed on an insulating support 0.1m high above a ground reference plane. CDN (coupling and decoupling device) is placed on the ground plane about 0.3m from EUT. Cables between CDN and EUT are as short as possible, and their height above the ground reference plane shall be between 30 and 50 mm (where possible).
- 4) The disturbance signal described below is injected to EUT through CDN.
- 5) The EUT operates within its operational mode(s) under intended climatic conditions after power on.
- 6) The frequency range is swept from 150KHz to 80MHz using 3V signal level, and with the disturbance signal 80% amplitude modulated with a 1KHz sine wave.
- 7) The rate of sweep shall not exceed  $1.5 \times 10^{-3}$  decades/s. Where the frequency is swept incrementally, the step size shall not exceed 1% of the start and thereafter 1% of the preceding frequency value.
- 8) Recording the EUT operating situation during compliance testing and decide the EUT immunity criterion.

### 13.7. Test Results

**PASS.**

Please refer to the following page.

## Injected Currents Test Results

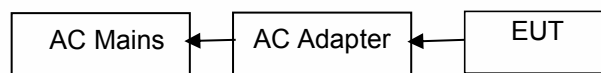
EMTEK(DONGGUAN) CO., LTD

Applicant : <u>Power beauty (Dong Guan) Industrial Co., Ltd.</u>			Test Date : <u>August 04, 2023</u>	
EUT : <u>LED Table Lamp</u>			Temperature : <u>24.9℃</u>	
M/N : <u>PBG-0613</u>			Humidity : <u>56.2%</u>	
Power Supply : <u>AC 230V 50Hz</u>			Test Engineer : <u>Chen Li</u>	
Test Mode : <u>ON</u>				
Frequency Range (MHz)	Injected Position	Strength	Criterion	Result
0.15 ~ 80	AC Mains	3V(rms)	A	PASS
Test Mode : _____				
Frequency Range (MHz)	Injected Position	Strength	Criterion	Result
Remark : 1. Modulation Signal:1KHz 80% AM 2. CDN : <input checked="" type="checkbox"/> CDN-M2 <input type="checkbox"/> CDN-M3		Note: No observable change during the test.		

## 14. VOLTAGE DIPS AND SHORT INTERRUPTIONS TEST

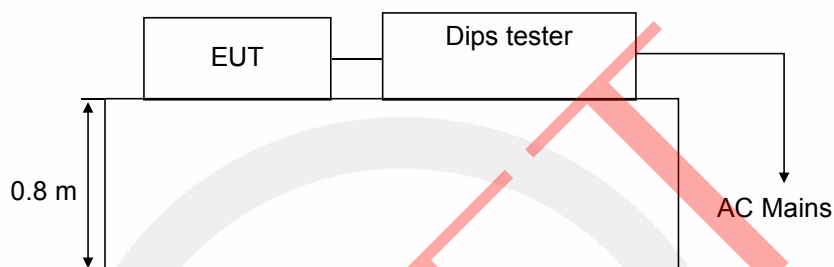
### 14.1. Block Diagram of Test Setup

#### 14.1.1. Block Diagram of the EUT



(EUT: LED Table Lamp)

#### 14.1.2. Dips Test Setup



(EUT: LED Table Lamp)

### 14.2. Test Standard

BS EN 61547: 2009  
(IEC 61000-4-11: 2020)

### 14.3. Severity Levels and Performance Criterion

#### 14.3.1. Severity level

Test Level %UT	Voltage dip and short interruptions %UT	Duration (in period)
0	100	0.5 1 5 10 25 50 *
40	60	
70	30	

**Performance criterion: B, C**

### 14.4. EUT Configuration

The configurations of EUT are listed in Section 14.1.

#### 14.5. Operating Condition of EUT

Step 1: Setup the EUT as shown in Section 14.1.

Step 2: Turn on the power of all equipments.

Step 3: Let the EUT work in test mode (ON) and measure it.

#### 14.6. Test Procedure

- 1) Set up the EUT and test generator as shown on Section 14.1.2.
- 2) The interruption is introduced at selected phase angles with specified duration.
- 3) Record any degradation of performance.

#### 14.7. Test Results

**PASS.**

Please refer to the following page.

DRAFT

# Voltage Dips and Short Interruptions Test Results

EMTEK(DONGGUAN) CO., LTD

Applicant : <u>Power beauty (Dong Guan) Industrial Co., Ltd.</u>			Test Date : <u>August 04, 2023</u>	
EUT : <u>LED Table Lamp</u>			Temperature : <u>24.9℃</u>	
M/N : <u>PBG-0613</u>			Humidity : <u>56.2%</u>	
Power Supply : <u>AC 230V 50Hz</u>			Test Engineer : <u>Chen Li</u>	
Test Model : <u>ON</u>				
Test Level % $U_T$	Voltage Dips & Short Interruptions % $U_T$	Duration (in period)	Criterion <input checked="" type="checkbox"/> A <input checked="" type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> D	Result
0	100	0.5P	B	PASS
70	30	10P	C	PASS
Test Model : <u>                    </u>				
Test Level % $U_T$	Voltage Dips & Short Interruptions % $U_T$	Duration (in period)	Criterion <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D	Result
Remark: $U_T$ is the rated voltage for the equipment.			Note: No observable change during the test.	

