MPE Report

Report No.:STS2512356H01

Issued for

Shangyou Jiayi Lighting Products Co., LTD

South Shangyou Industrial Park, Huangbu Town, Shangyou county, Ganzhou, China

Product Name:	LED String Lights
Brand Name:	N/A
Model Name:	JY25NET04922401
Series Model(s):	JY25NET02882401,JYXXTTTZZZZ24EE(XX denotes the year when the item created, it can be 00 to 99;TTT denotes the type of the light; ZZZZ denotes the quantity of the LEDs, it can be 0030-0492;24 denotes the input voltage of the chain is 24V; EE denotes that the model names are different.it can be 00 to 99.)
FCC ID:	2BNPO-APPNET
Test Standard:	FCC 47CFR §2.1091

TEST REPORT

Applicant's Name ..... :	Shangyou Jiayi Lighting Products Co., LTD
Address ..... :	South Shangyou Industrial Park, Huangbu Town, Shangyou county, Ganzhou, China
Manufacturer's Name ..... :	Shangyou Jiayi Lighting Products Co., LTD
Address ..... :	South Shangyou Industrial Park, Huangbu Town, Shangyou county, Ganzhou, China

Product Description

Product Name ..... :	LED String Lights
Brand Name ..... :	N/A
Model Name ..... :	JY25NET04922401
Series Model(s) ..... :	JY25NET02882401,JYXXTTTZZZZ24EE(XX denotes the year when the item created, it can be 00 to 99;TTT denotes the type of the light; ZZZZ denotes the quantity of the LEDs, it can be 0030-0492;24 denotes the input voltage of the chain is 24V; EE denotes that the model names are different.it can be 00 to 99.)
Test Standards ..... :	FCC 47CFR §2.1091 447498 D01 Interim General RF Exposure Guidance v06

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.

Date of Test	
Date of receipt of test item.	12 December.2025
Date (s) of performance of tests	12 December.2025~15 December.2025
Date of Issue	23 December 2025
Test Result	**Pass**

Testing Engineer : Aaron Bu

(Aaron Bu)

Technical Manager : Skylar Li

(Skylar Li)

Authorized Signatory : Bovey Yang

(Bovey Yang)

SHENZHEN STS TEST SERVICES CO., LTD. TESTING APPROVAL

TABLE OF CONTENTS

Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	23 December 2025	STS2512356H01	ALL	Initial Issue

1. GENERAL INFORMATION

1.1 GENERAL DESCRIPTION OF THE EUT

<table>
<tr><td>Product Name</td><td>LED String Lights</td></tr>
<tr><td>Brand Name</td><td>N/A</td></tr>
<tr><td>Model Name</td><td>JY25NET04922401</td></tr>
<tr><td>Series Model(s)</td><td>JY25NET02882401,JYXXTTTZZZZ24EE(XX denotes the year when the item created, it can be 00 to 99;TTT denotes the type of the light; ZZZZ denotes the quantity of the LEDs, it can be 0030-0492;24 denotes the input voltage of the chain is 24V; EE denotes that the model names are different.it can be 00 to 99.)</td></tr>
<tr><td>Model Difference</td><td>The following models of equipment we produce are identical in terms of electrical, mechanical, and physical structure; The difference lies in the model name, color, and number of light strings. We ultimately chose JY25NET04922401 as the test model.</td></tr>
<tr><td>Product Description</td><td>The EUT is a LED String Lights
<table>
<tr><td>Operation Frequency:</td><td>802.11b/g/n 20: 2412~2462 MHz</td></tr>
<tr><td>Modulation Type:</td><td>802.11b(DSSS):CCK,DQPSK,DBPSK
802.11g(OFDM):BPSK,QPSK,16-QAM,64-QAM
802.11n(OFDM):BPSK,QPSK,16-QAM,64-QAM</td></tr>
<tr><td>Bit Rate of Transmitter:</td><td>802.11b:11/5.5/2/1 Mbps
802.11g:54/48/36/24/18/12/9/6Mbps
802.11n(20MHz):
65/58.5/52/39/26/19.5/13/6.5Mbps
802.11n(40MHz):
135/121.5/108/81/54/40.5/37/13.5Mbps</td></tr>
<tr><td>Number of Channel:</td><td>802.11b/g/n20: 11CH</td></tr>
<tr><td>Antenna Type:</td><td>Internal antenna</td></tr>
<tr><td>Antenna Gain (dBi):</td><td>6.40dBi</td></tr>
<tr><td>Operation Frequency:</td><td>2402~2480 MHz</td></tr>
<tr><td>Modulation Type:</td><td>GFSK</td></tr>
<tr><td>Radio Technology:</td><td>BLE</td></tr>
<tr><td>Bluetooth Configuration:</td><td>BLE(Support 1M, 2M)</td></tr>
<tr><td>Number Of Channel:</td><td>40</td></tr>
<tr><td>Antenna Type:</td><td>Internal antenna</td></tr>
<tr><td>Antenna Gain (dBi)</td><td>6.40dBi</td></tr>
</table></td></tr>
<tr><td>Power Rating</td><td>DC 24V,1A</td></tr>
<tr><td>Adapter</td><td>Input: AC 120V/60Hz,0.8A
Output: DC 24V,1A</td></tr>
<tr><td>Battery</td><td>N/A</td></tr>
<tr><td>Hardware Version</td><td>N/A</td></tr>
<tr><td>Software Version</td><td>N/A</td></tr>
</table>

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01

2. FCC 47CFR §2.1091 REQUIREMENT

2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.
Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the human exposure to radio-frequency (RF) radiation as specified in 1.1307 (b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm²)
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
3.0-30	1842/f	4.89/f	*(900/f²)
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1.34-30	824/f	2.19/f	*(180f²)
1500 – 100000	--	--	1.0

F= Frequency in MHz

Friss Formula

Friss Transmission Formula: $Pd = (Pout * G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = Distance between observation point and the center of radiator in cm

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

2.3 TEST RESULT

Tune up

Mode	Detector	Tune up Power
WIFI	PK	15±1dBm
BLE	PK	1±1dBm

Protocol	Fre. (GHz)	Separation distance (cm)	Max Tune up power (dBm)	ANT Gain (dBi)	Conducted Output Power (dBm)	Conducted Output Power (mW)	Power Density (mW/cm²)	Limit (mW/cm²)	Ratio	Result
WIFI	2.462	20	16	6.4	22.4	173.78	0.0346	1	0.0346	Pass
BLE	2.480	20	2	6.4	8.4	6.92	0.0014	1	0.0014	Pass

Multiple transmission:

WIFI+BLE=0.0346+0.0014=0.036＜1

Note: 1. The Maxinum power is less than the limit, complies with the exemption requirements.

※※※※※END OF THE REPORT※※※※※