

TEST REPORT

Product Name : **Roller Shade Controller T1S**
Model Number : **CD-M03D**
FCC ID : **2AKIT-CDM03D**

Prepared for : Lumi United Technology Co., Ltd
Address : B1, Chongwen Park, Nanshan iPark, Liuxian Avenue,
Taoyuan Residential District, Nanshan District, Shenzhen,
China

Prepared by : EMTEK (DONGGUAN) CO., LTD.
Address : -1&2/F., Building 2, Zone A, Zhongda Marine Biotechnology
Research and Development Base, No.9, Xincheng Avenue,
Songshanhu High-technology Industrial Development Zone,
Dongguan, Guangdong, China

TEL: +86-0769-22807078

FAX: +86-0769-22807079

Report Number : EDG2402200023E00102R
Date(s) of Tests : February 20, 2024 to February 29, 2024
Date of issue : February 29, 2024

Table of Contents

1. TEST RESULT CERTIFICATION	3
2. EUT SPECIFICATION	5
3. TEST REQUIREMENT:	6
RF EXPOSURE EVALUATION	6
4. MEASUREMENT RESULT	7



1. TEST RESULT CERTIFICATION

Applicant : Lumi United Technology Co., Ltd
 Address : B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China
 Manufacturer : Lumi United Technology Co., Ltd
 Address : B1, Chongwen Park, Nanshan iPark, Liuxian Avenue, Taoyuan Residential District, Nanshan District, Shenzhen, China
 EUT : Roller Shade Controller T1S
 Model Name : CD-M03D
 Trademark : N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1093	PASS

The above equipment was tested by EMTEK(DONGGUAN) CO., LTD. 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 FCC § 15.247(i), § 2.1093.

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


Date of Test : February 20, 2024 to February 29, 2024

Prepared by : Warren Deng

Warren Deng /Editor

Reviewer : Tim Dong

Tim Dong /Supervisor

 EMTEK (DONGGUAN) CO., LTD. TESTING

Approve & Authorized Signer : Sam Lv / Manager

Modified History

Version	Report No.	Revision Date	Summary
	EDG2402200023E00102R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	Roller Shade Controller T1S
Model Number:	RSD-M01
Sample:	2#
Device Type:	zigbee
Modulation:	O-QPSK
Operating Frequency Range(s) :	2405-2480MHz
Number of Channels:	16 Channels
Transmit Power Max:	6.72 dBm(0.004699 W)
Antenna Gain:	0 dBi
Power supply:	AC 100-240V, 50/60Hz, 20W
Evaluation applied:	<input checked="" type="checkbox"/> MPE Evaluation <input type="checkbox"/> SAR Evaluation

3. Test Requirement:

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

π =3.1416

R= distance between observation point and center of the radiator in cm

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

4. Measurement Result

Antenna gain:
2.4G: 0 dBi

1M: Antenna A

Channel	Output Power(dBm)	E.I.R.P(dBm)	Target Power W/tolerance (dBm)	Max tune up power(dBm) tolerance	Max tuneup power(mW) tolerance	Power Density at R=20cm (mW/cm2)	Power density Limits (mW/cm2)
1	6.72	6.72	6±1	7	5.01	0.000997	1
8	6.07	6.07	6±1	7	5.01	0.000997	1
15	6.45	6.45	6±1	7	5.01	0.000997	1

According to KDB 447498, no stand-alone required for Zigbee antenna, and no simultaneous SAR measurement is required.

*** End of Report ***