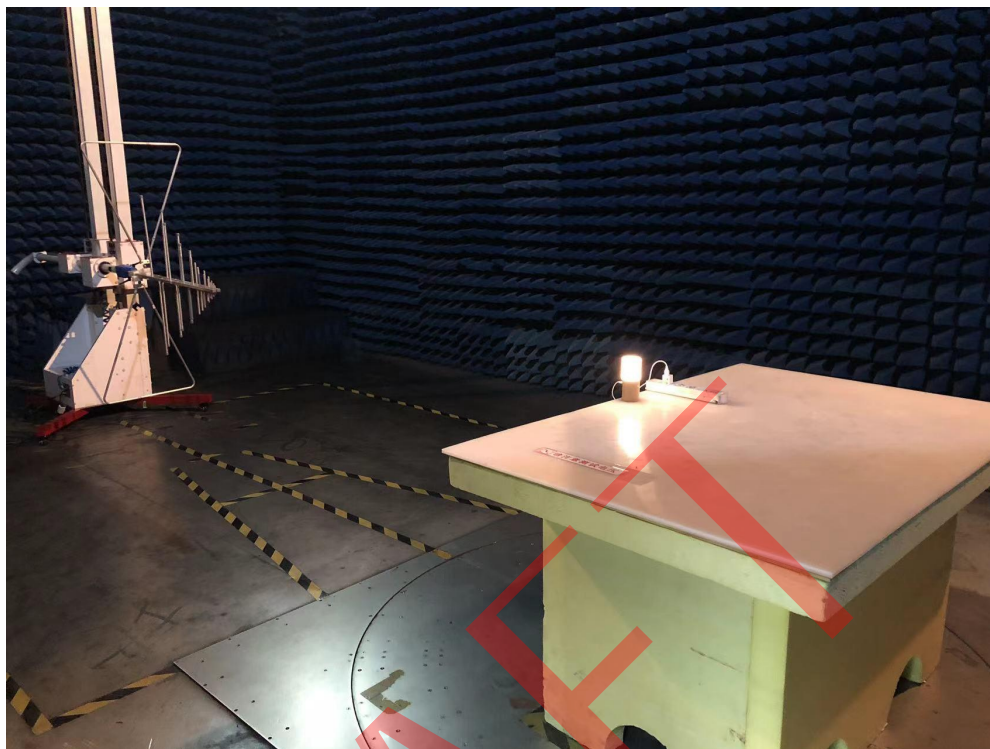


## 15. PHOTOGRAPH

### 15.1.Photo of Disturbance voltage at the electric power supply interface



## 15.2.Photo of Radiated disturbance (30 MHz~1 Ghz)



### 15.3.Photo of Radiated disturbance (9 kHz~30 Mhz)



### 15.4.Photo of Harmonic / Flicker Measurement

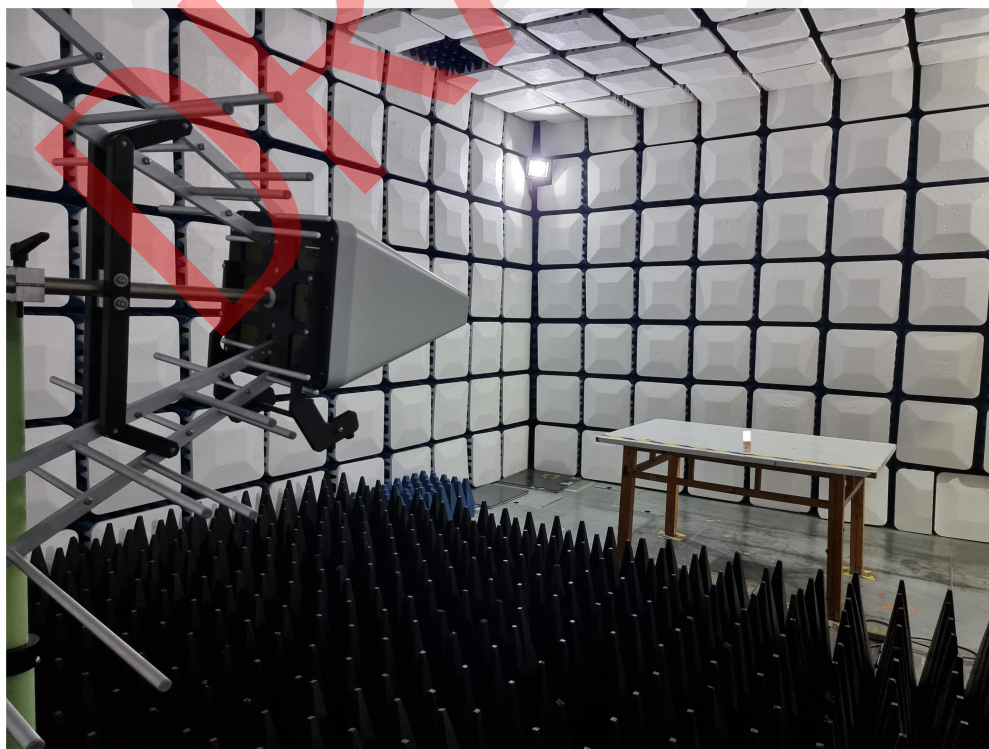




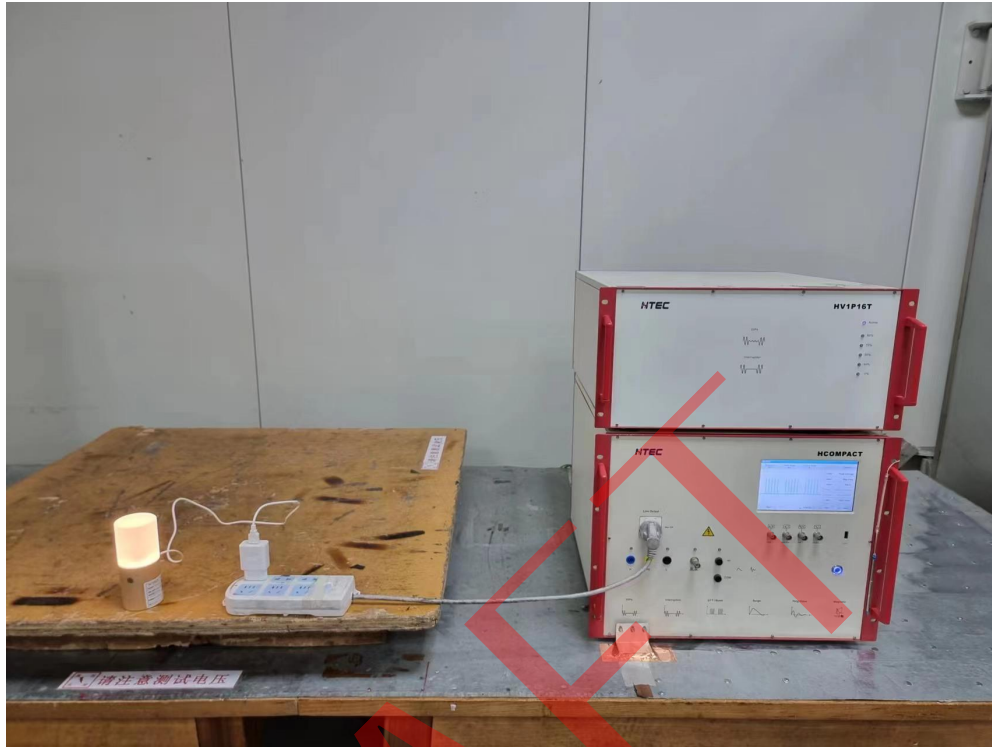
### 15.5.Photo of Electrostatic Discharge Test



