

# FCC TEST REPORT

For

Shenzhen xinjia lighting co., ltd

Product Name : LED Grow Light

Trademark : SINJIAlight

ZW0173

Model Number : ZW0081,ZW0141,ZW0013,ZW0125,ZW0209,ZW0213,ZW0148

Prepared For : Shenzhen xinjia lighting co., ltd

Address : 9<sup>th</sup> Floor, Building A9, Xinghuaxiong Industrial Park,  
Baihuadong First Industrial Zone, Guangming District,  
Shenzhen, Guangdong

Report No. : LST190368084FR

Testing laboratory : Shenzhen LST Technology Co., Ltd.

Address : Huichao Building, Yintian Industry zone, Bao'an  
District, Shenzhen, Guangdong P.R. China

**Shenzhen LST Testing Co., Ltd.**

Applicant : Shenzhen xinjia lighting co., ltd  
Address : 9<sup>th</sup> Floor, Building A9, Xinghuaxiong Industrial Park, Baihuadong First Industrial Zone, Guangming District, Shenzhen, Guangdong  
Manufacturer : Shenzhen xinjia lighting co., ltd  
Address : 9<sup>th</sup> Floor, Building A9, Xinghuaxiong Industrial Park, Baihuadong First Industrial Zone, Guangming District, Shenzhen, Guangdong  
EUT : LED Grow Light  
Model Number : ZW0173  
Trademark: : SINJIAlight  
Test Date : Mar. 20, 2019,- Mar. 25.2019  
Date of Report : Mar. 25.2019  
**Test Result:** : The equipment under test was found to be compliance with the requirements of the standards applied.

## Test Procedure Used:

FCC Part 15 B

ANSI C63.4:2014

Tested by (name + signature):

Reviewed by (name + signature):



Approved by (name + signature):

This test report is based on a single evaluation of one sample of above mentioned products. The test results in the report only apply to the tested sample. It is not permitted to be duplicated in extracts without written approval of Shenzhen LST Technology Co., Ltd.

## 1. GENERAL INFORMATION

### 1.1. Description of Device (EUT)

EUT : LED Grow Light  
Trademark : SINJIAlight  
Model Number : ZW0173  
Power Supply : 85-265V AC, 50Hz

### 1.2. Tested System Details

None.

### 1.3. Test Uncertainty

Conducted Emission Uncertainty :  $\pm 1.82$  dB

Radiated Emission Uncertainty :  $\pm 2.51$  dB

### 1.4. Test Facility

Site Description :

Name of Firm : Shenzhen LST Technology Co., Ltd.

Address : Huichao Building, Yintian Industry zone, Bao'an District, Shenzhen, Guangdong P.R. China

## 2. TEST INSTRUMENT USED

### For Conducted Emission at the mains terminals Test

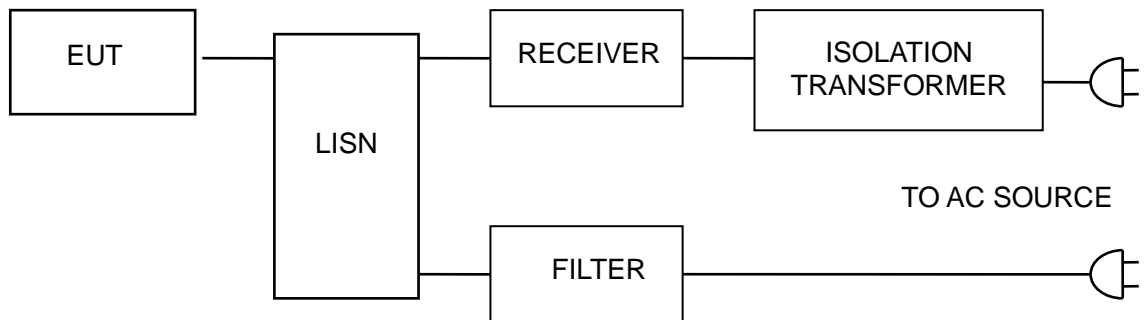
Conducted Emission Test ( A --- site)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
843 Shielded Room	ChengYu	843 Room	843	Aug. 25, 2018	Aug. 24, 2019
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2018	Aug. 26, 2019
LISN	Schwarzbeck	NSLK8127	8127739	Sep. 07, 2018	Sep. 06, 2019
Attenuator	R&S	ESH3-Z2	LST021E	Aug. 25, 2018	Aug. 24, 2019
843 Cable 1#	FUJIKURA	843C1#	001	Aug. 25, 2018	Aug. 24, 2019

