

RF EXPOSURE REPORT



Applicant: Laipac Technology Inc
25 Valleywood Drive Unit11, Markham, Ontario, Canada, L3R 5L9

Manufacturer: Laipac Technology Inc
25 Valleywood Drive Unit11, Markham, Ontario, Canada, L3R 5L9

Product Name: LooK SPOT 2

Brand Name: LooK SPOT

Model No.: LooK SPOT 2

Model Difference: N/A

Report Number: E2/2021/80084

FCC ID TET-LOOKSPOT2

IC: 11280A-LOOKSPOT2

Issue Date: Dec.10,2021

Date of EUT Received: Jun.15,2021

Approved By

John Yeh

John Yeh

We hereby certify that:

The above equipment was evaluate by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1091 and RSS-102.

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

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
E2/2021/80084	Rev.00	Original.	Dec.10,2021	Viola Su	-

Note:

- 1、The remark "" indicates modification of the report upon requests from certification body.
- 2、Antenna information is provided by the applicant, test results of this report are applicable to the sample EUT received

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	LooK SPOT 2
Brand Name:	LooK SPOT
Model No.:	LooK SPOT 2
Model Difference:	N/A
Hardware Version:	V2.0
Firmware Version:	V1.0
EUT Series No.:	PJ216050001
Power Supply:	12V DC

1.2 Antenna Information:

Antenna Type	Freq. (MHz)	Peak Antenna Gain (dBi)
resonant cavity	2.4GHz	3.5

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2 FCC MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission’s guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.2 ISED Standard Applicable

This submittal(s) (test report) is intended to comply with RSS-102 issue 5 Radio frequency Radiation Exposure requirement.

This is a Mobile device, the MPE is required.

Limits for Maximum Permissible Exposure (MPE)

RF Field Strength Limits for Devices Used by the General Public (Uncontrolled Environment)				
Frequency Range (MHz)	Electric Field (V/m rms)	Magnetic Field Strength (A/m rms)	Power Density (W/m ²)	Reference Period (minutes)
0.003-10	83	90	-	Instantaneous*
0.1-10	-	0.73/ <i>f</i>	-	6**
1.1-10	87/ <i>f</i> ^{0.5}	-	-	6**
10-20	27.46	0.0728	2	6
20-48	58.07/ <i>f</i> ^{0.25}	0.1540/ <i>f</i> ^{0.25}	8.944/ <i>f</i> ^{0.5}	6
48-300	22.06	0.05852	1.291	6
300-6000	3.142 <i>f</i> ^{0.3417}	0.008335 <i>f</i> ^{0.3417}	0.02619 <i>f</i> ^{0.6834}	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	616000/ <i>f</i> ^{1.2}
150000-300000	0.158 <i>f</i> ^{0.5}	4.21 x 10 ⁻⁴ <i>f</i> ^{0.5}	6.67 x 10 ⁻⁵ <i>f</i>	616000/ <i>f</i> ^{1.2}

F = frequency in MHz

* = Based on nerve stimulation (NS).

** = Based on specific absorption rate (SAR)

Maximum Permissible Exposure (MPE) Evaluation

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.3 Power Density Calculation

Frequency (MHz)	E-FIELD dBuV/m	Test Distance (m)	Separation Distance (m)	Distance Factor (dB)	E-FIELD (dBuV/m)	EIRP (dBm)	EIRP (mW)
13.56	4.71	30	0.005	151.13	155.84	5.11940	3.2504

Note

The Field strength of E-FIELD is derived from the physical test in the report number E2/2021/80083.

Distance Factor = 40log(Test Distance (m) / Required Distance (m))

E-FIELD (dBuV/m) = E-FIELD (dBuV/m) + Distance Factor(dB)

EIRP (dBm)= (E-FIELD(dBuV/m)+ 20log(d(m)))-104.7

EIRP(mW)= (10^(EIRP(dBm)/10))

FCC Standalone MPE

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	Max. EIRP (mW)	Power Density (PD) (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
NFC	13.56	20	5.119	0.00	3.250	0.0006	0.979	0.0006
WLAN 2.4G	2437.00	20	13.27	3.50	47.53	0.009	1.000	0.009

ISED Standalone MPE

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	Max. EIRP (mW)	Power Density (PD) (W/m ²)	Limit (W/m ²)	Power Density / Limit
NFC	13.56	20	5.119	0.00	3.250	0.006	2	0.038
WLAN 2.4G	2437.00	20	13.27	3.50	47.53	0.095	5.404	0.018

Note: For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.

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2.4 Collocated Power Density Calculation

FCC Collocated MPE

Operation Mode	Power Density / Limit	Σ (Power Density / Limit)	Threshold
NFC	0.0006	0.00960	1
WLAN 2.4G	0.009		

ISED Collocated MPE

Operation Mode	Power Density / Limit	Σ (Power Density / Limit)	Threshold
NFC	0.038	0.056	1
WLAN2.4G	0.018		

Note:

1. Σ (Power Density / Limit): This is a summation of [(Power Density for each transmitter/antenna included in the simultaneous transmission) / (corresponding MPE limit)].
2. Considering the collocated transmitters, the aggregated (Power Density /limit) is smaller than 1, and MPE of collocated transmitters is compliant

~ End of Report ~

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