



## RF Exposure Evaluation

FOR

BRAVOLITE TECH (VN) Co., LTD

LED EMERGENCY WRAP LIGHT

Test Model: WR484040EFLV

Prepared for	:	BRAVOLITE TECH (VN) Co., LTD
Address	:	767 Street, Song May Industrial Park, Bac Son commune, Trang Bom District, Dong Nai Province, Vietnam
Prepared by	:	Shenzhen LCS Compliance Testing Laboratory Ltd
Address	:	101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel	:	(+86)755-82591330
Fax	:	(+86)755-82591332
Web	:	<a href="http://www.LCS-cert.com">www.LCS-cert.com</a>
Mail	:	<a href="mailto:webmaster@LCS-cert.com">webmaster@LCS-cert.com</a>
Date of receipt of test sample	:	June 17, 2025
Number of tested samples	:	2
Sample No.	:	B250530037-1, B250530037-2
Sample number	:	Prototype
Date of Test	:	June 17, 2025 ~ August 11, 2025
Date of Report	:	August 11, 2025



Shenzhen LCS Compliance Testing Laboratory Ltd.

Add: 101, 201 Bldg A &amp; 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,

518000, China

Tel: +(86) 0755-82591330 | E-mail: [webmaster@lcs-cert.com](mailto:webmaster@lcs-cert.com) | Web: [www.lcs-cert.com](http://www.lcs-cert.com)

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RF Exposure Evaluation		
Report Reference No. ....	: LCSA05305091EB	
Date of Issue.....	: August 11, 2025	
Testing Laboratory Name.....	: Shenzhen LCS Compliance Testing Laboratory Ltd.	
Address.....	: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China	
Testing Location/ Procedure.....	: <input checked="" type="checkbox"/> Full application of Harmonised standards <input type="checkbox"/> Partial application of Harmonised standards <input type="checkbox"/> Other standard testing method	
Applicant's Name.....	: BRAVOLITE TECH (VN) Co., LTD	
Address.....	: 767 Street, Song May Industrial Park, Bac Son commune, Trang Bom District, Dong Nai Province, Vietnam	
<b>Test Specification</b>		
Standard.....	: FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06 FCC CFR 47 part1 1.1310 FCC CFR 47 part2 2.1091	
Test Report Form No.....	: TRF-4-E-214 A/0	
TRF Originator.....	: Shenzhen LCS Compliance Testing Laboratory Ltd.	
Master TRF.....	: Dated 2011-03	
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Test Item Description.....	: LED EMERGENCY WRAP LIGHT	
Trade Mark.....	: N/A	
Test Model.....	: WR484040EFLV	
Ratings.....	: Input: AC 120-277V Battery: 6.4V, 3.3Ah, 21.12Wh	
Result .....	: PASS	

Compiled by:

Diamond Lu/ Administrator

Supervised by:

Jack Liu/ Technique principal

Approved by:

Gavin Liang/ Manager



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## RF Exposure Evaluation

Test Report No. : <b>LCSA05305091EB</b>	<u>August 11, 2025</u> Date of issue
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Test Model.....	: WR484040EFLV
EUT.....	: LED EMERGENCY WRAP LIGHT
<b>Applicant</b> .....	: <b>BRAVOLITE TECH (VN) Co., LTD</b>
Address.....	: 767 Street, Song May Industrial Park, Bac Son commune, Trang Bom District, Dong Nai Province, Vietnam
Telephone.....	: /
Fax.....	: /
<b>Manufacturer</b> .....	: <b>BRAVOLITE TECH (VN) Co., LTD</b>
Address.....	: 767 Street, Song May Industrial Park, Bac Son commune, Trang Bom District, Dong Nai Province, Vietnam
Telephone.....	: /
Fax.....	: /
<b>Factory</b> .....	: <b>BRAVOLITE TECH (VN) Co., LTD</b>
Address.....	: 767 Street, Song May Industrial Park, Bac Son commune, Trang Bom District, Dong Nai Province, Vietnam
Telephone.....	: /
Fax.....	: /

<b>Test Result</b>	<b>PASS</b>
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The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.