### For Radiated Emission Test

Radiation Emission Test (966 chamber)					
Equipment	Manufacturer	Model#	Serial#	Last Cal.	Next Cal.
966 chamber	ChengYu	966 Room	966	Aug. 25, 2018	Aug. 24, 2019
Spectrum Analyzer	Agilent	E4407B	MY45109572	Aug. 27, 2018	Aug. 26, 2019
Amplifier	Schwarzbeck	BBV9743	9743-119	Aug. 25, 2018	Aug. 24, 2019
Amplifier	Schwarzbeck	BBV9718	9718-270	Aug. 25, 2018	Aug. 24, 2019
Log-periodic Antenna	Schwarzbeck	VULB9160	VULB9160-3369	Sep. 07, 2018	Sep. 06, 2019
EMI Receiver	R&S	ESCI	101421	Aug. 27, 2018	Aug. 26, 2019
Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1275	Aug. 25, 2018	Aug. 24, 2019
966 Cable 1#	CHENGYU	966	004	Aug. 25, 2018	Aug. 24, 2019
966 Cable 2#	CHENGYU	966	003	Aug. 25, 2018	Aug. 24, 2019

### 3. CONDUCTED EMISSION AT THE MAINS TERMINALS TEST

#### 1.1. Block Diagram Of Test Setup



#### 1.2. Test Standard

FCC PART 15 B

#### 1.3. Power Line Conducted Emission Limit

Frequency MHz	Limits dB(μV)	
	Quasi-peak Level	Average Level
0.15 ~ 0.50	66 ~ 56*	56 ~ 46*
0.50 ~ 5.00	56	46
5.00 ~ 30.00	60	50

Notes: 1. \*Decreasing linearly with logarithm of frequency.

2. The lower limit shall apply at the transition frequencies.

#### 1.4. EUT Configuration on Test

The following equipments are installed on conducted emission test to meet FCC PART 15 B requirement and operating in a manner which tends to maximize its emission characteristics in a normal application.

#### 1.5. Operating Condition of EUT

3.5.1 Setup the EUT and simulators as shown in Section 3.1.

3.5.2 Turn on the power of all equipments.

3.5.3 Let the EUT work in test modes and test it.

## 1.6. Test Procedure

The EUT is put on the ground and connected to the AC mains through a Artificial Mains Network (AMN). This provided a 50ohm coupling impedance for the tested equipments. Both sides of AC line are checked to find out the maximum conducted emission levels according to the **FCC PART 15 B** regulations during conducted emission test.

The bandwidth of the test receiver (R&S Test Receiver ESCI) is set at 10KHz.

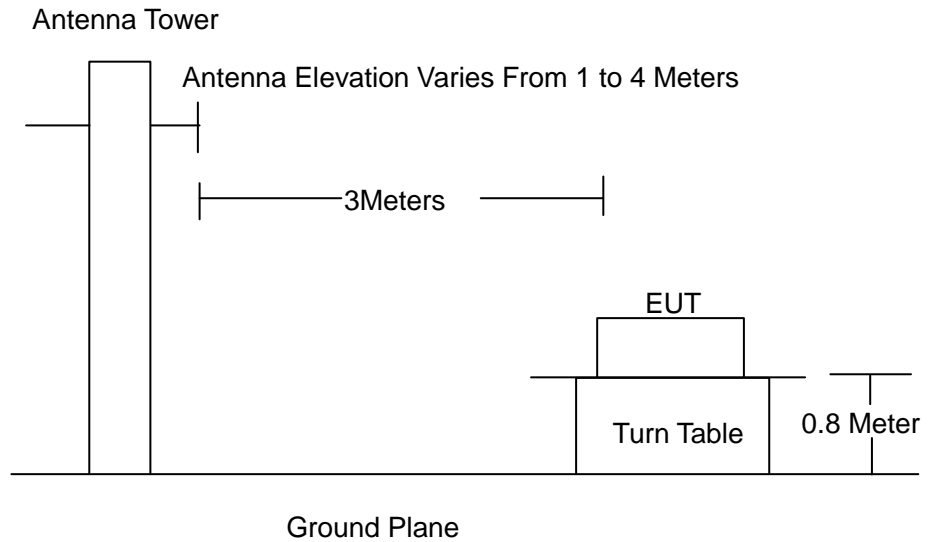
The frequency range from 150 KHz to 30 MHz is investigated.

