



TESTING LABORATORY
CERTIFICATE#4323.01



FCC PART 15B

TEST REPORT

For

ARTIKA FOR LIVING INC

1756 50th avenue, Lachine, Quebec, Canada, H8T 2V5

FCC ID: 2AUHG-FLP14T

Report Type: Original Report	Product Type: LED Panel
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Report Number:	RSHB200908001-00A
Report Date:	2021-01-20
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant	ARTIKA FOR LIVING INC
Manufacturer	ZHEJIANG SHUANGYU ELECTRONIC TECHNOLOGY CO.,LTD
Brand name	Artika
Test Model	FLP14T-C01
Series Model	FLP14T-XXXXXXX (XXXXXXX can be A to Z and/or a to z and/or 0 to 9 and/or Blank (commercial code))
Model Difference	Model name
Product	LED Panel
Rate Voltage	AC 120V
*Highest Operation Frequency	<108 MHz

**Note: The highest operation frequency was declared by the applicant.*

All measurement and test data in this report was gathered from production sample serial number: RSHB200908001-1. (Assigned by the BACL. The EUT supplied by the applicant was received on 2020-09-08)

Objective

This report is prepared on behalf of *ARTIKA FOR LIVING INC* in accordance with Part 2-Subpart J, and Part 15-Subparts A and B of the Federal Communication Commission's rules.

The objective of the manufacturer is to determine the compliance of EUT with FCC Part 15, Class B device.

Related Submittal(s)/Grant(s)

No Related Submittal(s)/Grant(s).

Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2014, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

All radiated and conducted emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Kunshan). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01 and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

SYSTEM TEST CONFIGURATION

Justification

The system was configured for testing in a typical mode (as normally used by a typical user).

Test mode: Light on-AC 120V

EUT Exercise Software

No exercise software.

Special Accessories

No special accessory was used.

Equipment Modifications

No modification was made to the EUT tested.

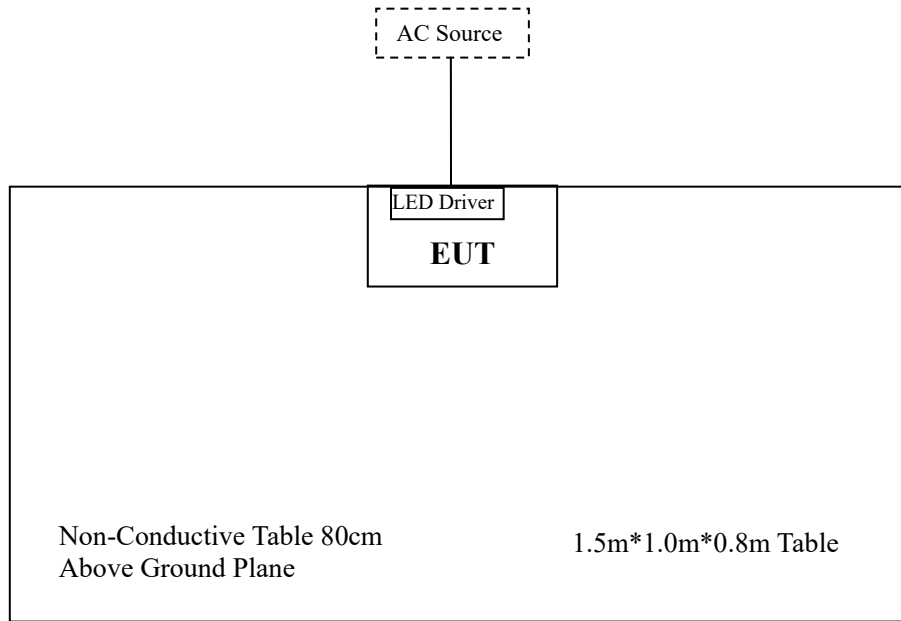
Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
/	LED Driver	/	/

External I/O Cable

Cable Description	Length (m)	From	To
Power Cable	1.2	LED Driver	AC Source

Block Diagram of Radiated Test Setup



SUMMARY OF TEST RESULTS

FCC Rules	Description of Test	Results
§15.107	Conducted Emissions	Compliant
§15.109	Radiated Emissions	Compliant

