

# CE EMC Test Report



(Declaration of Conformity)  
For  
Electromagnetic compatibility  
Of

**Product :** LED Strip Light

**Trade Mark :** N/A

**Model Number :** CJ-5V-5050-30L-RGB,  
CJ-5V-5050-50D-RGB,  
CJ-5V-5050-12D-RGB,  
CJ-5V-5050-60D-RGB,  
CJ-5V-5050-60D-RGB

**Prepared for**

Shenzhen Chengjie Lighting Co., Ltd.

2B-2-1101, Xingfu Fengjing, Meilong Road, Longhua District, Shenzhen, China

**Prepared by**

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## TEST RESULT CERTIFICATION

**Applicant's Name**..... Shenzhen Chengjie Lighting Co., Ltd.  
**Address**..... 2B-2-1101, Xingfu Fengjing, Meilong Road, Longhua District, Shenzhen, China  
**Manufacturer's Name**..... Shenzhen Chengjie Lighting Co., Ltd.  
**Address**..... 2B-2-1101, Xingfu Fengjing, Meilong Road, Longhua District, Shenzhen, China  
**Factory's Name**..... Shenzhen Chengjie Lighting Co., Ltd.  
**Address**..... 2B-2-1101, Xingfu Fengjing, Meilong Road, Longhua District, Shenzhen, China  
**Product description**  
**Product name**..... LED Strip Light  
**Model and/or type reference:** CJ-5V-5050-30L-RGB, CJ-5V-5050-50D-RGB, CJ-5V-5050-12D-RGB, CJ-5V-5050-60D-RGB, CJ-5V-5050-60D-RGB  
**Standards**..... EN IEC 55015:2019+A11:2020  
EN 61547:2009

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**Date of Test**.....  
**Date (s) of performance of tests**..... Aug. 18, 2021 to Aug. 26, 2021  
**Date of Issue**..... Aug. 27, 2021  
**Test Result**..... **Pass**

Testing Engineer : Hins

(Hins Zhang)

Technical Manager : Brian Yang

(Brian Yang)

Authorized Signatory : Bart Fang

(Bart Fang)





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## 1 . TEST SUMMARY

Test procedures according to the technical standards:

EMC Emission				
Standard	Test Item	Limit	Judgment	Remark
EN IEC 55015:2019+A11:2020	Conducted Emission	-----	N/A	
	Radiated Emission	-----	PASS	
EN 61000-3-2:2014	Harmonic Current Emission	-----	N/A	
EN 61000-3-3:2013	Voltage Fluctuations & Flicker	-----	N/A	
EMC Immunity				
Section EN 61547:2009	Test Item	Performance Criteria	Judgment	Remark
EN 61000-4-2	Electrostatic Discharge	B	PASS	
EN 61000-4-3	RF electromagnetic field	A	PASS	
EN 61000-4-4	Fast transients	B	N/A	
EN 61000-4-5	Surges	C	N/A	
EN 61000-4-6	Injected Current	A	N/A	
EN 61000-4-8	Power Frequency Magnetic Field	A	PASS	
EN 61000-4-11	Volt. Interruptions Volt. Dips	B / C	N/A	NOTE (1)

NOTE:

- (1) Voltage Interruption: 100% reduction – Performance Criteria B  
Voltage dip: 30% reduction – Performance Criteria C
- (2) “N/A” denotes test is not applicable in this Test Report.
- (3) For client’s request and manual description, the test will not be executed.



## 1.1 TEST FACILITY

Dongguan NTEK Testing Service Co., Ltd.

Add. : Room101/401, Building 3, No.8, Keji 8th Road, Songshan Lake High-Tech Industrial Development Zone, Dongguan, Guangdong, China

CNAS-Lab. : The Laboratory has been assessed and proved to be in compliance with CNAS-CL01:2006 (identical to ISO/IEC 17025:2017)  
The Certificate Registration Number is L13824

## 1.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement  $y \pm U$ , where expended uncertainty  $U$  is based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately **95 %**.

Test Item	Measurement Frequency Range	K	U(dB)
AC Mains Conducted Emission	0.009kHz ~ 0.15MHz	2	2.66
AC Mains Conducted Emission	0.15MH ~ 30MHz	2	2.80
Telecom Conducted Emission (Cat 3)	0.15MHz ~ 30MHz	2	2.40
Telecom Conducted Emission (Cat 5)	0.15MHz ~ 30MHz	2	2.58
Radiated Emission	30MHz ~ 1000MHz	2	2.64
Radiated Emission	1000MHz ~ 6000MHz	2	2.52
Radiated Emission	6000MHz ~ 18000MHz	2	2.52
Power Clamp	30MHz ~ 300MHz	2	2.20

## Revision History

[illegible]

## 2 . GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

Equipment	LED Strip Light	
Model Name.	CJ-5V-5050-30L-RGB	
Additional Model Number(s)	CJ-5V-5050-50D-RGB, CJ-5V-5050-12D-RGB, CJ-5V-5050-60D-RGB, CJ-5V-5050-60D-RGB	
Model Difference	All models are identical except model's power.	
Product Description	The EUT is a LED Strip Light.	
	Operating frequency:	N/A
	Connecting I/O port:	N/A
	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an LED Lighting Device. More details of EUT technical specification, please refer to the User's Manual.	
Power Source	DC Voltage	
Power Rating	DC 5V/2A, 5.9W	