## 1.7. Test Result

The EUT is powered by the DC only, the test item is not applicable.

## 4. RADIATION EMISSION TEST

### 2.1. Block Diagram of Test Setup



### 2.2. Test Standard

FCC PART 15 B

### 2.3. Radiation Limit

FREQUENCY (MHz)	DISTANCE (Meters)	FIELD STRENGTHS LIMITS (dB $\mu$ V/m)
30 ~ 88	3	40.0
88 ~ 216	3	43.5
216 ~ 960	3	46.0
960 ~ 1000	3	54.0

### 2.4. EUT Configuration on Test

The FCC PART 15 B regulations test method must be used to find the maximum emission during radiated emission test.

The configuration of EUT is the same as used in conducted emission test. Please refer to Section 2.2.

### 2.5. Operating Condition of EUT

Same as conducted emission test, which is listed in Section 2.2 except the test set up replaced as Section 4.1.

## 2.6. Test Procedure

The EUT and its simulators are placed on a turned table that is 0.8 meter above the ground. The turned 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 that is mounted on the antenna tower. The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level. Broadband antenna (calibrated biconical and log periodical antenna) is used as receiving antenna. Both horizontal and vertical polarization of the antenna is set on test. In order to find the maximum emission levels, the interface cable must be manipulated according to FCC PART 15 B on radiated emission test.

The bandwidth setting on the field strength meter (R&S Test Receiver ESCI) is set at 120KHz below 1GHz, set at 1MHz above 1GHz

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

The highest frequency of the internal sources of the EUT was below 108MHz, so the measurement was only made up to 1GHz.

## 2.7. Test Result

**PASS**

Please refer to the following page.



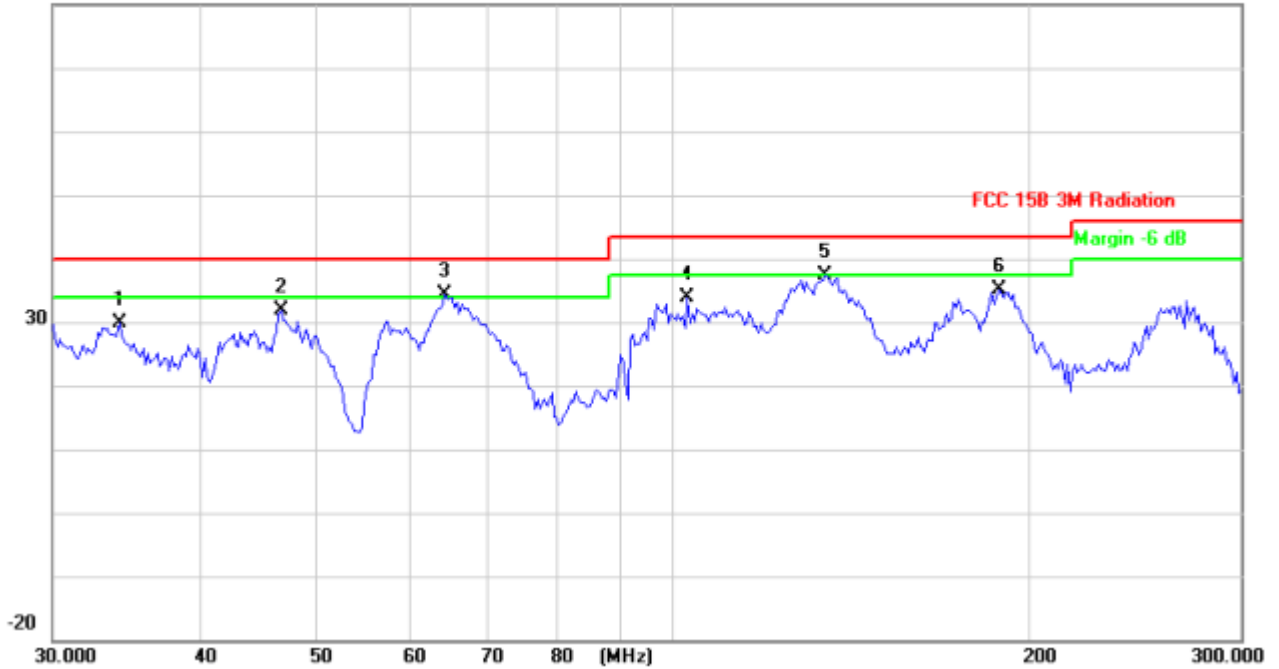
Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Horizontal
Test Voltage :	AC 120V	Test Mode:	Data transmission

