

RF Exposure Evaluation Report

Product : Nanoleaf Remote
Trade mark : Nanoleaf
Model/Type reference : NL26-0001, NL26-XXXX
Serial Number : N/A
Report Number : EED32J00292102
FCC ID : 2AEWY-NL26
Date of Issue : Jan. 30, 2018
47 CFR Part 1.1307
Test Standards : 47 CFR Part 2.1093
KDB447498D01 v06
Test result : PASS

Prepared for:

NANOGRID LIMITED

**ROOM 1405, 135 BONHAM STRAND TRADE CENTRE,
135 BONHAM STRAND, SHEUNG WAN, HONG KONG**

Prepared by:

**Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China**

TEL: +86-755-3368 3668

FAX: +86-755-3368 3385

Tested By:

Tom-chen

Tom chen (Test Project)

Reviewed by:

Kevin Yang

Kevin yang (Reviewer)

Date:

Jan. 30, 2018

Compiled by:

Kevin lan

Kevin lan (Project Engineer)

Approved by:

Sheek Luo

Sheek Luo (Lab supervisor)



Check No.:2457547922

2 Version

Version No.	Date	Description
00	Jan. 30, 2018	Original

3 Contents

	Page
1 COVER PAGE.....	1
2 VERSION.....	2
3 CONTENTS.....	3
4 GENERAL INFORMATION.....	4
4.1 CLIENT INFORMATION.....	4
4.2 GENERAL DESCRIPTION OF EUT.....	4
4.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD.....	4
4.4 TEST LOCATION.....	5
4.5 DEVIATION FROM STANDARDS.....	5
4.6 ABNORMALITIES FROM STANDARD CONDITIONS.....	5
4.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	5
5 SAR EVALUATION.....	6
5.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....	6
5.1.1 Standard Requirement.....	6
5.1.2 Limits.....	6
5.1.3 EUT RF Exposure.....	6
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....	7

4 General Information

4.1 Client Information

Applicant:	NANOGRID LIMITED
Address of Applicant:	ROOM 1405, 135 BONHAM STRAND TRADE CENTRE, 135 BONHAM STRAND, SHEUNG WAN, HONG KONG
Manufacturer:	NANOGRID LIMITED
Address of Manufacturer:	ROOM 1405, 135 BONHAM STRAND TRADE CENTRE, 135 BONHAM STRAND, SHEUNG WAN, HONG KONG
Factory:	Seveco Global Limited
Address of Factory:	No. 1, Jianxiang Street, Hanxishui Village, Chashan Town, Dongguan City, Guangdong Province, P.R. China,

4.2 General Description of EUT

Product Name:	Nanoleaf Remote
Model No.(EUT):	NL26-0001, NL26-XXXX
Test Model No.:	NL26-0001
Trade Mark:	Nanoleaf
EUT Supports Radios application:	BT: 4.2 Signal mode, 2402-2480MHz

4.3 Product Specification subjective to this standard

Frequency Range:	2402-2480MHz
Modulation Type:	GFSK
Test Power Grade:	TX 0
Test Software of EUT:	Secure CRT
Antenna Type:	PCB Antenna
Antenna Gain:	2.15dBi
Hardware Version:	PCB-FZ021-V2.2
Firmware Version:	0.8.4
Power Supply:	Battery:2*1.5(AA)=3.0V
Output Power:	-1.303dBm
	The data refer to the report No.EED32J00292101
Sample Received Date:	Dec. 20, 2017
Sample tested Date:	Dec. 20, 2017 to Jan. 29, 2018
Remark:	The tested sample(s) and the sample information are provided by the client. Model No.:NL26-0001, NL26-XXXX Only the model L26-0001 was tested, 1st, 2nd, 3rd, and 4th "X" denote country or/and region codes where each "X" to be replaced by the alphanumeric codes from 0 - 9 or A - Z, which are only for marketing purposes.

4.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 3368 3668 Fax: +86 (0) 755 3368 3385

No tests were sub-contracted.

FCC Designation No.: CN1164

4.5 Deviation from Standards

None.

4.6 Abnormalities from Standard Conditions

None.

4.7 Other Information Requested by the Customer

None.

5 SAR Evaluation

5.1 RF Exposure Compliance Requirement

5.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

5.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})} \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
$$f(\text{GHz}) \text{ is the RF channel transmit frequency in GHz}$$

Power and distance are rounded to the nearest mW and mm before calculation¹⁷

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion

5.1.3 EUT RF Exposure

The Maximum Conducted Output Power is -1.303dBm;

The best case gain of the antenna is 2.15dBi.

$\text{EIRP} = -1.303\text{dBm} + 2.15\text{dBi} = 0.847\text{dBm}$

8.0dBm logarithmic terms convert to numeric result is nearly 1.215mW

According to the formula. calculate the EIRP test result:

$$\left[\frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm})} \right] \cdot \sqrt{f(\text{GHz})}$$

General RF Exposure = $(1.215\text{mW} / 5 \text{ mm}) \times \sqrt{2.480\text{GHz}} = 0.383$ ①

SAR requirement:

S= 3.0

② ;

① < ②.

So the SAR report is not required.

PHOTOGRAPHS OF EUT Constructional Details

Refer to Report No. EED32J00292101 for EUT external and internal photos.

*** End of Report ***

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.