## 2.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

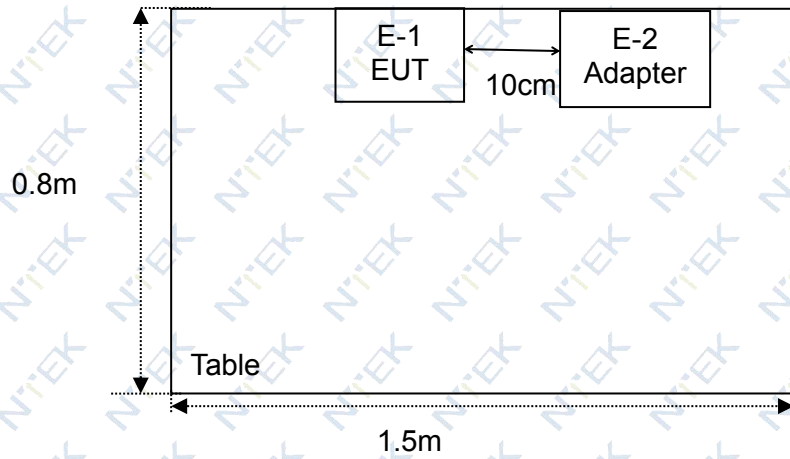
Pretest Mode	Description
Mode 1	Lighting

For Radiated Test	
Final Test Mode	Description
Mode 1	Lighting

For EMS Test	
Final Test Mode	Description
Mode 1	Lighting

### 2.3 DESCRIPTION OF TEST SETUP

Mode RE: Lighting



## 2.4 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Brand	Model/Type No.	Series No.	Note
E-1	LED Strip Light	N/A	CJ-5V-5050-30L-RGB	N/A	EUT
E-2	Adapter	N/A	N/A	N/A	AE

Item	Shielded Type	Ferrite Core	Length	Note

## Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) “YES” means “shielded” “with core”; “NO” means “unshielded” “without core”.



## 2.5 MEASUREMENT INSTRUMENTS LIST

### RADIATED TEST SITE

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Antenna Mast	SKET	N/A	N/A	N/A	N/A	N/A
2	Test Cable	REBES	A50-NMNM-8 M-A	1810C35	Jun. 10, 2021	Jun. 09, 2022	1 year
3	Test Cable	REBES	A50-NMNM-3 M	1810C36	Jun. 10, 2021	Jun. 09, 2022	1 year
4	Test Cable	REBES	A50-NMNM-1 M	1810C37	Jun. 10, 2021	Jun. 09, 2022	1 year
5	Bilog Antenna	TESEQ	CBL6111D	186604	Jun. 10, 2021	Jun. 09, 2022	1 year
6	Low Noise Pre-Amplifier	SKET	LNPA_30M06 G-35	SK20190107 01	Aug. 31, 2020	Aug. 30, 2021	1 year
7	EMI Test Receiver	R&S	ESCI	101427	Aug. 31, 2020	Aug. 30, 2021	1 year

### ESD

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	ESD TEST GENERATOR	SHANGHAI LIONCELI	ESD-203A	ESD0230100 3	Dec. 19, 2020	Dec. 18, 2021	1 year

### LOOP

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Triple Loop Antenna	EVERFINE	LLA-2	11020003	Jul. 13, 2021	Jul. 12, 2022	1 year
2	EMI Test Receiver	R&S	ESCI	101160	May. 11, 2021	May. 10, 2022	1 year
3	Low frequency cable	N/A	C-02	N/A	Jun. 28, 2019	Jun. 27, 2022	3 years
4	50Ω Switch	Anritsu	MP59B	6200983704	May. 11, 2020	May. 10, 2023	3 years

## RS

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	RF Test System Controller	AR	SC1000	0350156	Feb. 22, 2021	Feb. 21, 2024	3 years
2	3M Semi Anechoic Chamber	N/A	8*4*4	N/A	Aug. 07, 2020	Aug. 06, 2023	3 years
3	Broadband Amplifier	AR	60S1G6	0350414	Apr. 27, 2021	Apr. 26, 2022	1 year
4	Bilog Antenna	ETS	3142E	00214344	Dec. 13, 2020	Dec. 12, 2021	1 year
5	Power Amplifier	rflight	NTWPA-00810200	17063153	Jul. 13, 2021	Jul. 12, 2022	1 year
6	PSG Analog Signal Generator	Agilent	E8257D	MY51110112	Jul. 13, 2021	Jul. 12, 2022	1 year
7	Power Meter	Agilent	E4419B	MY45102538	Jul. 13, 2021	Jul. 12, 2022	1 year
8	Power Sensor	Agilent	E9301A	MY41495644	Jul. 13, 2021	Jul. 12, 2022	1 year
9	Power Sensor	Agilent	E9301A	US39212148	Jul. 13, 2021	Jul. 12, 2022	1 year

## MF

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Last calibration	Calibrated until	Calibration period
1	Generator	EVERFINE	EMS61000-8K	1007001	Jun. 06, 2021	Jun. 05, 2022	1 year



### 3 . EMC EMISSION TEST

#### 3.1 RADIATED EMISSION MEASUREMENT

##### 3.1.1 LIMITS OF RADIATED EMISSION MEASUREMENT (Below 1000MHz)

FREQUENCY (MHz)	<input checked="" type="checkbox"/> 2m	<input type="checkbox"/> 3m	<input type="checkbox"/> 4m
	dB(μA)	dB(μA)	dB(μA)
9kHz~ 70kHz	88	81	75
70kHz ~ 150kHz	88 to 58	81 to 51	75 to 45
150kHz ~ 3MHz	58 to 22	51 to 15	45 to 9
3MHz ~ 30MHz	22	15 to 16	9 to 12

FREQUENCY (MHz)	<input type="checkbox"/> At 10m	<input checked="" type="checkbox"/> At 3m
	dBμV/m	dBμV/m
30 – 230	30	40
230 – 1000	37	47

Notes:

- (1) The limit for radiated test was performed according to as following: CISPR 15.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBμV/m)=20log Emission level (uV/m).