### Radiated Emission Measurement

File :3

Data :#3

80.0 dBuV/m



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		34.1286	46.11	-16.11	30.00	40.00	-10.00			peak
2		46.6790	53.96	-22.13	31.83	40.00	-8.17			peak
3	*	64.1389	58.35	-24.01	34.34	40.00	-5.66			peak
4		102.5938	56.05	-22.19	33.86	43.50	-9.64			peak
5		134.0050	59.79	-22.45	37.34	43.50	-6.16			peak
6		187.5517	54.93	-19.90	35.03	43.50	-8.47			peak

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

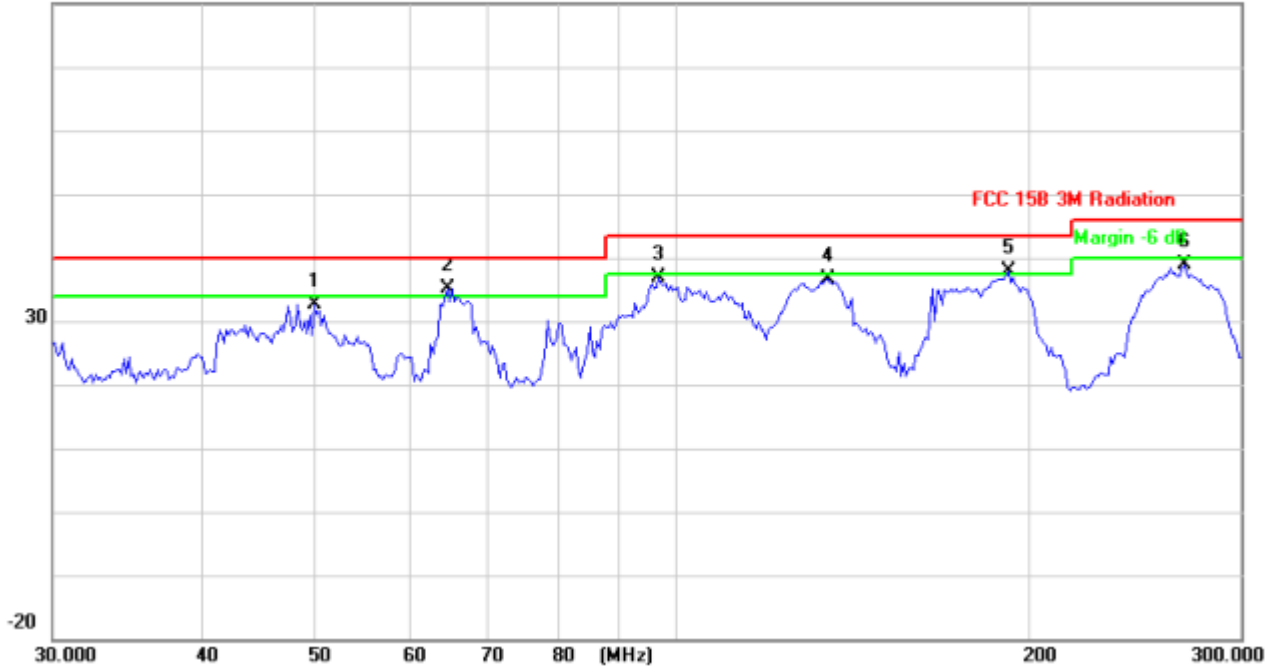
Radiation Emission Test Data			
Temperature:	24.5 °C	Relative Humidity:	54%
Pressure:	1009hPa	Phase :	Vertical
Test Voltage :	AC 120V	Test Mode:	Data transmission