FCC §15.107 –CONDUCTED EMISSIONS

Applicable Standard

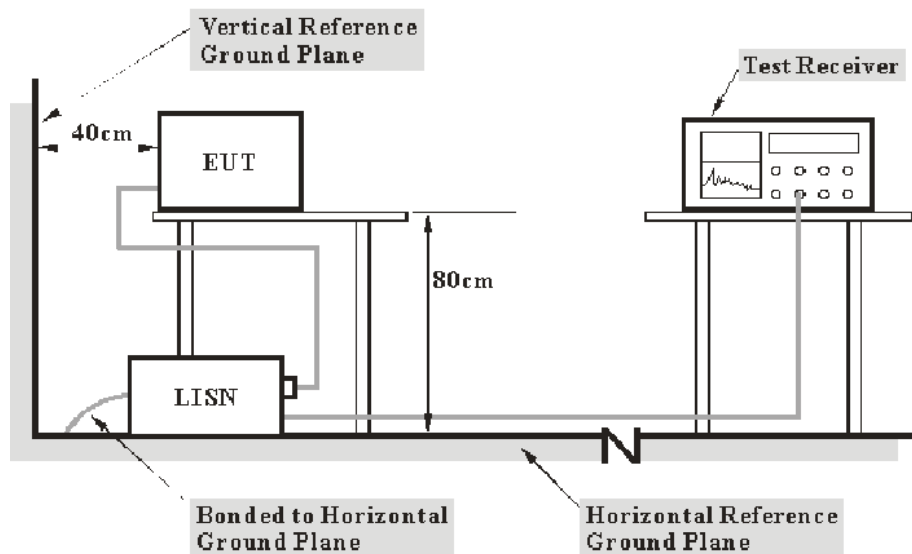
According to FCC§15.107

Measurement Uncertainty

Input quantities to be considered for conducted disturbance measurements maybe receiver reading, attenuation of the connection between LISN and receiver, LISN voltage division factor, LISN VDF frequency interpolation and receiver related input quantities, etc.

Item		Measurement Uncertainty	U_{cispr}
Conducted Emission	150kHz~30MHz	3.19 dB	3.4 dB

EUT Setup



- Note: 1. Support units were connected to second LISN.
 2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with ANSI C63.4-2014. The related limit was specified in FCC Part 15.107 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30 MHz

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Rohde & Schwarz	EMI Test Receiver	ESR	1316.3003K03 -101746-zn	2020-08-05	2021-08-04
Rohde & Schwarz	LISN	ENV216	3560655016	2019-11-30	2020-11-29
COM-POWER	LISN	LI-3P-132	20200002	2019-09-12	2020-09-11
Audix	Test Software	e3	V9	--	--
MICRO-COAX	Coaxial Cable	Cable-6	006	2020-09-08	2021-09-07
Rohde & Schwarz	Pluse limiter	ESH3-Z2	100552	2020-08-10	2021-08-09

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Factor & Over Limit Calculation

The Corrected factor is calculated by adding LISN VDF (Voltage Division Factor), Cable Loss and Transient Limiter Attenuation. The basic equation is as follows:

$$\text{Factor (dB)} = \text{LISN VDF (dB)} + \text{Cable Loss (dB)} + \text{Transient Limiter Attenuation (dB)}$$

The “**Over Limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an over limit of 7dB means the emission is 7 dB above the limit. The equation for over limit calculation is as follows:

$$\text{Over Limit (dB)} = \text{Read level (dB}\mu\text{V)} + \text{Factor (dB)} - \text{Limit (dB}\mu\text{V)}$$