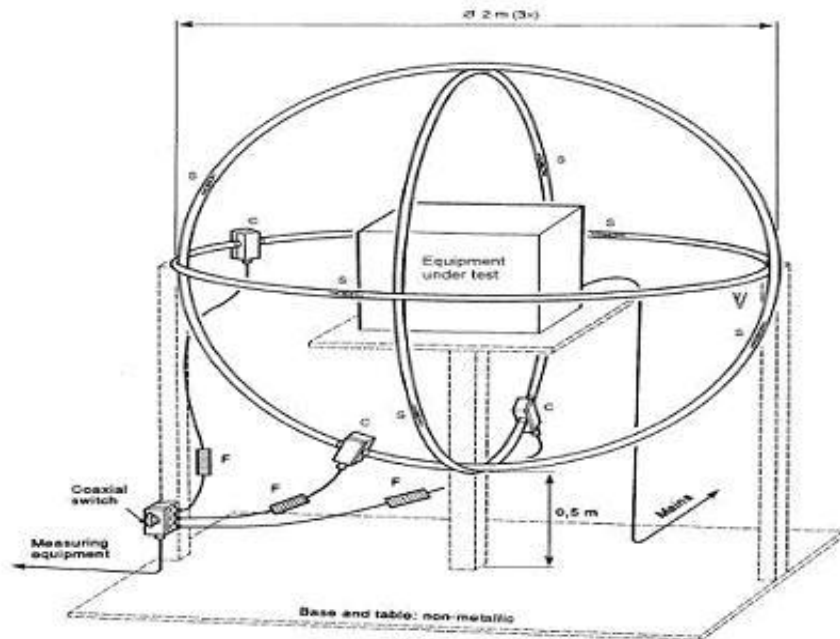
##### 3.1.2 TEST PROCEDURE

- a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

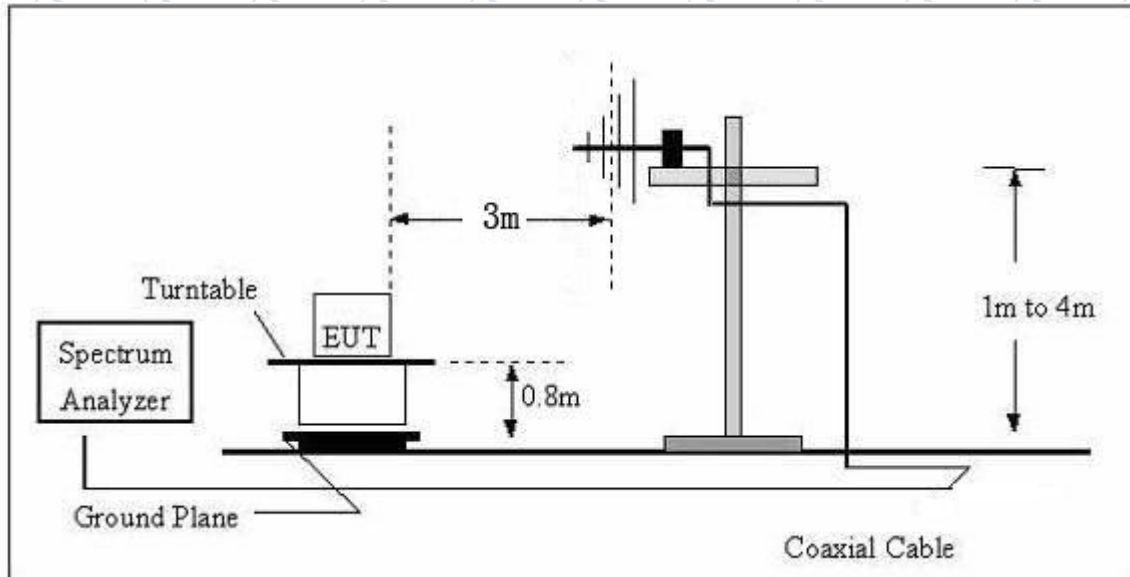


### 3.1.3 EST SETUP

#### (A) Radiated Emission Test Set-Up Frequency Below 30 MHz



#### (B) Radiated Emission Test Set-Up Frequency Above 30 MHz



### 3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

### 3.1.5 TEST RESULTS (30-1000MHz)

EUT :	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature :	23°C	Relative Humidity :	57%
Pressure :	1010hPa	Polarization :	Horizontal
Test Mode:	Lighting	Test Power:	DC 5V From Adapter Input AC230V/50Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Antenna Height cm	Table Degree	Comment
1	*	30.8535	56.33	-21.11	35.22	40.00	-4.78	QP		
2		40.1347	41.09	-24.99	16.10	40.00	-23.90	QP		
3		62.4313	48.71	-27.46	21.25	40.00	-18.75	QP		
4		78.1389	47.53	-29.27	18.26	40.00	-21.74	QP		
5		105.6414	47.90	-24.94	22.96	40.00	-17.04	QP		
6		197.8926	42.22	-25.60	16.62	40.00	-23.38	QP		

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

EUT :	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature :	23°C	Relative Humidity :	57%
Pressure :	1010hPa	Polarization :	Vertical
Test Mode:	Lighting	Test Power:	DC 5V From Adapter Input AC230V/50Hz