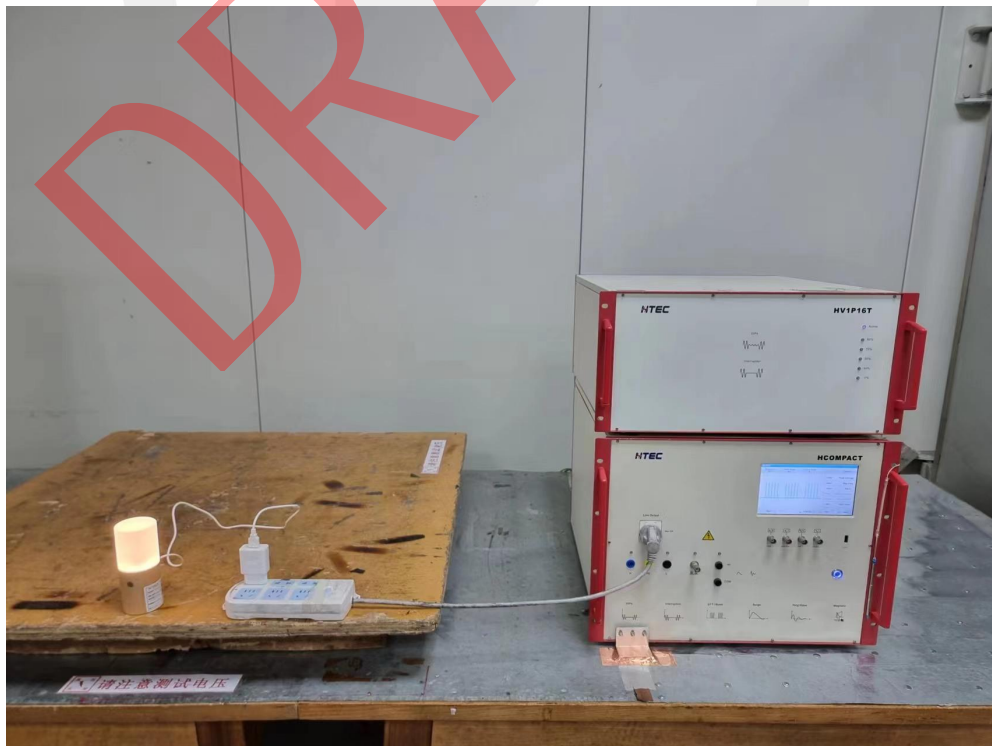
### 15.6.Photo of Radio-frequency Electromagnetic Fields