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## Revision History

Report Version	Issue Date	Revision Content	Revised By
000	August 11, 2025	Initial Issue	---



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## TABLE OF CONTENTS

Description	Page
1. PRODUCT INFORMATION .....	6
2. EVALUATION METHOD AND LIMIT .....	7
4. MPE CALCULATION METHOD .....	8
7. EVALUATION RESULTS .....	8
8. CONCLUSION .....	8
9. DESCRIPTION OF TEST FACILITY .....	9
10. MEASUREMENT UNCERTAINTY .....	9



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## 1. Product Information

EUT	LED EMERGENCY WRAP LIGHT
Test Model	WR484040EFLV
Ratings	Input: AC 120-277V Battery: 6.4V, 3.3Ah, 21.12Wh
Hardware Version	V1.0
Software Version	V1.0
SRD-5.8G	
Frequency Range	5800±75MHz
Modulation Type	FMCW
Antenna Description	Internal Antenna, 3.9dBi(max.)
Exposure category	General population/uncontrolled environment
EUT Type	Production Unit
Device Type	Mobile Device

Note: For a more detailed antenna description, please refer to the antenna specifications or the antenna report provided by the customer.



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## 2. Evaluation method and Limit

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

In accordance with KDB447498D01 for Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on the calculated/estimated, numerically modelled or measured field strengths or power density, is  $\leq 1.0$ . The MPE ratio of each antenna is determined at the minimum test separation distance required by the operating configurations and exposure conditions of the host device, according to the ratio of field strengths or power density to MPE limit, at the test frequency. Either the maximum peak or spatially averaged results from measurements or numerical simulations may be used to determine the MPE ratios. Spatial averaging does not apply when MPE is estimated using simple calculations based on far-field plane-wave equivalent conditions. The antenna installation and operating requirements for the host device must meet the minimum test separation distances required by all antennas, in both standalone and simultaneous transmission operations, to satisfy compliance.

## 3. Limit

### 3.1 Refer Evaluation Method

[ANSI C95.1-1999](#): IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.

[FCC KDB publication 447498 D01 General 1 RF Exposure Guidance v06](#): Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies.

[FCC CFR 47 part1 1.1310](#): Radiofrequency radiation exposure limits.

[FCC CFR 47 part2 2.1091](#): Radiofrequency radiation exposure evaluation: mobile devices.

### 3.2 Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100)*	6
3.0 – 30	1842/f	4.89/f	(900/f <sup>2</sup> )*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minute)
Limits for Occupational/Uncontrolled Exposure				
0.3 – 3.0	614	1.63	(100)*	30
3.0 – 30	824/f	2.19/f	(180/f <sup>2</sup> )*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

\*=Plane-wave equivalent power density



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## 4. MPE Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

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

## 5. Antenna Information

EUT can only use antennas certificated as follows provided by manufacturer;

Internal/External Identification	Antenna type and antenna number	Operate frequency band	Maximum antenna gain	Notes
Internal	InternalAntenna	5800±75MHz	3.9dBi	SRD 5.8G Antenna

## 6. Conducted Power

TX frequency range:  $5800 \pm 75\text{MHz}$

Max. Field Strength:  $82.72\text{dBuV/m}$  @3m

$$\text{EIRP} = \text{E}-104.7 + 20\log D = 82.72 - 104.7 + 20\log 3 = -12.44\text{dBm}$$

Maximum Conducted Output Power:  $-16.34\text{dBm}$

Turn-up:  $-16 \pm 1\text{dBm}$

## 7. Evaluation Results

As declared by the Applicant, the EUT is a wireless device used in a fix application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance,  $r = 20\text{cm}$ , as well as the gain of the used antenna refer to antenna information, the RF power density can be obtained.

Modulation Type	Output power		Antenna Gain (dBi)	Antenna Gain (linear)	MPE (mW/cm <sup>2</sup> )	MPE Limits (mW/cm <sup>2</sup> )
	dBm	mW				
FMCW	-15.0	0.0316	3.9	2.4547	0.00002	1.0000

Remark:

1. Output power including tune-up tolerance;
2. Output power was adjusted to duty cycle at 100% if measured duty cycle less than 98%;
3. MPE evaluate distance is 20cm from user manual provide by manufacturer.

## 8. Conclusion

The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.



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## 9. Description of Test Facility

NVLAP Accreditation Code is 600167-0.

FCC Designation Number is CN5024.

CAB identifier is CN0071.

CNAS Registration Number is L4595.

Test Firm Registration Number: 254912.

## 10. Measurement Uncertainty

Test Item		Frequency Range	Uncertainty	Note
Radiation Uncertainty	:	9KHz~30MHz	±3.10dB	(1)
		30MHz~200MHz	±2.96dB	(1)
		200MHz~1000MHz	±3.10dB	(1)
		1GHz~26.5GHz	±3.80dB	(1)
		26.5GHz~40GHz	±3.90dB	(1)
Conduction Uncertainty	:	150kHz~30MHz	±1.63dB	(1)
Power disturbance	:	30MHz~300MHz	±1.60dB	(1)
Occupied Channel Bandwidth	:	1GHz~40GHz	±5%	(1)

(1). This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

.....THE END OF REPORT.....



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