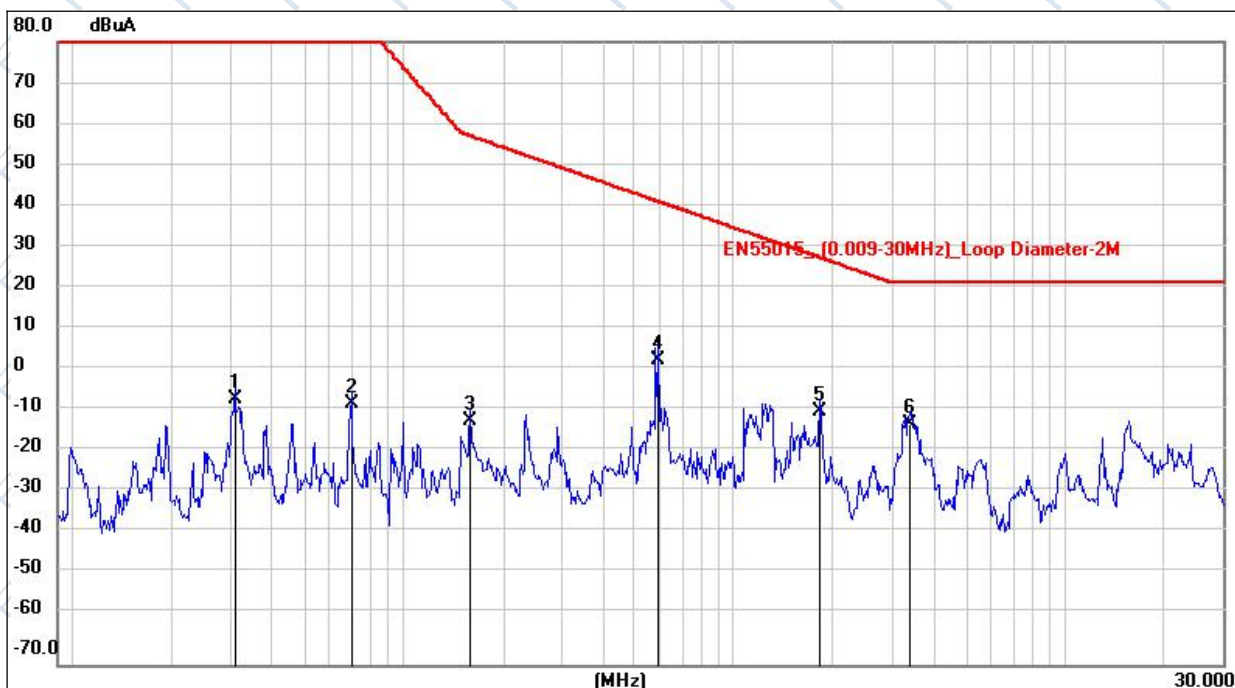
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Antenna Height cm	Table Degree degree	Comment
1	*	31.1798	58.19	-21.25	36.94	40.00	-3.06	QP		
2	!	59.6493	61.48	-26.69	34.79	40.00	-5.21	QP		
3		106.7587	52.26	-24.97	27.29	40.00	-12.71	QP		
4		38.3462	56.26	-24.31	31.95	40.00	-8.05	QP		
5		156.4578	46.46	-28.52	17.94	40.00	-22.06	QP		
6		46.5030	56.05	-24.66	31.39	40.00	-8.61	QP		

Remark:  
Factor = Antenna Factor + Cable Loss - Amplifier.



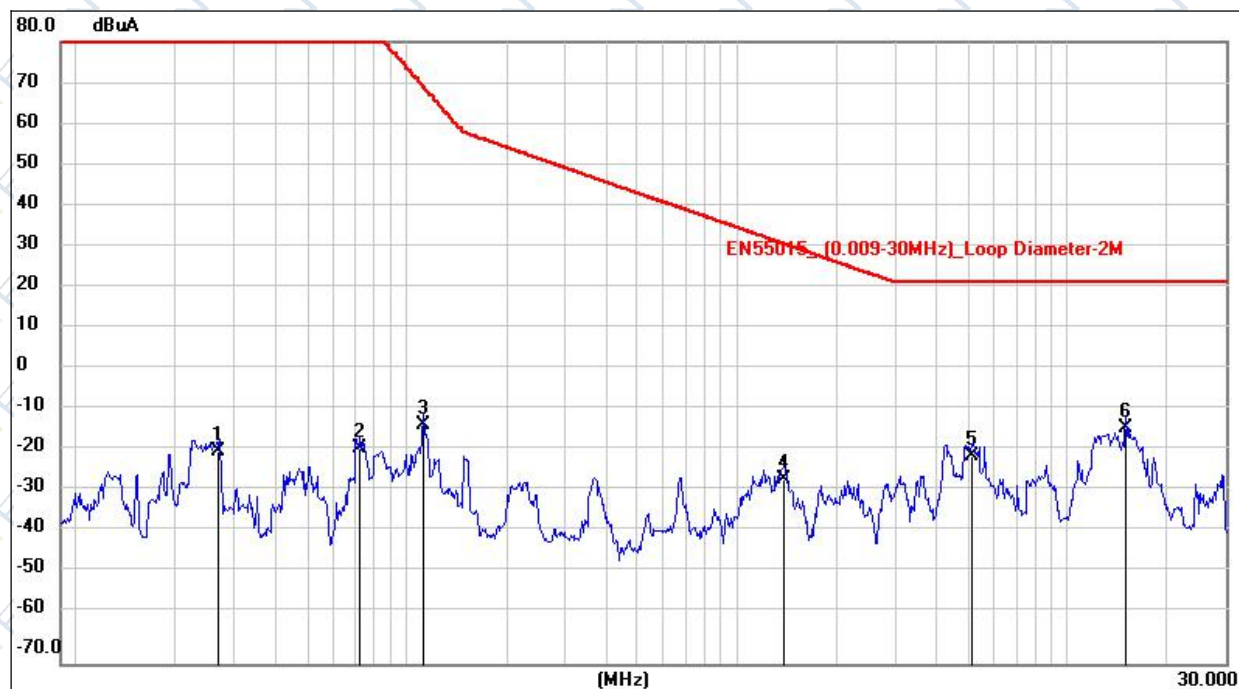
### 3.1.6 TEST RESULTS (0.009-30MHz)