### Radiated Emission Measurement

File :3

Data :#4

80.0 dBuV/m

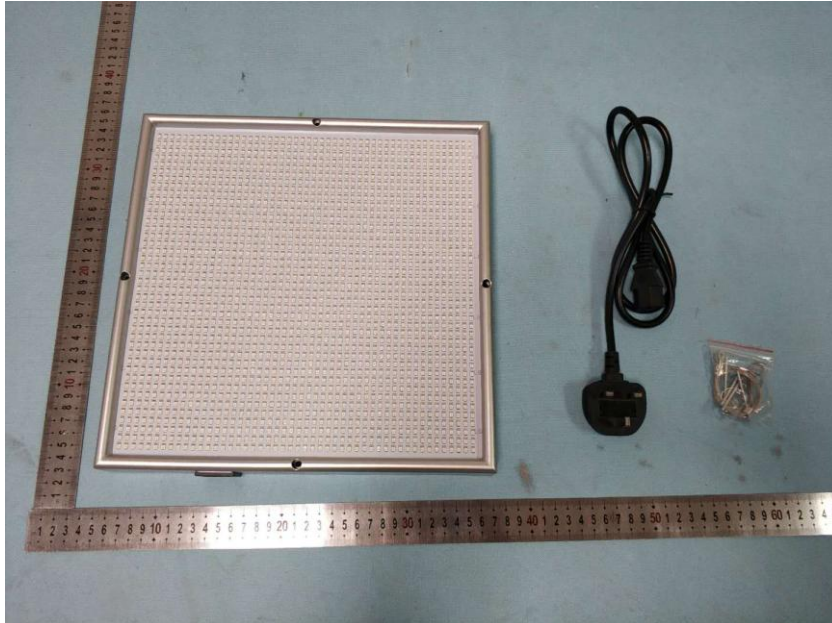


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	cm	degree	Comment
1		49.7875	55.76	-23.17	32.59	40.00	-7.41			peak
2	*	64.4348	59.19	-23.99	35.20	40.00	-4.80			peak
3		97.0781	58.87	-22.06	36.81	43.50	-6.69			peak
4		134.6236	58.98	-22.46	36.52	43.50	-6.98			peak
5	!	191.0387	57.70	-19.82	37.88	43.50	-5.62			peak
6		268.6093	55.58	-16.81	38.77	46.00	-7.23			peak

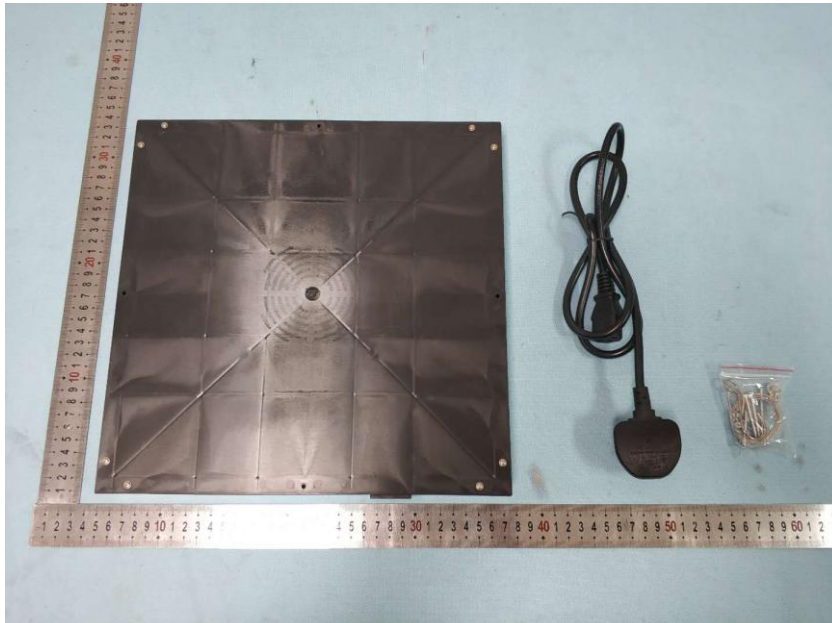
\*:Maximum data    x:Over limit    !:over margin