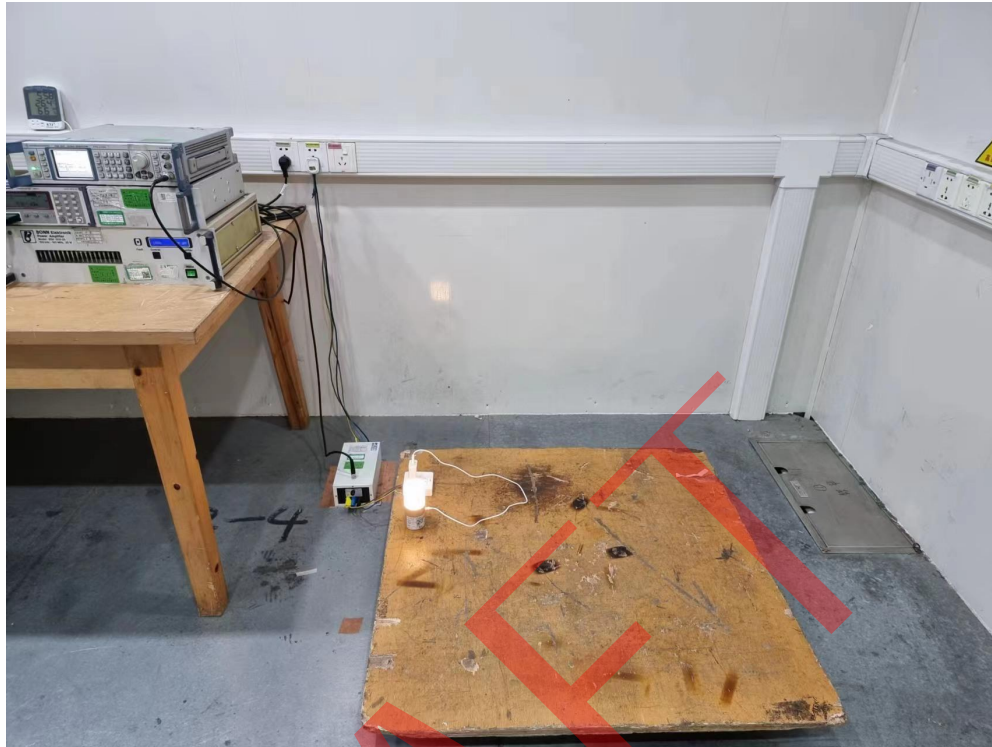
### 15.7.Photo of Fast Transients Test



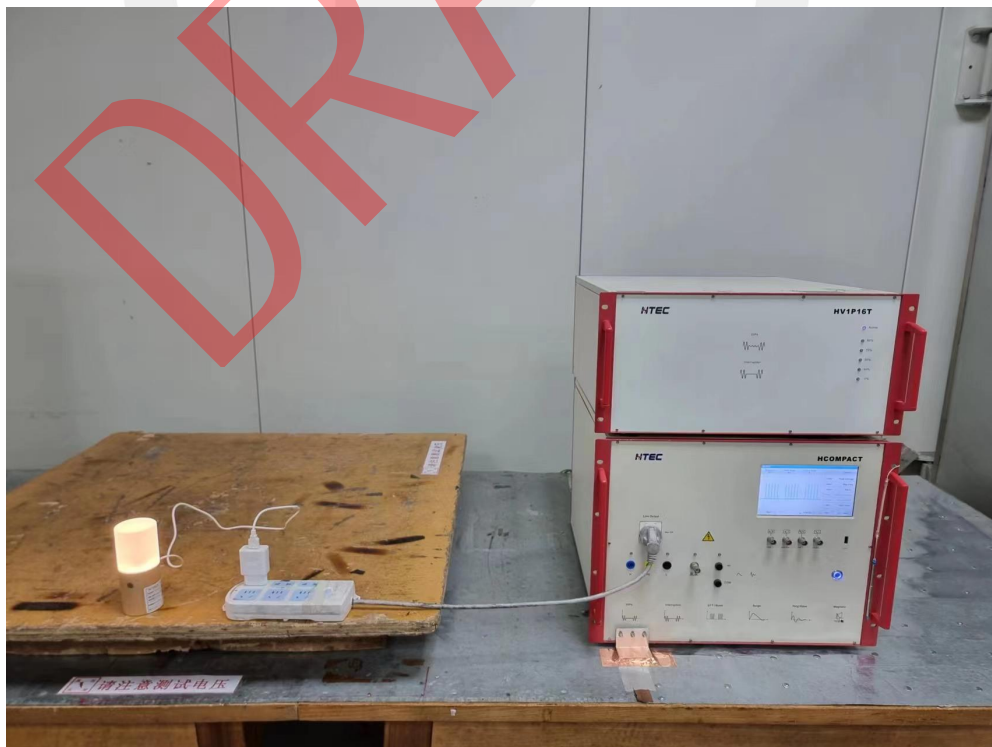