EUT :	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature :	20°C	Relative Humidity :	50%
Pressure :	1010hPa	Polarization :	X
Test Mode:	Lighting	Test Power:	DC 5V From Adapter Input AC230V/50Hz



Remark:  
Factor = Antenna Factor + Cable Loss.

EUT :	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature :	20°C	Relative Humidity :	50%
Pressure :	1010hPa	Phase :	Y
Test Mode :	Lighting	Test Voltage:	DC 5V From Adapter Input AC230V/50Hz



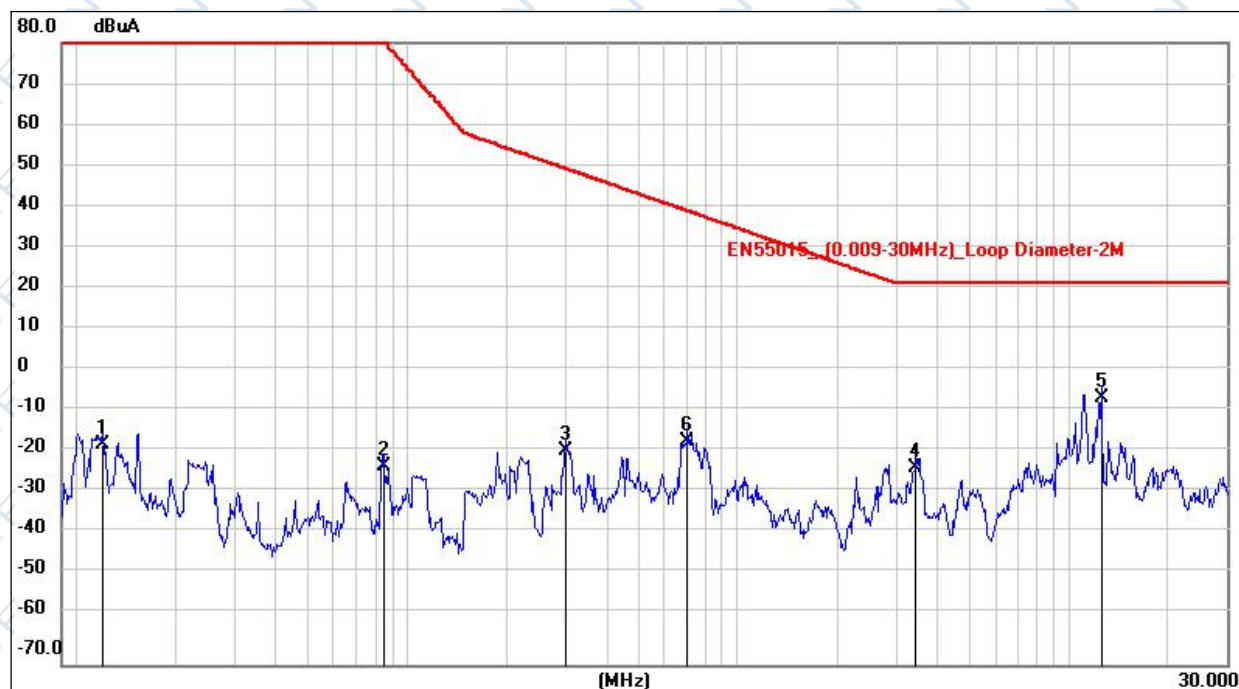
No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dBS	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		0.0269	-18.88	0.02	-18.86	88.00	-106.8	QP	
2		0.0724	-18.26	0.05	-18.21	86.67	-104.8	QP	
3		0.1129	-12.45	0.09	-12.36	69.18	-81.54	QP	
4		1.3900	-25.79	0.31	-25.48	31.24	-56.72	QP	
5		5.1579	-20.04	0.25	-19.79	22.00	-41.79	QP	
6	*	14.9977	-13.51	0.51	-13.00	22.00	-35.00	QP	

Remark:

Factor = Antenna Factor + Cable Loss.



EUT :	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature :	20°C	Relative Humidity :	50%
Pressure :	1010hPa	Polarization :	Z
Test Mode:	Lighting	Test Voltage:	DC 5V From Adapter Input AC230V/50Hz



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dBS	Measure- ment dBuA	Limit dBuA	Over dB	Detector	Comment
1		0.0119	-17.01	0.01	-17.00	88.00	-105.0	QP	
2		0.0844	-22.06	0.06	-22.00	80.64	-102.6	QP	
3		0.2993	-18.57	0.12	-18.45	49.70	-68.15	QP	
4		3.4460	-22.85	0.47	-22.38	22.00	-44.38	QP	
5	*	12.5860	-6.25	0.47	-5.78	22.00	-27.78	QP	
6		0.7056	-16.41	0.20	-16.21	39.39	-55.60	QP	

Remark:

Factor = Antenna Factor + Cable Loss.



