



EMC TEST REPORT

Report No.: STS2107103E01

Issued for

Shenzhen Sonoff Technologies Co.,Ltd.

1001, BLDG8, Lianhua Industrial Park, Shenzhen, GD, China

Product Name:	Wi-Fi Smart LED RGB Light Strip
Brand Name:	SONOFF
Model Name:	L2-2M
Series Model:	5050RGB-2M
Test Standard:	EN 62493: 2015

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TEST REPORT CERTIFICATION

Applicant's Name : Shenzhen Sonoff Technologies Co.,Ltd.

Address : 1001, BLDG8, Lianhua Industrial Park, Shenzhen, GD, China

Manufacturer's Name : Shenzhen Sonoff Technologies Co.,Ltd.

Address : 1001, BLDG8, Lianhua Industrial Park, Shenzhen, GD, China

Product Description..... :

Product Name : Wi-Fi Smart LED RGB Light Strip

Brand Name : SONOFF

Model Name : L2-2M

Series Model : 5050RGB-2M

Note : L2-2M: 2M waterproof light strip with remote control, controller and adapter
5050RGB-2M: 2M waterproof light strip

Standards : EN 62493: 2015

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Date of Test..... :

Date of Receipt of Test Item : 13 July 2021

Date (s) of Performance of Tests..... : 13 July 2021~22 July 2021

Date of Issue : 22 July 2021

Test Result : Pass

Testing Engineer : _____

Bulun

(Bulun)

Technical Manager : _____

Barry Li

(Barry Li)

Authorized Signatory : _____

Vita Li

(Vita Li)





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Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	22 July 2021	STS2107103E01	ALL	Initial Issue





1. TEST STANDARDS

1.1 THE TESTS WERE PERFORMED ACCORDING TO FOLLOWING STANDARDS

EN 62493: 2015:

Assessment of lighting equipment related to human exposure to electromagnetic fields

2. SUMMARY

2.1 FINAL ASSESSMENT

The EMC requirements pertaining to the technical standards and tested operation modes are

- - fulfilled.
- - not fulfilled.

The equipment under test

- - fulfils the EMF requirements cited on page 8.
- - does not fulfil the EMF requirements cited on page 8.

3. EQUIPMENT UNDER TEST

3.1 EUT OPERATION MODE

The equipment under test was operated during the measurement under the following conditions:

Operating Mode:	<i>Lighting</i>
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Emissions tests: According to EN 62493, searching for the highest disturbance.



4. TEST ENVIRONMENT

4.1 ADDRESS OF THE TEST LABORATORY

Company Name:	SHENZHEN STS TEST SERVICES CO.,LTD.
Address:	A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
Telephone:	+86-755 3688 6288
Fax:	+86-755 3688 6277
Registration No.:	FCC test Firm Registration Number: 625569
	IC test Firm Registration Number: 12108A
	A2LA Certificate No.: 4338.01

4.2 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35° C
Humidity:	25~75 %
Atmospheric pressure:	86~106kPa

4.3 STATEMENT OF THE MEASUREMENT UNCERTAINTY

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

4.4 TEST DESCRIPTION

4.4.1 DESCRIPTION OF STANDARDS AND RESULTS

EMISSION			
Description of Test Item	Standard	Limits	Results
Electromagnetic disturbance	EN 62493: 2015	-----	PASS

5. TEST CONDITIONS AND RESULTS

5.1 ELECTROMAGNETIC FIELDS

For test instruments and accessories used see section 6 part 6.1.

5.1.1 DESCRIPTION OF THE TEST LOCATION

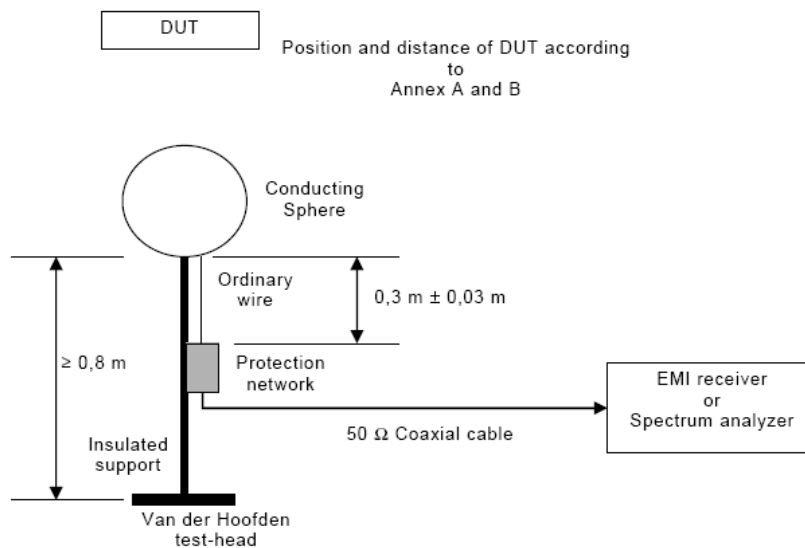
Test location:	Shielded room
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5.1.2 DESCRIPTION OF THE TEST SET-UP

5.1.2.1 OPERATING CONDITION

The EUT is engraving during the test, and the results of the maximum emanation are recorded

5.1.2.2 BLOCK DIAGRAM OF TEST SETUP



DUT = device under test.