Test Data

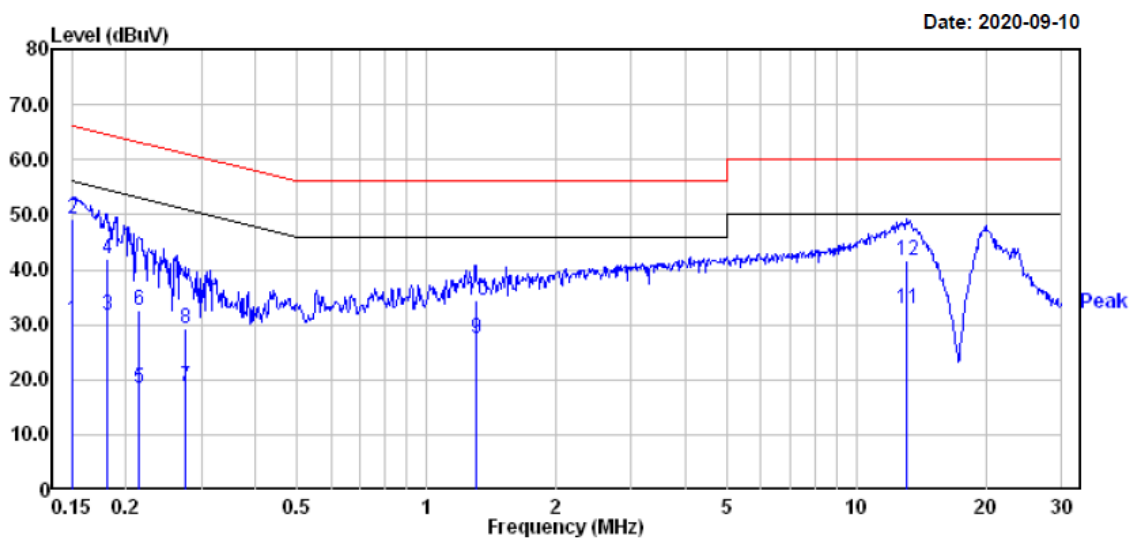
Environmental Conditions

Temperature:	24.3°C
Relative Humidity:	53 %
ATM Pressure:	101 kPa

The testing was performed by Cary Han on 2020-09-10.

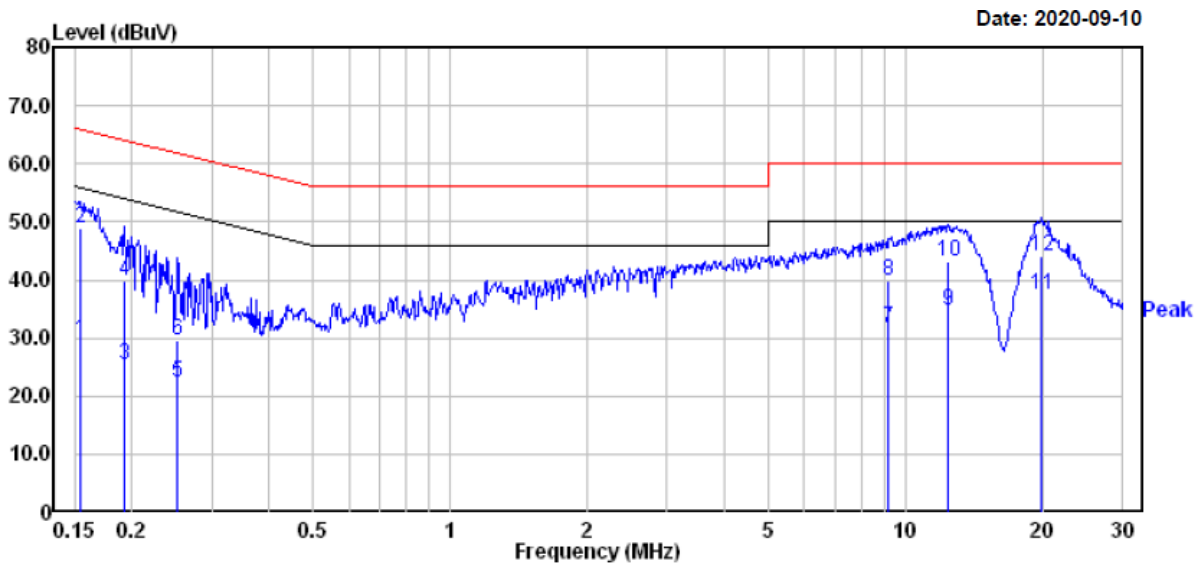
Test mode: Light on-AC 120V

Line:



