

TEST REPORT

Report No.: 8135EU012712H

Applicant: Shenzhen Qianyan Technology LTD

Address: No.3301,Block C,Section 1,Chuangzhi Yuncheng Building,Liuxian Avenue,Xili Community,Xili Street, Nanshan District,Shenzhen 518000 China

Product Name: Govee Strip Light S

Model No.: H612C (refer to clause 2.4)

Trademark: Govee

Test Standard(s): EN 50665: 2017
EN IEC 62311: 2020

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ISSUED BY:
SHENZHEN EU TESTING LABORATORY LIMITED



Prepared by:



Mikey Zhu/ Engineer

Reviewed and Approved by:



Sally Zhang/ Manager

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2 General Information

2.1 Applicant Information

Applicant	Shenzhen Qianyan Technology LTD
Address	No.3301,Block C,Section 1,Chuangzhi Yuncheng Building,Liuxian Avenue,Xili Community,Xili Street, Nanshan District,Shenzhen 518000 China

2.2 Manufacturer Information

Manufacturer	Shenzhen Qianyan Technology LTD
Address	No.3301,Block C,Section 1,Chuangzhi Yuncheng Building,Liuxian Avenue,Xili Community,Xili Street, Nanshan District,Shenzhen 518000 China

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description of E.U.T.

Product Name	Govee Strip Light S
Model No. Under Test	H612C
List Model No.	H612A, H612F
Description of Model differentiation	All samples are the same, only the input current, adapter, lengths of light are different. The model differentiations will not affect RF parameters, so we prepare all models for Conducted Emission, Radiated Emission tests with their own adapters. And prepare "H612C" or RF test only.
Rating(s)	Refer to the following detailed table.
Test Sample No.	-1/1(Normal Sample)
Hardware Version	N/A
Software Version	N/A
Remark	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Detailed table:

Model No.	Length of Light	Rating	Adapter Information
H612C	10m	24V 1.5A	Model No.: YXTG36EU-2401500 Input: 200-240VAC, 50/60Hz, 1.0A Max. Output: 24VDC, 1.5A, 36.0W Manufacturer: SHENZHEN LINKSOONER TECHNOLOGY CO.,LTD
H612A	5m	24VDC,1A	Adapter 1: Model No.: YXTG24EU-2401000 Input: 200-240VAC, 50/60Hz, 0.5A Max. Output: 24VDC, 1.0A, 24.0W Manufacturer: SHENZHEN LINKSOONER TECHNOLOGY CO.,LTD
			Adapter 2: Model No.: BI24GP-240100-AdV Input: 200-240VAC, 50/60Hz, 0.4A Output: 24VDC, 1.0A, 24.0W Manufacturer: Dong Guan Royal Intelligent Co., Ltd
H612F	3m	24V 0.5A	Model No.: BI12GH-240050-BdV Input: 200-240VAC, 50/60Hz, 0.4A Output: 24VDC, 0.5A, 12.0W Manufacturer: Dong Guan Royal Intelligent Co., Ltd

2.5 Technical Information of E.U.T.

Network and Wireless Connectivity		Bluetooth (BLE) WiFi 2.4G: 802.11b, 802.11g, 802.11n(HT20)
Antenna Type	Bluetooth	PCB Antenna
	WiFi	
Antenna Gain (Peak)	Bluetooth	2.45 dBi
	WiFi 2.4G	1.54 dBi

3 Test Summary

3.1 Test Standard

The tests were performed according to following standards:

No.	Identity	Document Title
1	EN 50665: 2017	Generic standard for assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)
2	EN IEC 62311: 2020	Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)

Remark:

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product maybe which result in lowering the emission/immunity should be checked to ensure compliance has been maintained.

3.2 Test Laboratory

Test Laboratory	Shenzhen EU Testing Laboratory Limited
Address	101, Building B1, Fuqiao Fourth Area, Qiaotou Community, Fuhai Subdistrict, Baoan District, Shenzhen, Guangdong, China

4 Test Configuration

4.1 Test Environment

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

Relative Humidity	30% to 60%	
Atmospheric Pressure	86 kPa to 106 kPa	
Temperature	NT (Normal Temperature)	+15°C to +35°C
Working Voltage of the EUT	NV (Normal Voltage)	AC 230V/50Hz for adapter

4.2 Test Equipment

No.	Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal. Interval
1	Electric and Magnetic Field Probe – Analyzer	Narda	EHP-200A	EE-405	2024/2/18	1 Year

4.3 Description of Support Unit

No.	Title	Manufacturer	Model No.	Serial No.
1	Adapter	refer to clause 2.4	refer to clause 2.4	--

5 Test requirements

5.1 Test Limit

Basic restriction for electric, magnetic and electromagnetic fields (0Hz to 300GHz)