## 4 . EMC IMMUNITY TEST

### 4.1 STANDARD COMPLIANCE/SEVERITY LEVEL/CRITERIA

Tests Standard No.	TEST SPECIFICATION Level	Test Mode Test Ports	Perform. Criteria
1. ESD IEC/EN 61000-4-2	8kV air discharge 4kV contact discharge	Direct Mode	B
	4kV HCP discharge 4kV VCP discharge	Indirect Mode	B
2. RS IEC/EN 61000-4-3	80 MHz to 1000 MHz 1000Hz, 80%, AM modulated	Enclosure	A
3. Power Frequency Magnetic Field IEC/EN 61000-4-8	50 Hz	Enclosure	A

## 4.2 GENERAL PERFORMANCE CRITERIA

According to **EN 61547** standard, the general performance criteria as following:

<b>Criterion A</b>	<p>The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended.</p> <p>The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.</p>
<b>Criterion B</b>	<p>After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended.</p> <p>The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.</p>
<b>Criterion C</b>	<p>Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.</p>

## 4.3 GENERAL PERFORMANCE CRITERIA TEST SETUP

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.



#### 4.4 ESD TESTING

##### 4.4.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330ohm / 150pF
Required Performance:	B
Discharge Voltage:	Air Discharge:2kV/4kV/8kV (Direct) Contact Discharge:2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 20 times at each test point
Discharge Mode:	Single Discharge
Discharge Period:	second minimum

##### 4.4.2 TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

a. Indirect application of the discharge:

Vertical Coupling Plane (VCP):

At least 10 single discharges (in the most sensitive polarity) shall be applied to the centre of one vertical edge of the coupling plane. The coupling plane, of dimensions 0,5 m × 0,5 m, is placed parallel to, and positioned at a distance of 0,1 m from, the EUT.

Discharges shall be applied to the coupling plane, with sufficient different positions such that the four faces of the EUT are completely illuminated. One VCP position is considered to illuminate 0,5 m × 0,5 m area of the EUT surface.

Horizontal Coupling Plane (HCP):

Discharge to the HCP shall be made horizontally to the edge of the HCP.

At least 10 single discharges (in the most sensitive polarity) shall be applied at the front edge of each HCP opposite the centre point of each unit (if applicable) of the EUT and 0.1m from the front of the EUT. The long axis of the discharge electrode shall be in the plane of the HCP and perpendicular to its front edge during the discharge.

The discharge electrode shall be in contact with the edge of the HCP before the discharge switch is operated

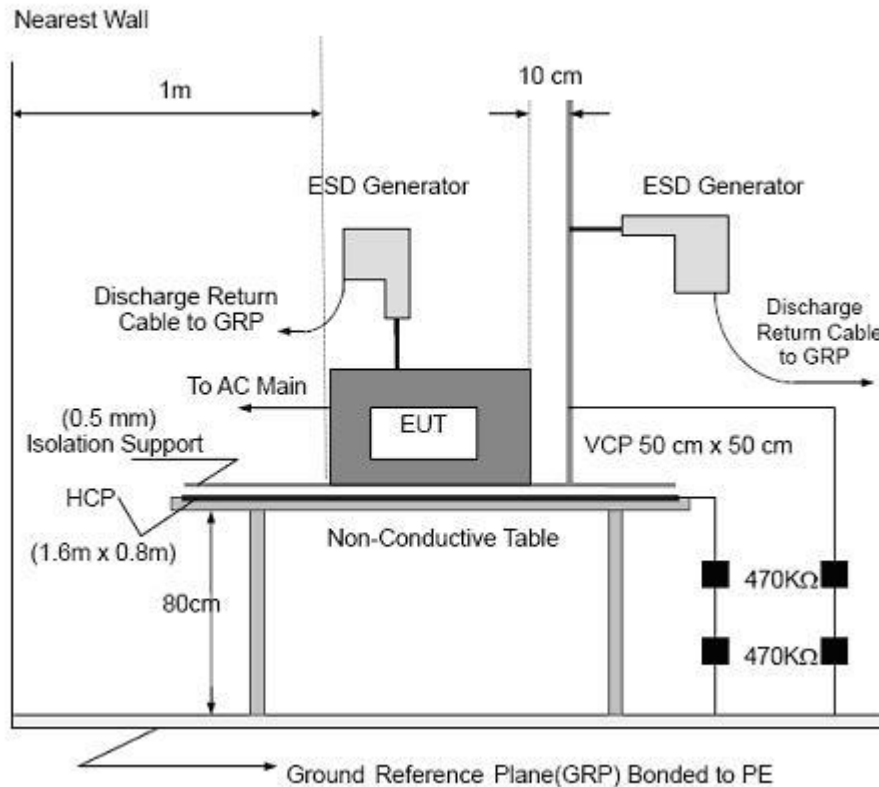
b. Direct application of discharges to the EUT

The test shall be performed with single discharges. On each pre-selected point at least 10 single discharges (in the most sensitive polarity) shall be applied.

For the time interval between successive single discharges an initial value of 1 s is recommended. Longer intervals may be necessary to determine whether a system failure has occurred.



