# Light & Effects Technology Co., Ltd

# MPE ASSESSMENT REPORT

**Report Type:**
FCC Part §2.1091, §2.1093 and §1.1307(b) assessment report

**Model:**
LE-LP60L12060Q01, LE-LP60L12060D01,
LE-LP40L6060Q01, LE-LP40L6060D01,
LE-LP40L12030Q01, LE-LP40L12030D01

**REPORT NUMBER:**
180503134SHA-002

**ISSUE DATE:**
July 18, 2018

**DOCUMENT CONTROL NUMBER:**
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Total Quality. Assured.

**TEST REPORT**

Report no.: 180503134SHA-002

| | |
|---|---|
| **Applicant:** | Light & Effects Technology Co., Ltd |
| | No. 2 Xinda Road, High-Tech (West) Zone, Chengdu, Sichuan, 611730 |
| **Manufacturer:** | Sunfor Light Co., Ltd |
| | No.2 Xinda Road, High-Tech(West) Zone, Chengdu, Sichuan 611730 |

**FCC ID: 2AG6C-LEP01**

**IC: 23694-LEP01**

**SUMMARY:**

| The equipment complies with the requirements according to the following standard(s) or Specification: |
|---|
| KDB447498 D01 General RF Exposure Guidance v06<br>FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b) |

| **PREPARED BY:** | **REVIEWED BY:** |
|---|---|
| Project Engineer<br>Erick Liu | Reviewer<br>Daniel Zhao |

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# Revision History

| Report No. | Version | Description | Issued Date |
|---|---|---|---|
| 180503134SHA-002 | Rev. 01 | Initial issue of report | July 18, 2018 |
| | | | |
| | | | |

TEST REPORT

# 1 GENERAL INFORMATION

## 1.1 Description of Equipment Under Test (EUT)

| | |
|---|---|
| Product name: | Lettin Essential Panel Light |
| Type/Model: | LE-LP60L12060Q01, LE-LP60L12060D01,<br>LE-LP40L6060Q01, LE-LP40L6060D01,<br>LE-LP40L12030Q01, LE-LP40L12030D01 |
| Description of EUT: | The EUT is a panel light with 2.4G Zigbee, there are three models, we have tested the samples of all models, the model "LE-LP60L12060Q01" is the worst case and we list the result in the report. |
| Rating: | 100-277V AC, 60Hz, 60W for model "LE-LP60L12060Q01, LE-LP60L12060D01";<br>100-277V AC, 60Hz, 40W for model "LE-LP40L6060Q01, LE-LP40L6060D01, LE-LP40L12030Q01, LE-LP40L12030D01" |
| Category of EUT: | Class B |
| EUT type: | ☒ Table top ☐ Floor standing |
| Software Version: | / |
| Hardware Version: | / |
| Sample received date: | June 05, 2018 |
| Date of test: | June 11, 2018– June 28, 2018 |

## 1.2 Technical Specification

| | |
|---|---|
| Frequency Range: | 2400MHz to 2483.5MHz |
| Support Standards: | IEEE 802.15.4 |
| Type of Modulation: | O-QPSK |
| Channel Number: | 15 channels |
| Channel Separation: | 5MHz |
| Antenna Information: | 2.5dBi, PCB antenna |

## 1.3 Description of Test Facility

| | |
|---|---|
| Name: | Intertek Testing Services Shanghai |
| Address: | Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China |
| Telephone: | 86 21 61278200 |
| Telefax: | 86 21 54262353 |

| | |
|---|---|
| The test facility is recognized, certified, or accredited by these organizations: | CNAS Accreditation Lab<br>Registration No. CNAS L0139 |
| | FCC Accredited Lab<br>Designation Number: CN1175 |
| | IC Registration Lab<br>Registration code No.: 2042B-1 |
| | VCCI Registration Lab<br>Registration No.: R-4243, G-845, C-4723, T-2252 |
| | NVLAP Accreditation Lab<br>NVLAP LAB CODE: 200849-0 |
| | A2LA Accreditation Lab<br>Certificate Number: 3309.02 |

# 2 MPE Assessment

**Test result: Pass**

## 2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

| Frequency range | E-field strength (V/m) | H-field strength (A/m) | B-field (uT) | Equivalent plane wave power density $S_{eq}$ ($W/m^2$) |
|---|---|---|---|---|
| 0-1 Hz | - | $3,2 \times 10^4$ | $4 \times 10^4$ | - |
| 1-8 Hz | 10 000 | $3,2 \times 10^4/f^2$ | $4 \times 10^4/f^2$ | - |
| 8-25 Hz | 10 000 | 4 000/f | 5 000/f | - |
| 0,025-0,8 kHz | 250/f | 4/f | 5/f | - |
| 0,8-3 kHz | 250/f | 5 | 6,25 | - |
| 3-150 kHz | 87 | 5 | 6,25 | - |
| 0,15-1 MHz | 87 | 0,73/f | 0,92/f | - |
| 1-10 MHz | $87/f^{1/2}$ | 0,73/f | 0,92/f | - |
| 10-400 MHz | 28 | 0,073 | 0,092 | 2 |
| 400-2 000 MHz | $1,375\ f^{1/2}$ | $0,0037\ f^{1/2}$ | $0,0046\ f^{1/2}$ | f/200 |
| 2-300 GHz | 61 | 0,16 | 0,20 | 10 |

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

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**TEST REPORT**

## 2.2 Assessment Results

Power density (S) is calculated according to the formula:

$S = P / (4\pi R^2)$

Where S = power density in $mW/cm^2$

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 180503134SHA-001:
The maximum radiated power = 5.25dBm = 3.35 mW;
Here R is chosen to be 20cm,

$S = P / (4\pi R^2) = 3.35 / (4 * 3.14 * 20 * 20) = 0.0007\ mW/cm^2 < 1\ mW/cm^2$

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## Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 25 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

********** END **********