NOTE The EMI receiver or spectrum analyzer must be powered by mains including protective earth.

5.1.3 LIMITS DISTURBANCE

Table D.2 – Calculation main contributions

U_{mains} [V]	f_{mains} [Hz]	$J_{\text{cap}}(f_{\text{mains}}, d)$ [$\mu\text{A}/\text{m}^2$] @ f_{mains} and $d = 0,3 \text{ m}$	$J_{\text{Lim}}(f_{\text{mains}})$ [mA/m^2]	$\frac{J_{\text{cap}}(f_{\text{mains}}, d)}{J_{\text{Lim}}(f_{\text{mains}})}$ @ f_{mains} and $d=0,3 \text{ m}$
230	50	22,8	2	0,011
120	60	14,6	2	0,007
277	60	33,6	2	0,017

The calculation results, as depicted in the last column of Table D.2, show that the contribution of the mains can be neglected and Equation (D.15) can be simplified to Equation (D.19)

$$\sum_{f_i=20 \text{ kHz}}^{10 \text{ MHz}} \frac{J_{\text{cap}}(f_i, d)}{J_{\text{Lim}}(f_i)} \leq 0,85 \tag{D.19}$$

5.1.4 POSITION OF MEASUREMENT

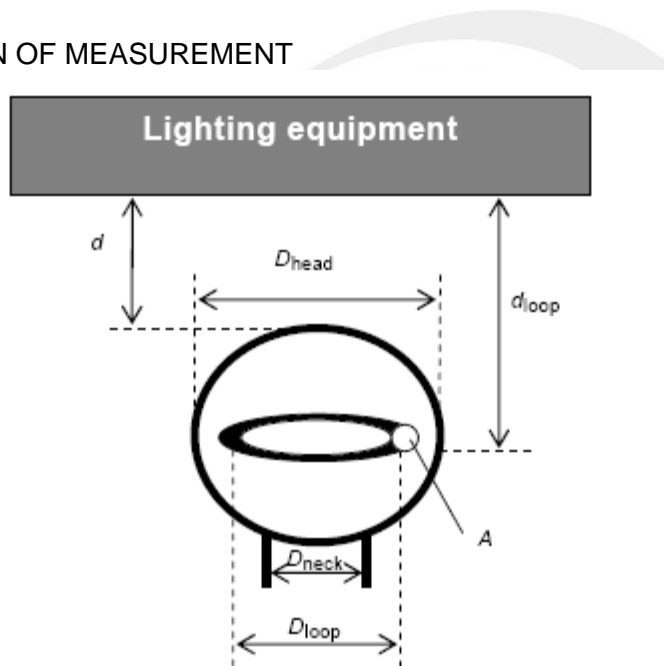


Figure D.2 – Distances of the head, loop and measurement set-up

Note: A. P1-Top, P2-Lift, P3-Right
 B. Measurement distance: 30cm



5.1.5 TEST RESULT

Used measurement procedure according Annex A of EN 62493 for devices which generate only magnetic fields of the main frequency (50Hz).

B_{RLF} = reference value see below

Measurement distance or position according table A1: 50cm

Measurement value in percent to the maximum reference value: 0%

Opinion: This equipment under test fulfils all requirements acc. EN 62493

Adapter: GA1202000V

Frequency range	F _{step}	Limited	Test Result	Results
20 kHz – 150 kHz	220Hz	0.85	0.0	PASS
150 kHz – 1 0MHz	10kHz			

Adapter: KZ1202000S

Frequency range	F _{step}	Limited	Test Result	Results
20 kHz – 150 kHz	220Hz	0.85	0.0	PASS
150 kHz – 1 0MHz	10kHz			

6. USED TEST EQUIPMENT

Voltage Short Interruptions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.
1	Van der Hoofden EMF Antenna	SCHWARZBECK	VDHH 9502	147	2020/10/12



7. MANUFACTURER/ APPROVAL HOLDER DECLARATION

The following identical model(s):