#### 4.4.3 TEST SETUP



Note:

##### TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of 1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

##### FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of 0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.

#### 4.4.4 TEST RESULTS

EUT:	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature:	23°C	Relative Humidity:	53%
Pressure:	1010hPa	Test Mode:	Lighting
Test Voltage:	DC 5V From Adapter Input AC230V/50Hz		

Mode	Contact Discharge (Indirect)							Criterion	Result
Test level(kV)	Test Point	2		4		6			
Test Location		+	-	+	-	+	-		
HCP	Front			P	P			B	Complies
	Rear			P	P				
	Left			P	P				
	Right			P	P				
VCP	Front			P	P				
	Rear			P	P				
	Left			P	P				
	Right			P	P				

Mode	Air Discharge								Contact Discharge								Criterion	Result
Test level(kV)	2		4		8		15		2		4		6		8			
Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
Gap					P	P											<b>B</b>	<b>Complies</b>

#### Note:

- 1) +/- denotes the Positive/Negative polarity of the output voltage.
- 2) Test location(s) in which discharge (Air and contact discharge) to be applied illustrated by photos shown in next page(s)
- 3) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 4) Criteria A: Normal performance within limits specified by the manufacturer, requestor or purchaser.
- 5) Criteria B: Temporary loss of function or degradation of performance which ceases after the disturbance ceases, and from which the EUT recovers its normal performance, without operator intervention.
- 6) Criteria C: Temporary loss of function or degradation of performance, the correction of which requires operator intervention.
- 7) Criteria D: Loss of function or degradation of performance which is not recoverable, owing to damage to hardware or software, or loss of data.



## 4.5 RS TESTING

### 4.5.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3
Required Performance:	A
Frequency Range:	80 MHz - 1000 MHz
Field Strength:	3 V/m
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Polarity of Antenna:	Horizontal and Vertical
Test Distance:	3 m
Antenna Height:	1.5 m
Dwell Time:	seconds

### 4.5.2 TEST PROCEDURE

The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

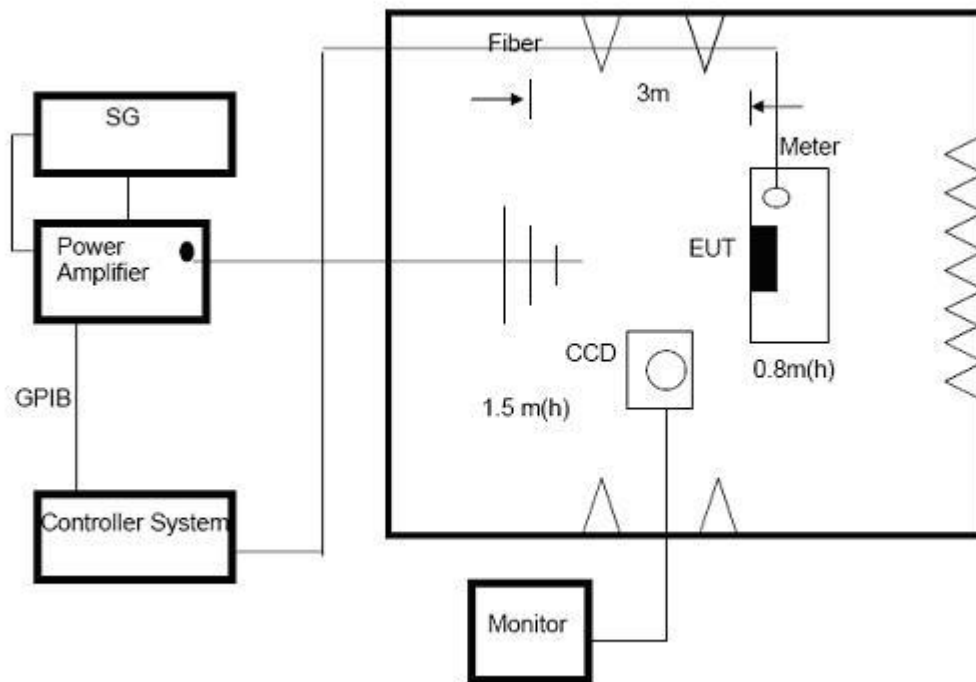
The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

- The frequency range is swept from 80 MHz to 1000 MHz with the signal 80%amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed  $1.5 \times 10^{-3}$  decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.
- Sweep Frequency 900 MHz, with the Duty Cycle:1/8 and Modulation: Pulse 217 Hz(if applicable)
- The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.



#### 4.5.3 TEST SETUP



#### Note:

##### TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

##### FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

#### 4.5.4 TEST RESULTS

EUT:	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature:	23℃	Relative Humidity:	53%
Pressure:	1010hPa	Test Mode:	Lighting
Test Voltage:	DC 5V From Adapter Input AC230V/50Hz		

Frequency Range (MHz)	RF Field Position	R.F. Field Strength	Azimuth	Perform. Criteria	Result s	Judgment
80MHz - 1000MHz	H / V	3 V/m (r.m.s) AM Modulated 1000Hz, 80%	Front	<b>A</b>	<b>P</b>	<b>Complies</b>
			Rear			
			Left			
			Right			

#### Note:

- 1) N/A - denotes test is not applicable in this test report.
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 5) Criteria C: The system shut down during the test.

## 4.6 POWER FREQUENCY MAGNETIC FIELD TESTING

### 4.6.1 TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-8
Required Performance:	A
Frequency Range:	50Hz
Field Strength:	3 A/m
Observation Time:	5 minutes
Inductance Coil:	Rectangular type, 1mx1m