	Read Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.150	11.00	19.82	30.82	56.00	-25.18	Average
2	0.150	29.40	19.82	49.22	66.00	-16.78	QP
3	0.181	11.80	19.83	31.63	54.46	-22.83	Average
4	0.181	22.10	19.83	41.93	64.46	-22.53	QP
5	0.215	-1.30	19.82	18.52	53.01	-34.49	Average
6	0.215	12.90	19.82	32.72	63.01	-30.29	QP
7	0.276	-1.10	19.82	18.72	50.94	-32.22	Average
8	0.276	9.50	19.82	29.32	60.94	-31.62	QP
9	1.303	7.80	19.82	27.62	46.00	-18.38	Average
10	1.303	14.70	19.82	34.52	56.00	-21.48	QP
11	13.057	13.40	19.60	33.00	50.00	-17.00	Average
12	13.057	22.10	19.60	41.70	60.00	-18.30	QP

Neutral:



	Read Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV	dBuV	dB	
1	0.154	9.80	19.82	29.62	55.78	-26.16	Average
2	0.154	29.20	19.82	49.02	65.78	-16.76	QP
3	0.193	5.60	19.82	25.42	53.89	-28.47	Average
4	0.193	20.10	19.82	39.92	63.89	-23.97	QP
5	0.252	2.50	19.82	22.32	51.69	-29.37	Average
6	0.252	9.90	19.82	29.72	61.69	-31.97	QP
7	9.204	12.10	19.55	31.65	50.00	-18.35	Average
8	9.204	20.20	19.55	39.75	60.00	-20.25	QP
9	12.449	15.19	19.60	34.79	50.00	-15.21	Average
10	12.449	23.69	19.60	43.29	60.00	-16.71	QP
11	19.950	17.49	19.96	37.45	50.00	-12.55	Average
12	19.950	24.19	19.96	44.15	60.00	-15.85	QP

Note:

- 1) Factor (dB) = LISN VDF (dB) + Cable Loss (dB) + Transient Limiter Attenuation (dB)
- 2) Over Limit (dB) = Read level (dBμV) + Factor (dB) - Limit (dBμV)

FCC §15.109 - RADIATED EMISSIONS

Applicable Standard

FCC §15.109

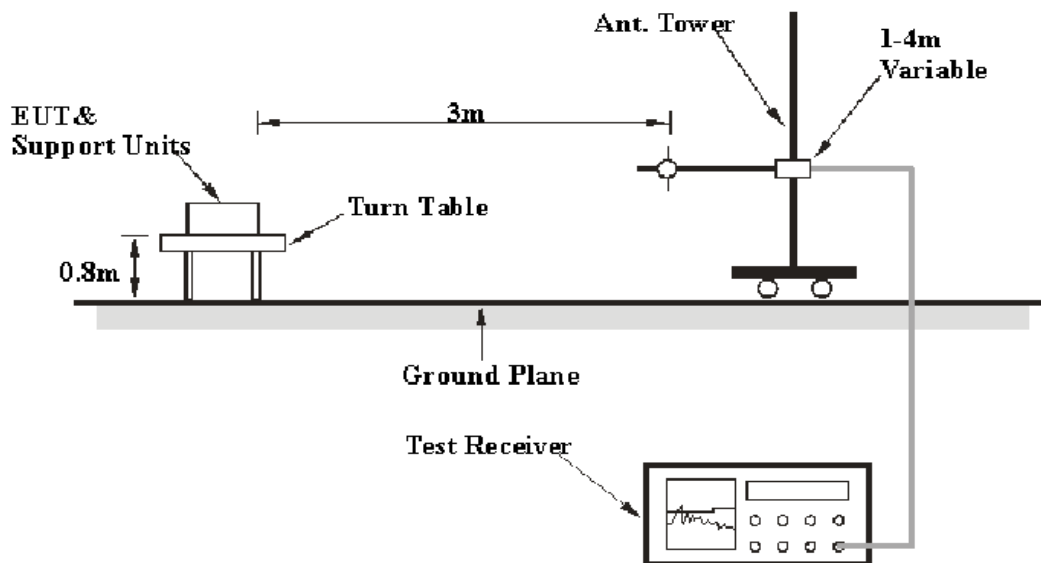
Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average) and system repeatability.