### 15.8.Photo of Surges Test



### 15.9.Photo of Injected Currents Test

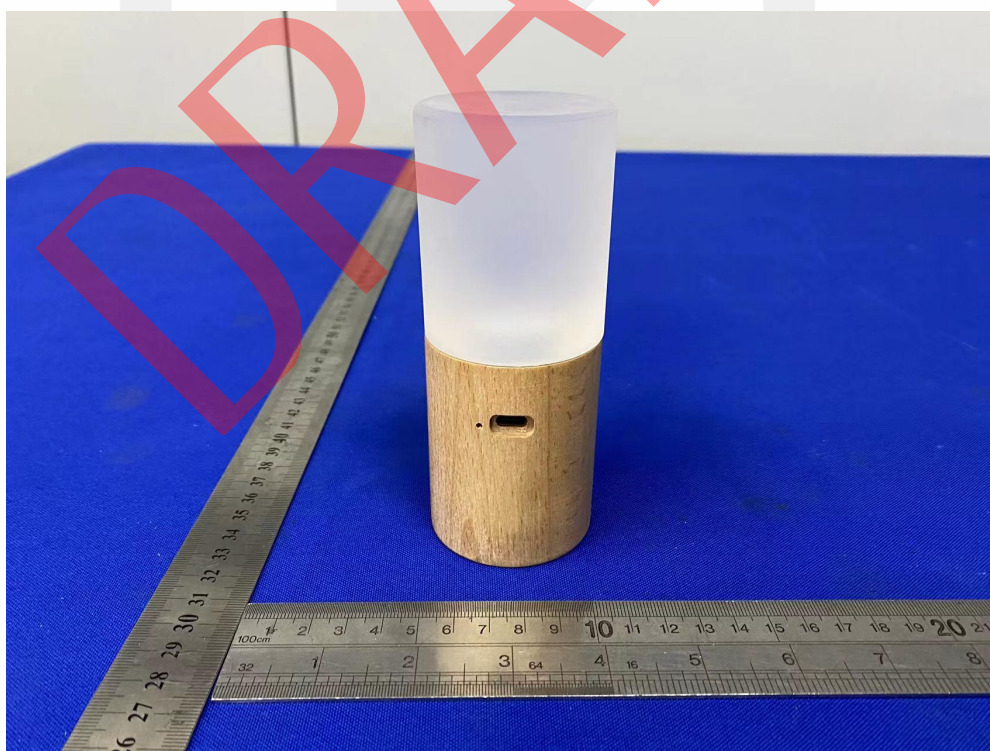
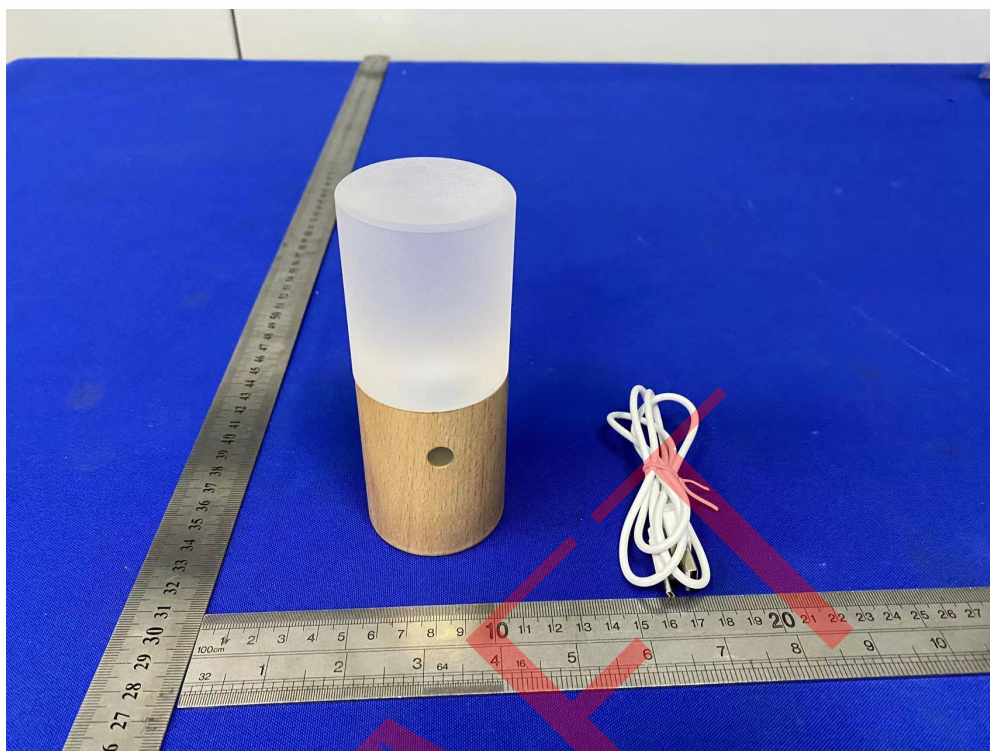


