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Report No.: SHEM170400223502
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1 Cover Page

FCC RF Exposure REPORT

Application No.:	SHEM1704002235CR
Applicant:	ZHEJIANG YANKON GROUP CO., LTD.
FCC ID:	2AL76MXLLED
Equipment Under Test (EUT):	
NOTE: The following sample(s) submitted was/were identified on behalf of the client as	
Product Name:	Bluetooth Shop Light
Model No.(EUT):	MXL2048-LED40K8040
Add Model No.:	MXL2048-LED40KXXXX, MXL2049-LED40KXXXX (The first and second X represent CRI. The third and forth X represent CCT and they can be two letters, the range of which is 30~57. For example, 3000K can be represented with 30)
Standards:	FCC Rules 47 CFR §2.1091 KDB 447498 D01 General RF Exposure Guidance v06
Date of Receipt:	2017-04-20
Date of Test:	2017-04-20 to 2017-05-04
Date of Issue:	2017-06-23
Test Result:	Pass*

* In the configuration tested, the EUT detailed in this report complied with the standards specified above.



**Parlam Zhan
E&E Section Manager
SGS-CSTC (Shanghai) Co., Ltd.**

The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of SGS International Electrical Approvals or testing done by SGS International Electrical Approvals in connection with, distribution or use of the product described in this report must be approved by SGS International Electrical Approvals in writing.

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Revision Record				
Version	Chapter	Date	Modifier	Remark
00		2017-06-23		Original

Authorized for issue by:			
Tested By	<i>Leon wu</i>		2017-05-04
	_____		_____
	Leon_wu /Project Engineer		Date
Checked By	<i>Parlam zhan</i>		2017-05-04
	_____		_____
	Parlam Zhan /Reviewer		Date

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3 General Information

3.1 Client Information

Applicant:	ZHEJIANG YANKON GROUP CO., LTD
Address of Applicant:	No.208 Tongjiang Middle Road Shangyu Economic Development Zone . Shaoxing ,Zhejiang, 312300,China
Manufacturer:	ZHEJIANG YANKON GROUP CO., LTD
Address of Manufacturer:	No.208 Tongjiang Middle Road Shangyu Economic Development Zone . Shaoxing ,Zhejiang, 312300,China
Factory:	ZHEJIANG YANKON GROUP CO., LTD
Address of Factory:	No.208 Tongjiang Middle Road Shangyu Economic Development Zone . Shaoxing ,Zhejiang, 312300,China

3.2 General Description of E.U.T.

Product Description:	Fixed product with BT function
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3.3 Technical Specifications

Operation Frequency:	2402MHz-2480MHz
Bluetooth Version:	BT 4.1
Modulation Type:	GFSK, $\pi/4$ DQPSK,8DPSK
Number of Channel:	79
Antenna Type	PCB Antenna
Antenna Gain	0 dBi

3.4 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

588 West Jindu Road, Xinqiao, Songjiang, 201612 Shanghai, China

Tel: +86 21 6191 5666

Fax: +86 21 6191 5678

3.5 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **CNAS (No. CNAS L0599)**

CNAS has accredited SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration Laboratories (CNAS-CL01 Accreditation Criteria for the Competence of Testing and Calibration Laboratories) for the competence in the field of testing.

- **FCC – Registration No.: 402683**

SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered and fully described in a report filed with the Federal Communications Commission (FCC). The acceptance letter from the FCC is maintained in our files. Registration No.: 402683.

- **Industry Canada (IC) – IC Assigned Code: 8617A**

The 3m Semi-anechoic chamber of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 8617A-1.

- **VCCI (Member No.: 3061)**

The 3m Semi-anechoic chamber and Shielded Room of SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-3868, C-4336, T-2221, G-830 respectively.

4 Test Standards and Limits

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency	Power density(mW/cm ²)	Averaging time(minutes)
300MHz~1.5GHz	f/1500	30
1.5GHz~100GHz	1.0	30

5 Measurement and Calculation

5.1 Maximum transmit power

The Power Data is based on the RF Test Report SHEM170400223501.

Test Data:

Test mode	Channel	Peak Power (dBm)	Peak Power (mW)
GFSK	2402	1.55	1.43
	2441	1.82	1.52
	2480	2.00	1.58
$\pi/4$ DQPSK	2402	2.07	1.61
	2441	1.46	1.40
	2480	1.58	1.44
8DPSK	2402	1.18	1.31
	2441	2.31	1.70
	2480	2.40	1.74

5.2 RF Exposure Calculation

The Max Conducted Peak Output Power is 1.74mW. The best case gain of the antenna is 0dBi. 0dBi logarithmic terms convert to numeric result is nearly 1.00

For FCC:

According to the formula $S = \frac{PG}{4R^2\pi}$, we can calculate S which is MPE.

Note:

- 1) P (Watts)
- 2) G (Antenna gain in numeric)
- 3) R = distance to the center of radiation of antenna (in meter) = 20cm
- 4) MPE limit = 1mW/cm²

$$S = \frac{PG}{4R^2\pi} = \frac{1.74 \times 1}{4 \times 400 \times 3.14} = 0.00035 \text{ mW/cm}^2 < 1 \text{ mW/cm}^2$$

So the device is exclusion from SAR test.

6 EUT Constructional Details

Refer to the < External Photos > & < Internal Photos >.

--End of the Report--