MPE Report

Applicant	:	**Lily Robotics, Inc.**
Address	:	**374 Harriet Street, San Francisco, California, United States 94103.**
Manufacturer	:	**Weifang GoerTek Electronics Co.,Ltd**
Address	:	**Gaoxin 2 Road,Free Trade Zone,Weifang,Shandong,261205,P.R.China**
Equipment	:	**Lily Camera**
Model No.	:	**Lily Camera**
FCC ID	:	**2AHWSLILY01**
IC ID	:	**21337-LILY01**

■ The test result refers exclusively to the test presented test model / sample.,

■ Without written approval of ***Cerpass Technology (Suzhou) Co.,Ltd***. the test report shall not be reproduced except in full.

■ The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Rules and Regulations Part 15. The test report has been issued separately.

■ The test report must not be used by the clients to claim product certification approval by ***NVLAP*** or any agency of the Government.

Approved by:

Miro Chueh
EMC/RF Manager

Laboratory Accreditation:

Cerpass Technology Corporation Test Laboratory

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NVLAP LAB Code:	**200954-0**
TAF LAB Code:	**1439**

Cerpass Technology (SuZhou) Co., Ltd.

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NVLAP LAB Code:	**200814-0**
CNAS LAB Code:	**L5515**

Radio Frequency Exposure

LIMIT

For 2.4G Band: According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

EUT Specification

EUT	Lily Camera
Frequency band (Operating)	☒ WLAN: 2.412GHz ~ 2.462GHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ Tx/Rx diversity
Max. output power for 2.4G Band	IEEE802.11b: 17.32 dBm (0.0540 W) IEEE802.11g: 14.52 dBm (0.0283W) IEEE802.11n HT20: 13.16 dBm (0.0207W) IEEE802.11n HT40: 11.16 dBm (0.0131W)
Antenna gain (Max)	3.18 dBi for 2.4G Band
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A
Remark: *1. The maximum output power is 17.32dBm (0.0540W) at 2462MHz (with numeric 2.08 antenna gain.) for2.4G band* *2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.* *3. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.*	

**Note: Simultaneous transmission is not applicable for this EUT.*

TEST RESULTS FOR 2.4G BAND

No non-compliance noted.

Calculation

Given $E = \frac{\sqrt{30 \times P \times G}}{d}$ & $S = \frac{E^2}{3770}$

Where *E = Field strength in Volts / meter*
P = Power in Watts
G = Numeric antenna gain
d = Distance in meters
S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

P (mW) = P (W) / 1000 and
d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

Where *d = Distance in cm*
P = Power in mW
G = Numeric antenna gain
S = Power density in mW / cm²

Maximum Permissible Exposure

Modulation Mode	Frequency band (MHz)	Max. Conducted output power(dBm)	Antenna gain (dBi)	Distance (cm)	Power density (mW/cm2)	Limit (mW/cm2)
IEEE802.11b	2412-2462	17.32	3.18	20	0.0223	1
IEEE802.11g	2412-2462	14.52	3.18	20	0.0117	1
IEEE802.11n HT20	2412-2462	13.16	3.18	20	0.0086	1
IEEE802.11n HT40	2422-2452	11.16	3.18	20	0.0054	1