### 15.10.Photo of Voltage Dips and Short Interruptions Test

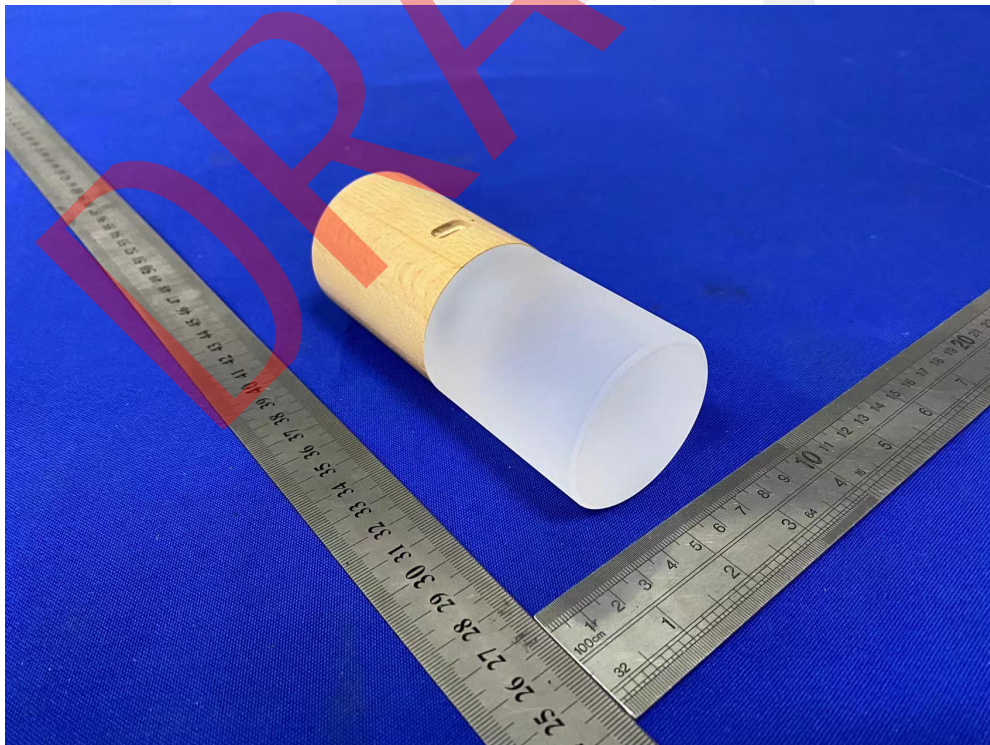
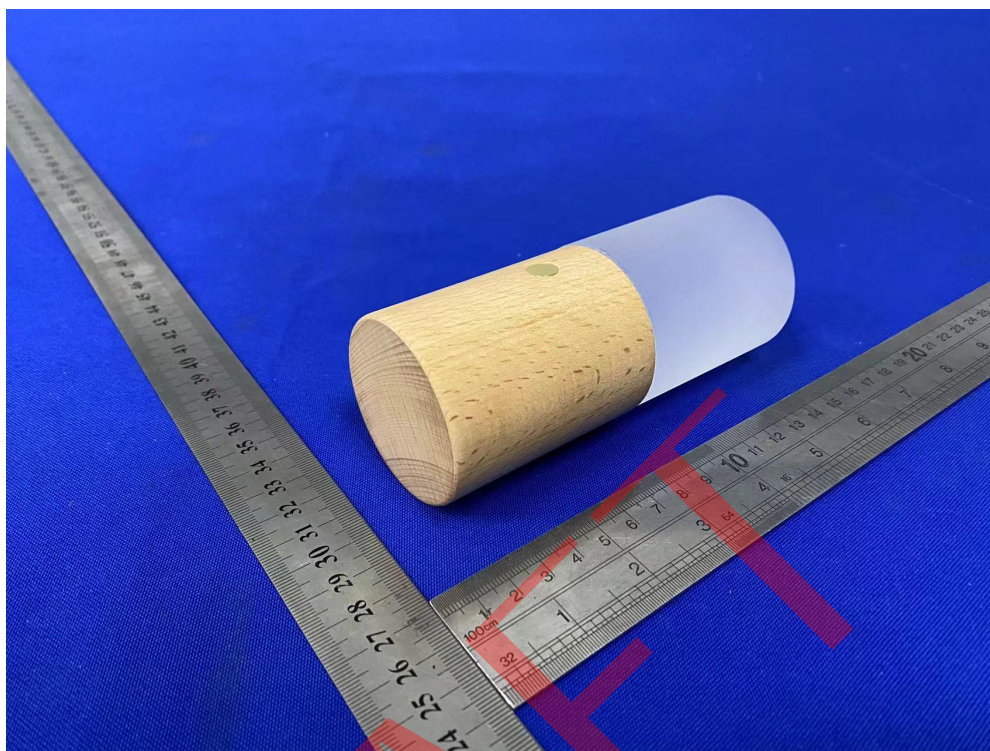