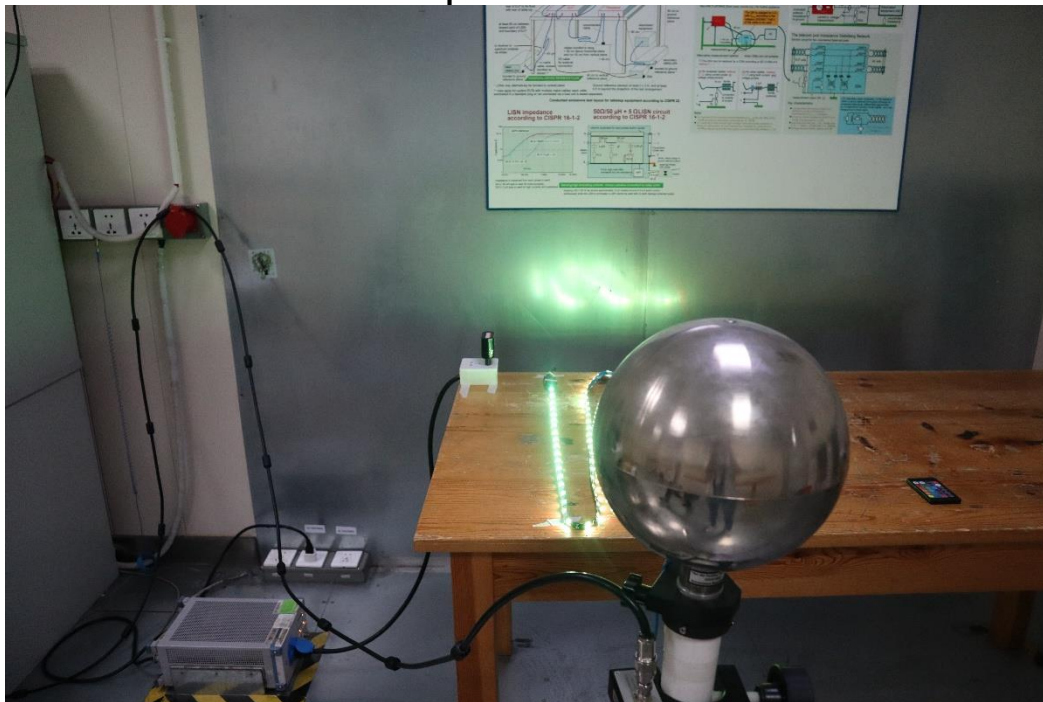
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Belong to the tested device:

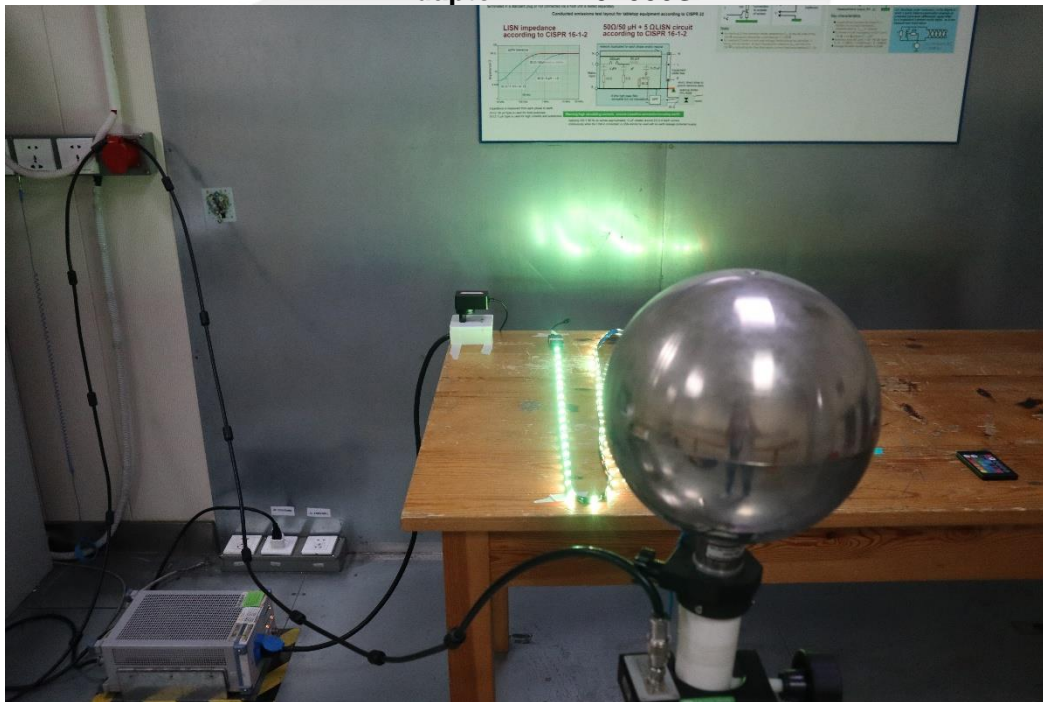
Product description	Desktop Hot & Cold Water Dispenser
Model name	MS1



EMF TEST PHOTOS
Adapter: GA1202000V



Adapter: KZ1202000S



※※※※※ END OF THE REPORT ※※※※※