**ANNEX A:  
Photo-documentation**

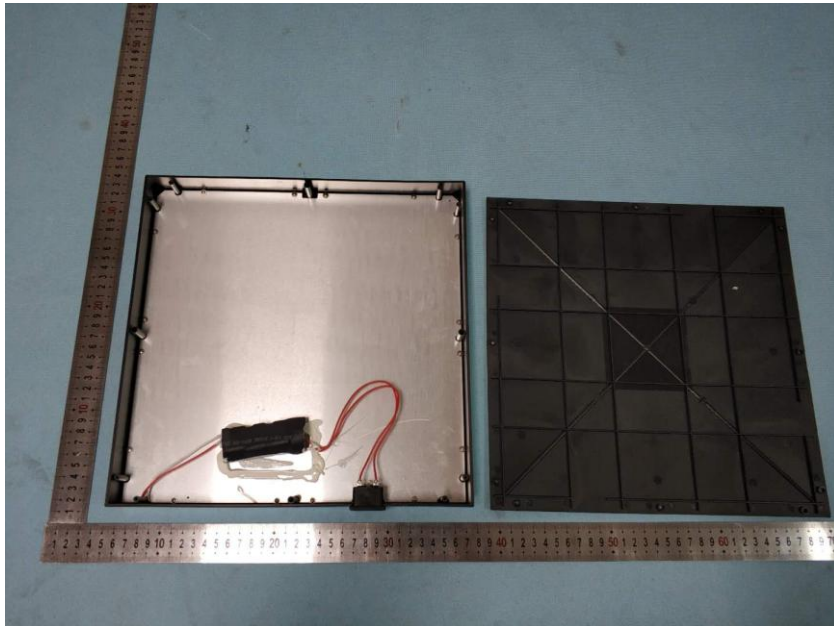
**EUT Photo 1**



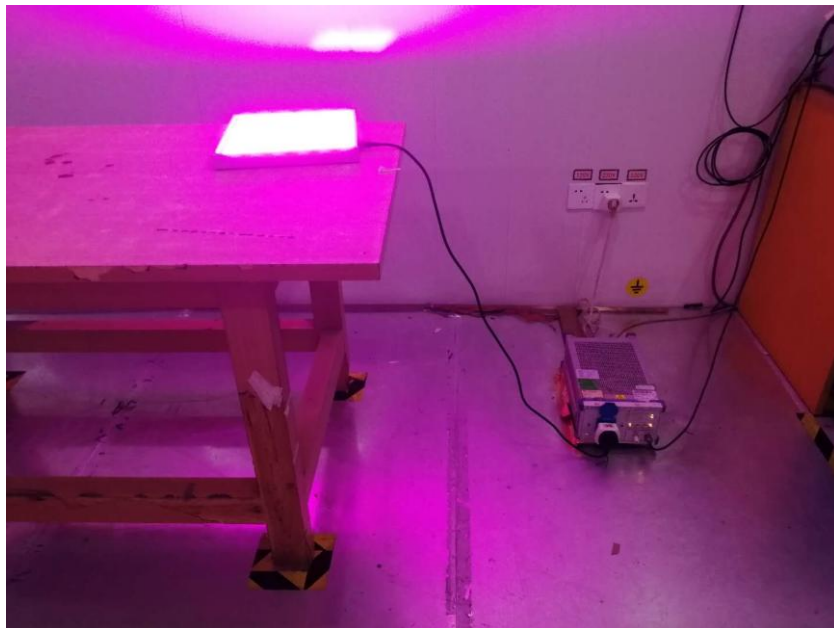
**EUT Photo 2**

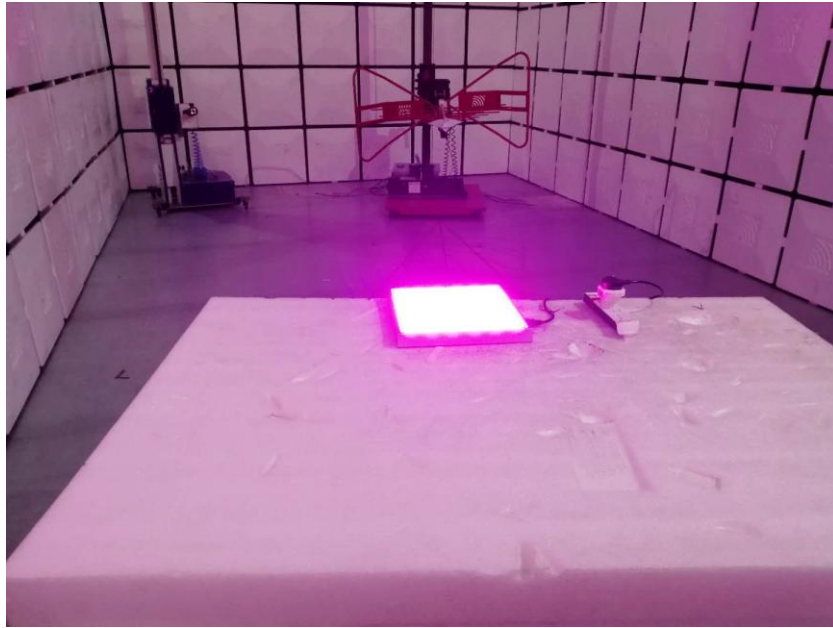


**EUT Photo 3**



**EUT Photo 4**



**EUT Photo 5**

**\*\*\*\*\* END OF REPORT \*\*\*\*\***