APPENDIX  
(Photos of EUT)

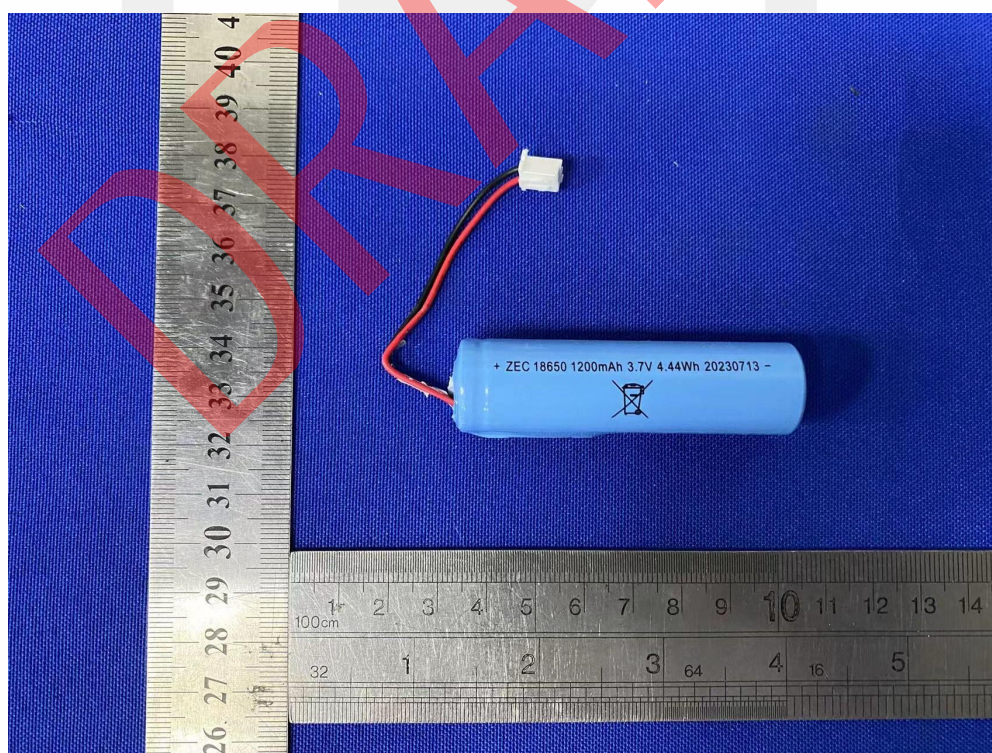
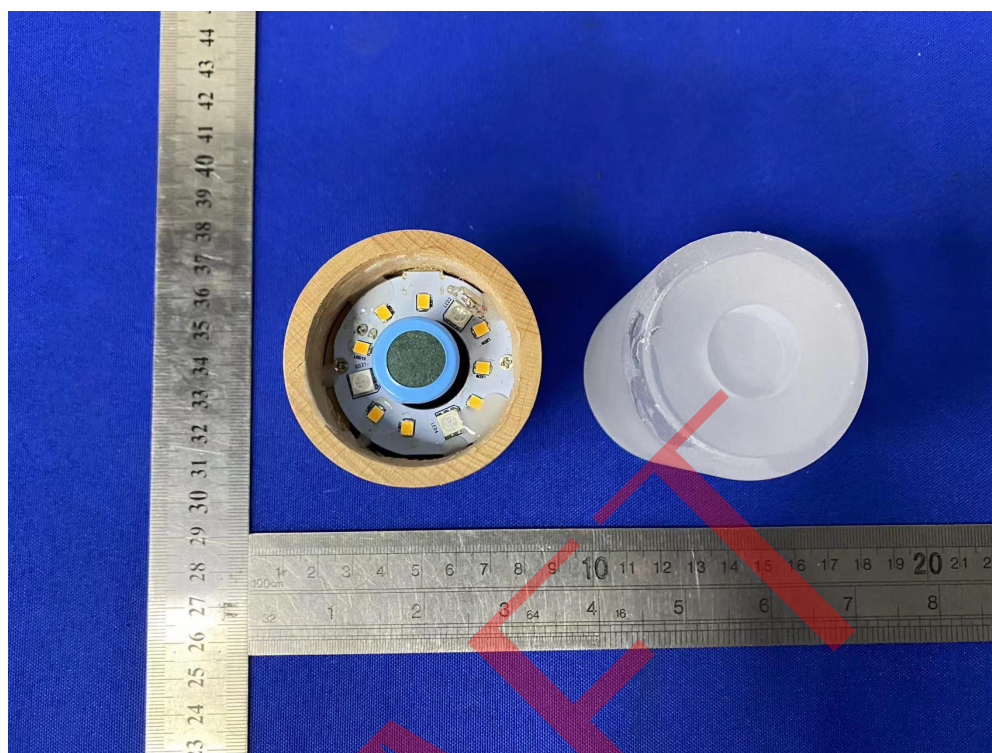




