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IEEE C95.1 2005 KDB 447498 D03 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: iSLC3500-C

**Trade Name: CIMCON** 

Issued to

CIMCON Lighting, Inc 35 Crosby Drive, Bedford, MA 01730, USA

Issued by

Compliance Certification Services Inc. No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.) Issued Date: April 23, 2019

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only. 除非另有說明,此報告結果僅對測試之樣品負責,同時此樣品僅保留90天。本報告未經本公司書面許可,不可部分複製。

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Report No.: T190304E02-MF

Page 2/7 Rev.: 00

# **Revision History**

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	April 23, 2019	Initial Issue	ALL	Allison Chen



Report No.: T190304E02-MF

Page 3/7 Rev.: 00

# **TABLE OF CONTENTS**

1.	TEST RESULT CERTIFICATION	4
2.	LIMIT	5
3.	EUT SPECIFICATION	5
4.	TEST RESULTS	6
5.	MAXIMUM PERMISSIBLE EXPOSURE	7



Page 4/7
Report No.: T190304E02-MF Rev.: 00

#### 1. TEST RESULT CERTIFICATION

## We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

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

Approved by:

Kevin Tsai

**Deputy Manager** 

Compliance Certification Services Inc.

Komil Tani

Reporter:

Allison Chen

Report coordinator

Compliance Certification Services Inc.

Allison Chen



Page 5 / 7
Report No.: T190304E02-MF Rev.: 00

# 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

EUT	Photocontroller		
Model	iSLC3500-C		
Model Discrepancy	N/A		
Frequency band (Operating)	<ul> <li>☐ IEEE 802.11b/g/n HT20 Mode: 2.412GHz ~ 2.462GHz</li> <li>☐ IEEE 802.11n HT40 Mode: 2.422GHz ~ 2.452GHz</li> <li>☐ Zigbee: 902.4MHz ~ 927.6MHz</li> <li>☐ Others</li> </ul>		
Device category	<ul><li>☐ Portable (&lt;20cm separation)</li><li>☑ Mobile (&gt;20cm separation)</li><li>☐ Others</li></ul>		
Exposure classification	<ul> <li>☐ Occupational/Controlled exposure (S = 5mW/cm²)</li> <li>☑ General Population/Uncontrolled exposure (S=1mW/cm²)</li> </ul>		
Antenna Specification	For Zigbee  Monopole Antenna  Antenna 1 Gain: 2.00 dBi (Numeric gain: 1.58)		
Maximum tune up power	Zigbee 29.00 dBm (794.328 mW)		
Evaluation applied	<ul><li></li></ul>		



Page 6/7 Report No.: T190304E02-MF Rev.: 00

#### 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:

$$P(mW) = P(W) / 1000$$
 and

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

**Yields** 

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

Where d = Distance in cm

P = Power in mW

G = Numeric antenna gain

 $S = Power density in mW / cm^2$ 



Page 7/7
Report No.: T190304E02-MF Rev.: 00

## 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

 $S = Power density in mW / cm^2$ 

#### Zigbee:

ĺ	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm <sup>2</sup> )
ĺ	915.2	794.328	1.58	20	0.2498	1.000

-- End of Report--