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CNAS L7649

# RADIO TEST REPORT

Report No: STS2104018H02

Issued for

GODOX PHOTO EQUIPMENT CO.LTD

1st to 4th Floor,Building 2/1st to 4th Floor, Building 4 ,Yaochuan Industrial Zone,Tangwei Community,Fuhai Street,Baoan District,Shenzhen China

| | |
|---|---|
| **Product Name:** | LED VIDEO LIGHT |
| **Brand Name:** | Godox |
| **Model Name:** | LD75R |
| **Series Model:** | LD150R, LD150RS |
| **FCC ID:** | 2ABYN028 |
| **Test Standard:** | FCC 47CFR §2.1091 |



Shenzhen STS Test Services Co., Ltd.
A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong Sub-District, Bao'an District, Shenzhen, Guang Dong, China
TEL: +86-755 3688 6288 FAX: +86-755 3688 6277 E-mail:sts@stsapp.com

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APPROVAL

# Test Report Certification

| | | |
|---|---|---|
| **Applicant's Name** | : | GODOX PHOTO EQUIPMENT CO.LTD |
| Address | : | 1st to 4th Floor,Building 2/1st to 4th Floor, Building 4 ,Yaochuan Industrial Zone,Tangwei Community,Fuhai Street,Baoan District,Shenzhen China |
| **Manufacturer's Name** | : | GODOX PHOTO EQUIPMENT CO.LTD |
| Address | : | 1st to 4th Floor,Building 2/1st to 4th Floor, Building 4 ,Yaochuan Industrial Zone,Tangwei Community,Fuhai Street,Baoan District,Shenzhen China |

**Product Description**

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| **Standards** | : | FCC 47CFR §2.1091 |



| | | |
|---|---|---|
| **Date of Test** | : | |
| Date of receipt of test item | : | 06 Apr. 2021 |
| Date (s) of performance of tests | : | 06 Apr. 2021 ~ 12 July 2021 |
| Date of Issue | : | 12 July 2021 |
| Test Result | : | **Pass** |

Testing Engineer : Chris Chen

(Chris Chen)

Technical Manager : Sean She

(Sean she)

Authorized Signatory : Vita Li

(Vita Li)

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## Revision History

| Rev. | Issue Date | Report No. | Effect Page | Contents |
|---|---|---|---|---|
| 00 | 12 July 2021 | STS2104018H02 | ALL | Initial Issue |
| | | | | |

# 1. GENERAL INFORMATION

## 1.1 GENERAL DESCRIPTION OF THE EUT

| | |
|---|---|
| Product Name | LED VIDEO LIGHT |
| Brand Name | Godox |
| Model Name | LD75R |
| Series Model | LD150R, LD150RS |
| Model Difference | 1. LD150RS appearance is square, the output power is 150W, LD150R appearance is rectangle, the output power is 150W, LD75R is square, the output power is 75W;<br>2. LD150RS, LD150R adapter is the same, the same type. LD75R has different adapter;<br>3. LD150R, LD150RS, LD75R RF module is the same, the control circuit is 90% of the same, because each lamp output current, voltage is different, the circuit will have the difference of resistance deployment. |
| Product Description | The EUT is LED VIDEO LIGHT<br>Operation Frequency: 2402~2480 MHz<br>Modulation Type: GFSK<br>Antenna gain: 1.74dBi<br>Antenna Designation: PCB Antenna |
| Adapter | For LD75R Battery power: DC 14.8V<br>For LD150R/LD150RS Battery power: DC 26V |
| Battery | For LD75R Power Unit:<br>Input: 100-240V~50-60Hz 3.0A max<br>Output: 16.8V ⎓ 7.0A, 117.6W<br><br>For LD150R/LD150RS Power Unit:<br>Input: 100-240V~50-60Hz 2.5A<br>Output: 24.0V ⎓ 8.33A, 200W |
| Hardware Version | 20210228X01 |
| Software Version | V1.0 |

1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD
Add. : A 1/F, Building B, Zhuoke Science Park, No.190 Chongqing Road, HepingShequ, Fuyong 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 ($mW/cm^2$) |
|---|---|---|---|
| Limits for Occupational / controlled Exposures | | | |
| 300 - 1500 | -- | -- | F/300 |
| 1500 – 100000 | -- | -- | 5.0 |
| Limits for General population / Uncontrolled Exposure | | | |
| 300 - 1500 | -- | -- | F/1500 |
| 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 $mW/cm^2$

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 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

### 2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.

2.5 TEST RESULT

Turn up

| Mode | Detector | Turn up Power |
|---|---|---|
| BLE 1M | AV | 1±1dBm |
| BLE 2M | AV | 1±1dBm |

ANT Gain (G)

2402-2483.5MHz: 1.74dBi (gain of antenna in linear scale=1.49)

| **Protocol** | **Max Turn up Power (dBm)** | **Max Turn up Power (mW)** | **ANT Gain(gain of antenna in linear scale)** | **Power Density (mW/cm²)** | **Limit (mW/cm²)** | **Result** |
|---|---|---|---|---|---|---|
| BLE 1M | 2 | 1.58489 | 1.49 | 0.00047 | 1 | Pass |
| BLE 2M | 2 | 1.58489 | 1.49 | 0.00047 | 1 | Pass |

※※※※※END OF THE REPORT※※※※※