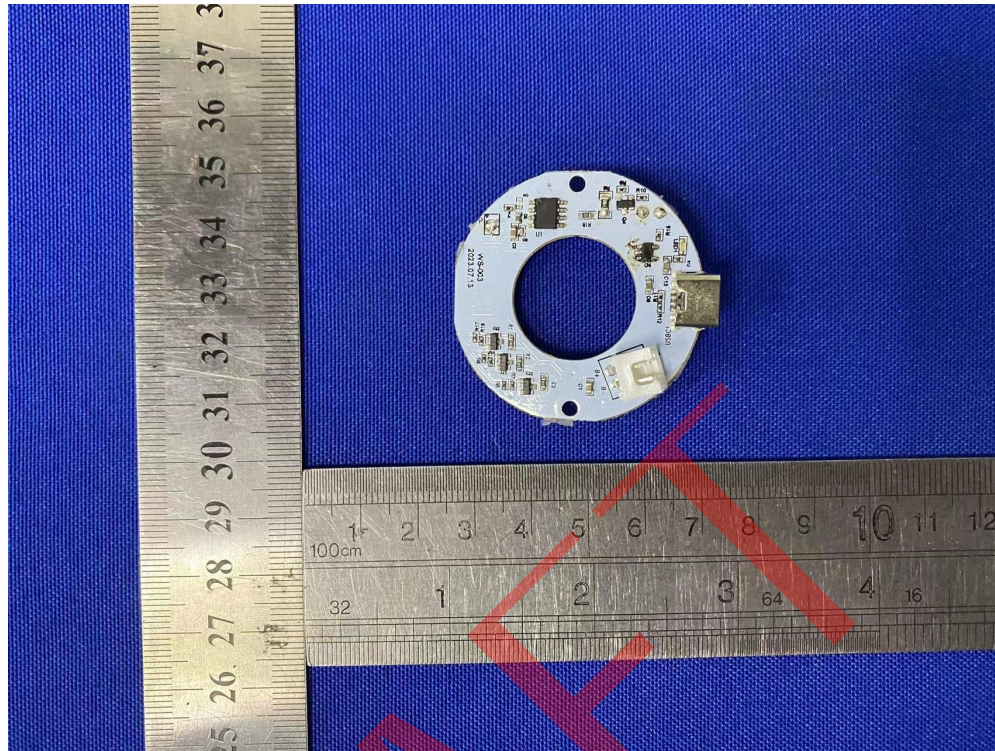












\*\*\* End of Report \*\*\*

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