

FCC RF EXPOSURE REPORT

FCC ID: 2AIBC-GOLIGHT3

Project No. : 2410C020
Equipment : Light Phone III
Brand Name : Light
Test Model : TLP301
Series Model : N/A
Applicant : The Light Phone Inc.
Address : 19 Morris Avenue Brooklyn, NY 11205 United States
Manufacturer : The Light Phone Inc.
Address : 19 Morris Avenue Brooklyn, NY 11205 United States
Factory : SHENZHEN FUTAIHONG PRECISION INDUSTRY CO.,LTD.
Address : ROOM 101, FOXCONN F7 FACTORY, NO.2, DONGHUAN 2ND ROAD, FUKANG COMMUNITY, LONGHUA STREET, LONGHUA DISTRICT, SHENZHEN, P.R.CHINA

Date of Receipt : Oct. 09, 2024
Date of Test : Oct. 12, 2024 ~ Jan. 23, 2025
Issued Date : Mar. 03, 2025
Report Version : R01
Test Sample : Engineering Sample No.: SSL20241009190
Standard(s) : FCC Guidelines for Human Exposure IEEE C95.1 & KDB 447498 D04 v01

The above equipment has been tested and found compliance with the requirement of the relative standards by BTL Inc.

Prepared by

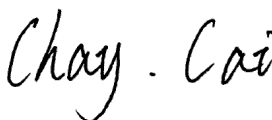
:



Antony Liang

Approved by

:



Chay Cai

Room 108-116, 309-310, Building 2, No.1, Yile Road, Songshan Lake Zone, Dongguan City, Guangdong, People's Republic of China

Tel: +86-769-8318-3000

Web: www.newbtl.com

Service mail: btl_qa@newbtl.com

REPORT ISSUED HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-7-2410C020	R00	Original Report.	Feb. 20, 2025	Invalid
BTL-FCCP-7-2410C020	R01	Update the address of applicant.	Mar. 03, 2025	Valid

1. TEST FACILITY

The test facilities used to collect the test data in this report is at the location of 1-2/F, 4/F, Building A, 1-2/F, Building B, 3/F, Building C, No.3, Jinshagang 1st Road, Dalang Town, Dongguan City, Guangdong People's Republic of China.

BTL's Registration Number for FCC: 747969

BTL's Designation Number for FCC: CN1377

2. GENERAL CONCLUSION

According to FCC §§1.1307 and KDB 447498 D04, the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW).

1) Option A. 1-mW Test Exemption

Per § 1.1307(b)(3)(i)(A), a single RF source is exempt RF device (from the requirement to show data demonstrating compliance to RF exposure limits, as previously mentioned) if the available maximum time-averaged power is no more than 1 mW, regardless of separation distance.

This exemption applies to all operating configurations and exposure conditions, for the frequency range 100 kHz to 100 GHz, regardless of fixed, mobile, or portable device exposure conditions. This is a standalone exemption, and it cannot be applied in conjunction with any other test exemption.

2) Option B. SAR-Based Exemption

A more comprehensive exemption, considering a variable power threshold that depends on both the separation distance and power, is provided in § 1.1307(b)(3)(i)(B). This exemption is applicable to the frequency range between 300 MHz and 6 GHz, with test separation distances between 0.5 cm and 40 cm, and for all RF sources in fixed, mobile, and portable device exposure conditions.

Accordingly, a RF source is considered an RF exempt device if its available maximum time-averaged (matched conducted) power or its effective radiated power (ERP), whichever is greater, are below a specified threshold.

This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

d = the separation distance (cm);

Table B2-Example Power Thresholds (mW)

	Distance(mm)										
	mW	5	10	15	20	25	30	35	40	45	50
Frequency (MHz)	300	39	65	88	110	129	148	166	184	201	217
	450	22	44	67	89	112	135	158	180	203	226
	835	9	25	44	66	90	116	145	175	207	240
	1900	3	12	26	44	66	92	122	157	195	236
	2450	3	10	22	38	59	83	111	143	179	219
	3600	2	8	18	32	49	71	96	125	158	195
	5800	1	6	14	25	40	58	80	106	136	169

3) Option C MPE-Based Exemption

An alternative to the SAR-based exemption is provided in § 1.1307(b)(3)(i)(C), for a much wider frequency range, from 300 kHz to 100 GHz, applicable for separation distances greater or equal to $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. The MPE-based test exemption condition is in terms of ERP, defined as the product of the maximum antenna gain and the delivered maximum time-averaged power. For this case, a RF source is an RF exempt device if its ERP (watts) is no more than a frequency-dependent value, as detailed tabular form in Appendix B. These limits have been derived based on the basic specifications on Maximum Permissible Exposure (MPE) considered for the FCC rules in § 1.1310(e)(1).

**TABLE B.1—THRESHOLDS FOR SINGLE RF SOURCES
SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION**

RF Source Frequency			Minimum Distance			Threshold ERP
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W
0.3	—	1.34	159 m	—	35.6 m	$1,920 R^2$
1.34	—	30	35.6 m	—	1.6 m	$3,450 R^2/f^2$
30	—	300	1.6 m	—	159 mm	$3.83 R^2$
300	—	1,500	159 mm	—	31.8 mm	$0.0128 R^2 f$
1,500	—	100,000	31.8 mm	—	0.5 mm	$19.2 R^2$
Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.						

In the case of fixed RF sources operating in the same time-averaging period, or of multiple mobile or portable RF sources within a device operating in the same time averaging period, if the sum of the fractional contributions to the applicable thresholds is less than or equal to 1 as indicated in the following equation.

$$\sum_{i=1}^a \frac{P_i}{P_{th,i}} + \sum_{j=1}^b \frac{ERP_j}{ERP_{th,j}} + \sum_{k=1}^c \frac{Evaluated_k}{Exposure\ Limit_k} \leq 1$$

Where:

a = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(B) of this section for P_{th}, including existing exempt transmitters and those being added.

b = number of fixed, mobile, or portable RF sources claiming exemption using paragraph (b)(3)(i)(C) of this section for Threshold ERP, including existing exempt transmitters and those being added.

c = number of existing fixed, mobile, or portable RF sources with known evaluation for the specified minimum distance including existing evaluated transmitters.

P_i = the available maximum time-averaged power or the ERP, whichever is greater, for fixed, mobile, or portable RF source i at a distance between 0.5 cm and 40 cm (inclusive).

P_{th,i} = the exemption threshold power (P_{th}) according to paragraph (b)(3)(i)(B) of this section for fixed, mobile, or portable RF source i.

ERP_j = the ERP of fixed, mobile, or portable RF source j.

ERP_{th,j} = exemption threshold ERP for fixed, mobile, or portable RF source j, at a distance of at least λ/2π according to the applicable formula of paragraph (b)(3)(i)(C) of this section.

Evaluated_k = the maximum reported SAR or MPE of fixed, mobile, or portable RF source k either in the device or at the transmitter site from an existing evaluation at the location of exposure.

Exposure Limit_k = either the general population/uncontrolled maximum permissible exposure (MPE) or specific absorption rate (SAR) limit for each fixed, mobile, or portable RF source k, as applicable from §1.1310 of this chapter.

3. PRODUCT INFO

Freq. (MHz)	Field Strength@3m (dBμV/m)	EIRP (dBm)	Distances (mm)	ERP (mW)
13.56	55.04	-40.26	5	0.000057

Note: $EIRP = \text{Field Strength} + 20\log(d) - 104.8$, where d is the measurement distance.

4. TEST RESULTS

Freq. (MHz)	Result Option A
13.56	exempt

Note: SAR and MPE evaluation is not required(For A).

End of Test Report