Item		Measurement Uncertainty	U_{cispr}
Radiated Emission	30MHz~1GHz	6.11dB	6.3 dB

EUT Setup

Below 1GHz:



The radiated emission tests were performed in the 3 meters chamber test site, using the setup accordance with the ANSI C63.4-2014. The specification used was the FCC Part 15.109 Class B limits.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.

EMI Test Receiver Setup

The system was investigated from 30 MHz to 1 GHz.

During the radiated emission test, the EMI test receiver was set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Detector
30MHz – 1000 MHz	120 kHz	300 kHz	120kHz	Peak

Test Procedure

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All data was recorded in the peak detector mode from 30 MHz to 1 GHz.

Test Equipment List and Details

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
Sonoma Instrument	Amplifier	310N	185700	2020-08-14	2021-08-13
Rohde & Schwarz	EMI Test Receiver	ESCI	100195	2019-11-30	2020-11-29
Sunol Sciences	Broadband Antenna	JB3	A090413-1	2018-12-26	2021-12-25
Champrotek	Chamber 1#	3m-SAC 966	NA	2019-05-08	2022-05-07
Rohde & Schwarz	Auto test Software	EMC32	100361	-	-
MICRO-COAX	Coaxial Cable	Cable-8	008	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-9	009	2020-08-15	2021-08-14
MICRO-COAX	Coaxial Cable	Cable-10	010	2020-08-15	2021-08-14

* **Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Kunshan) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain from the Meter Reading. The basic equation is as follows:

$$\text{Corrected Amplitude} = \text{Meter Reading} + \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of 7 dB means the emission is 7 dB below the limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Limit} - \text{Corrected Amplitude}$$

Test Data

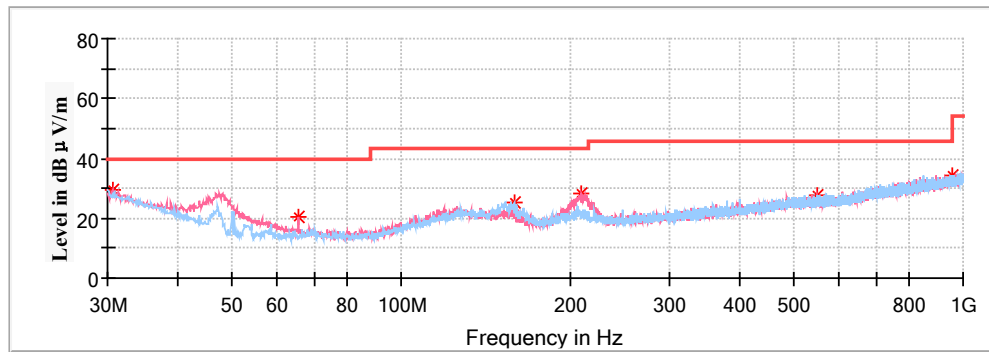
Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	53 %
ATM Pressure:	101.3 kPa

The testing was performed by Cary Han on 2020-09-13.

Test mode: Light on-AC 120V

1) Below 1 GHz:



Comment

Frequency (MHz)	MaxPeak (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB/m)
30.606250	29.61	40.00	10.39	200.0	V	179.0	-4.8
65.526250	20.40	40.00	19.60	200.0	V	269.0	-18.0
158.525000	25.31	43.50	18.19	200.0	H	211.0	-13.1
209.813750	28.44	43.50	15.06	100.0	V	298.0	-12.7
549.798750	27.75	46.00	18.25	100.0	H	0.0	-5.8
956.107500	34.11	46.00	11.89	200.0	H	270.0	1.3

Declarations

1: BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '*'. Customer model name, addresses, names, trademarks etc. are not considered data.

2: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

3: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

4: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

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