Frequency range	Magnetic flux density (mT)	Current density (mA/m ²)	Whole body average SAR(W/kg)	Localised SAR (head and trunk)(W/kg)	Localised SAR (limbs) (W/kg)	Power density, S (W/m ²)
0Hz	40	--	--	--	--	--
>0-1Hz	--	8	--	--	--	--
1-4Hz	--	8/f	--	--	--	--
4-1000Hz	--	2	--	--	--	--
1000Hz-100kHz	--	f/500	--	--	--	--
100kHz-10MHz	--	f/500	0.08	2	4	--
10MHz-10GHz	--	--	0.08	2	4	--
10-300GHz	--	--	--	--	--	10

Notes:

1. f is the frequency in Hz.
2. The basic restriction on the current density is intended to protect against acute exposure effects on central nervous system tissues in the head and trunk of the body and includes a safety factor. The basic restrictions for ELF fields are based on established adverse effects on the central nervous system. Such acute effects are essentially instantaneous and there is no scientific justification to modify the basic restrictions for exposure of short duration. However, since the basic restriction refers to adverse effects on the central nervous system, this basic restriction may permit higher current densities in body tissues other than the central nervous system under the same exposure conditions.
3. Because of electrical inhomogeneity of the body, current densities should be averaged over a cross section of 1cm² perpendicular to the current direction.
4. For frequencies up to 100 kHz, peak current density values can be obtained by multiplying the rms value by $\sqrt{2}$ (=1.414). For pulses of duration t_p the equivalent frequency to apply in the basic restrictions should be calculated as $f_{eq} = 1/(2t_p)$.
5. For frequencies up to 100kHz and for pulsed magnetic fields, the maximum current density associated with the pulses can be calculated from the rise/fall times and the maximum rate of change of magnetic flux density. The induced current density can then be compared with the appropriate basic restriction.
6. All SAR values are to be averaged over any six-minute period.
7. Localised SAR averaging mass is any 10g of contiguous tissue; the maximum SAR so obtained should be the value used for the estimation of exposure. These 10g of tissue are intended to be a mass of contiguous tissue with nearly homogeneous electrical properties. In specifying a contiguous mass of tissue, it is recognised that this concept can be used in computational dosimetry but may present difficulties for direct physical measurements. A simple geometry such as cubic tissue mass can be used provided that the calculated dosimetric quantities have conservation values relative to the exposure guidelines.
8. For pulses of duration t_p the equivalent frequency to apply in the basic restrictions should be calculated as $f_{eq} = 1/(2t_p)$. Additionally, for pulsed exposures, in the frequency range 0.3 to 10GHz and for localised exposure of the head, in order to limit and avoid auditory effects caused by thermoelastic expansion, an additional basic restriction is recommended. This is that SA should not exceed 2mJ kg⁻¹ averaged over 10g of tissue.

Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density Seq(W/m ²)
0-1Hz	--	3.2×10^4	4×10^4	--
1-8Hz	10000	$3.2 \times 10^4 / f^2$	$4 \times 10^4 / f^2$	--
8-25Hz	10000	4000/f	5000/f	--
0.025-0.8KHz	250/f	4/f	5/f	--
0.8-3KHz	250/f	5	6.25	--
3-150KHz	87	5	6.25	--
0.15-1MHz	87	0.73/f	0.92/f	--
1-10MHz	$87/f^{1/2}$	0.73/f	0.92/f	--
10-400MHz	28	0.073	0.092	2
400-2000MHz	$1.375f^{1/2}$	$0.0037f^{1/2}$	$0.0046f^{1/2}$	f/200
2-300GHz	61	0.16	0.20	10

Notes:

- As indicated in the frequency range column.
- For frequencies between 100kHz and 10GHz, Seq, E2, H2 and B2 are to be averaged over any six-minute period.
- For frequencies exceeding 10GHz, Seq, E2, H2 and B2 are to be averaged over any 68/f1.05-minute period (.in GHz).
- No E-field value is provided for frequencies <1Hz, which are effectively static electric fields. For most people the annoying perception of surface electric charges will not occur at field strengths less than 20kV/m. Spark discharges causing stress or annoyance should be avoided.

5.2 Test Result

Output Power

BLE			
Mode	BLE 1M		
	Low	Middle	High
EIRP (dBm)	2.24	3.96	3.88
Note: This report listed the maximal case power value, please refer to 8135EU012712W1 report for more details.			

WiFi 2.4G			
Mode	802.11b	802.11g	802.11n (HT20)
EIRP (dBm)	18.13	14.33	14.31
Note: This report listed the maximal case power value, please refer to 8135EU012712W2 report for more details.			

Assessment Result

Mode	Max. EIRP (dBm)	Antenna Gain (dBi)	Distance (cm)	Limit of Power Density (W/m ²)	Calculated RF Exposure (W/m ²)	Verdict
BLE	3.96	2.45	20	10	0.005	Pass
WiFi 2.4G	18.13	1.54	20	10	0.129	Pass

Conclusion

This EUT is deemed to comply with the reference level limits by Council Recommendation 1999/519/EC, therefore the basic restrictions are compliant with human exposure limits.

STATEMENT

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
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