

**IEEE C95.1 2005  
KDB 447498 D01 V06  
47 C.F.R. Part 1, Subpart I, Section 1.1310  
47 C.F.R. Part 2, Subpart J, Section 2.1091**

## **RF EXPOSURE REPORT**

**For**

**Photocontroller**

**Model: iSLC3100-7P-C**

**Trade Name: CIMCON**

*Issued to*

**CIMCON Lighting, Inc.  
600 Technology Park Drive, Billerica, MA 01821 USA**

*Issued by*

**Compliance Certification Services Inc.  
Wugu Laboratory  
No.11, Wugong 6th Rd., Wugu Dist.,  
New Taipei City 24891, Taiwan. (R.O.C.)  
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Issued Date: April 17, 2017**



Testing Laboratory  
1309

**Revision History**

| Rev. | Issue Date     | Revisions     | Effect Page | Revised By |
|------|----------------|---------------|-------------|------------|
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# 1. TEST RESULT CERTIFICATION

**We hereby certify that:**

The equipment has been tested by Compliance Certification Services Inc., and found compliance with the requirement of the applicable standards. The test record, data evaluation and Equipment under Test (EUT) configurations represented herein are true and accurate accounts of the measurement of the sample's RF characteristics under the conditions specified in this report.

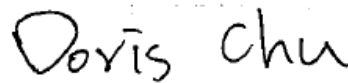
| APPLICABLE STANDARDS  |                         |
|---|-------------------------|
| STANDARD  | TEST RESULT             |
| IEEE C95.1 2005<br>KDB 447498 D03<br>47 C.F.R. Part 1, Subpart I, Section 1.1310<br>47 C.F.R. Part 2, Subpart J, Section 2.1091 | No non-compliance noted |

*Approved by:*



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Sam Chuang  
 Manager  
 Compliance Certification Services Inc.

*Prepared by:*



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Doris Chu  
 Report coordinator  
 Compliance Certification Services Inc.

## 2. LIMIT

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.

## 3. EUT SPECIFICATION

|                                     |   |
|-------------------------------------|---|
| <b>Product</b>                      | Photocontroller   |
| <b>Model Number</b>                 | iSLC3100-7P-C   |
| <b>Model Discrepancy</b>            | N/A   |
| <b>Trade Name</b>                   | CIMCON  |
| <b>Frequency band (Operating)</b>   | <input checked="" type="checkbox"/> FHSS: 902.4 MHz ~ 927.6 MHz<br><input type="checkbox"/> Others  |
| <b>Device category</b>              | <input type="checkbox"/> Portable (<20cm separation)<br><input checked="" type="checkbox"/> Mobile (>20cm separation)<br><input type="checkbox"/> Others                                      |
| <b>Exposure classification</b>      | <input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> )<br><input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> ) |
| <b>Antenna Specification</b>        | FHSS: Antenna Gain : -1.34 dBi (Numeric gain: 0.73) Worst   |
| <b>Maximum Average output power</b> | FHSS : 29.20 dBm (831.764 mW)   |
| <b>Maximum Tune up Power</b>        | FHSS : 30.00 dBm (1000.000 mW)  |
| <b>Evaluation applied</b>           | <input checked="" type="checkbox"/> MPE Evaluation*<br><input type="checkbox"/> SAR Evaluation<br><input type="checkbox"/> N/A  |

**Notes:** For WIFI and BT could not be use as transmit/receive at the same time.

## 4. TEST RESULTS

**No non-compliance noted.**

### Calculation

Given  $E = \frac{\sqrt{30 \times P \times G}}{d}$  &  $S = \frac{E^2}{377}$

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:

$$S = \frac{30 \times P \times G}{377d^2}$$

Changing to units of mW and cm, using:

$$P (mW) = P (W) / 1000 \text{ and}$$

$$d (cm) = d(m) / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where  $d =$  Distance in cm

$P =$  Power in mW

$G =$  Numeric antenna gain

$S =$  Power density in mW / cm<sup>2</sup>

## 5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using  $d = 20$  cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where  $P =$  Power in mW

$G =$  Numeric antenna gain

$S =$  Power density in mW / cm<sup>2</sup>

### FHSS:

| Ch. | Frq.(MHz) | P (mW)   | Gain (num.) | D (cm) | Power density in mW / cm <sup>2</sup> | Limit (mW/cm2) |
|-----|-----------|----------|-------------|--------|---------------------------------------|----------------|
| 0   | 902.4     | 1000.000 | 0.73        | 20     | 0.1453                                | 0.6016         |