### 4.6.2 TEST PROCEDURE

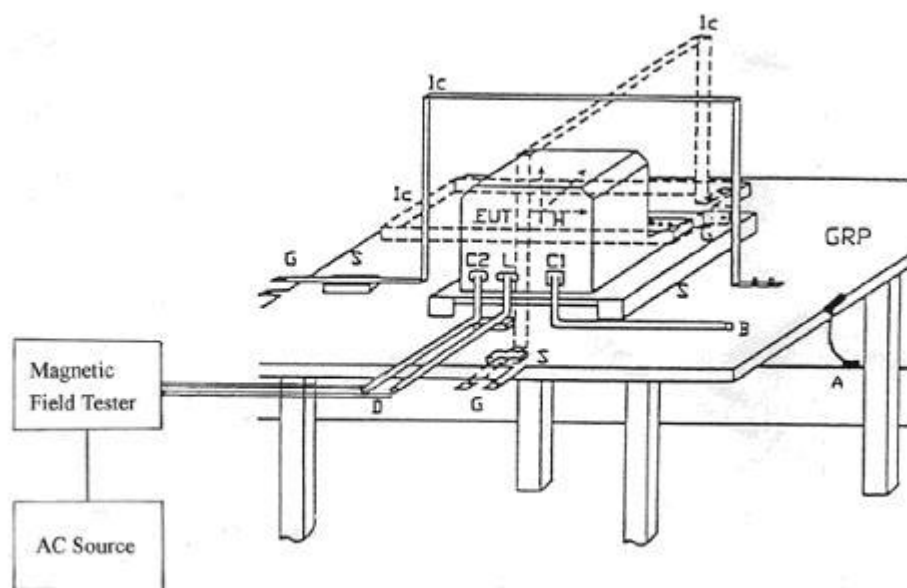
The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m\*1m min. and 0.65mm thick min.

The other condition as following manner:

- The equipment cabinets shall be connected to the safety earth directly on the GRP via the earth terminal of the EUT.
- The cables supplied or recommended by the equipment manufacturer shall be used. 1 meter of all cables used shall be exposed to the magnetic field.



#### 4.6.3 TEST SETUP



#### Note:

##### TABLE-TOP EQUIPMENT

The equipment shall be subjected to the test magnetic field by using the induction coil of standard dimension (1 m x 1 m). The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

##### FLOOR-STANDING EQUIPMENT

The equipment shall be subjected to the test magnetic field by using induction coils of suitable dimensions. The test shall be repeated by moving and shifting the induction coils, in order to test the whole volume of the EUT for each orthogonal direction. The test shall be repeated with the coil shifted to different positions along the side of the EUT, in steps corresponding to 50 % of the shortest side of the coil. The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

#### 4.6.4 TEST RESULTS

EUT:	LED Strip Light	Model Name:	CJ-5V-5050-30L-RGB
Temperature:	23°C	Relative Humidity:	53%
Pressure:	1010hPa	Test Mode:	Lighting
Test Voltage:	DC 5V From Adapter Input AC230V/50Hz		

Test Mode	Test Level	Antenna aspect	Duration (s)	Perform Criteria	Results	Judgment
Enclosure	3 A/m	X	300 s	A	P	Complies
Enclosure	3 A/m	Y	300 s	A	P	
Enclosure	3 A/m	Z	300 s	A	P	

#### Note:

- 1) N/A - denotes test is not applicable in this test report
- 2) In the table: 'P' represents 'PASS'; 'F' represents 'FAIL'.
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 5) Criteria C: The system shut down during the test.



## 5. EUT TEST PHOTO

### Radiated Measurement Photos





## ATTACHMENT PHOTOGRAPHS OF EUT

Photo 1

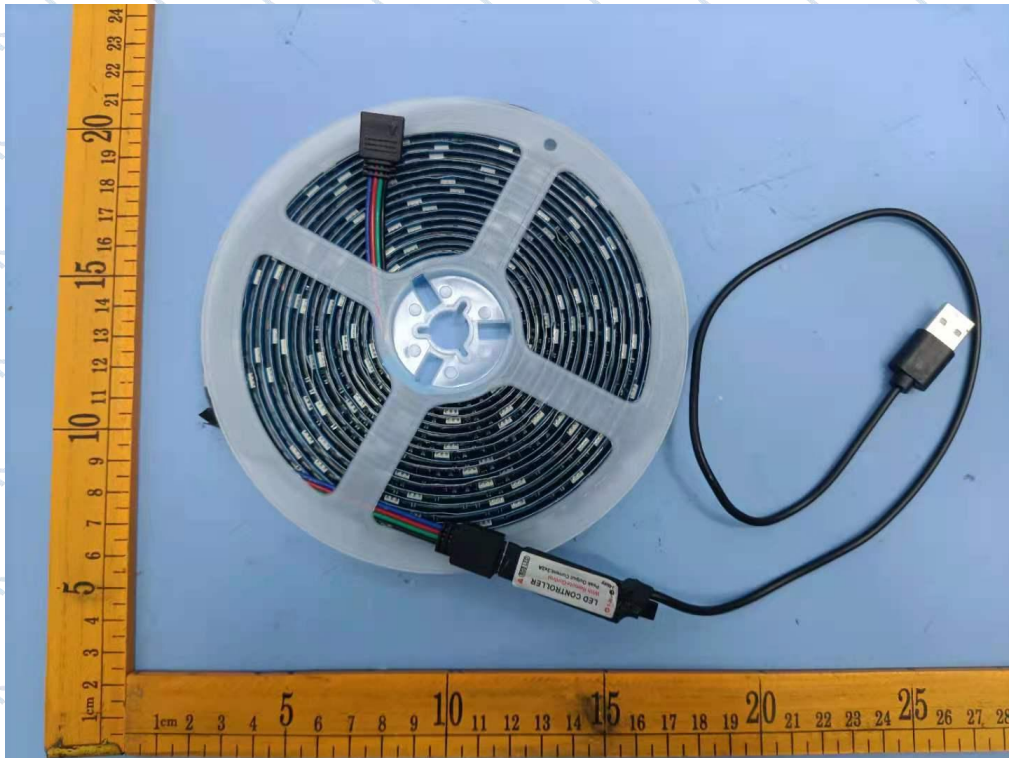


Photo 2

