Atlas Copco (Wuxi) Compressor Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCC MPE assessment report

Model:
HiLight PE 3, HiLight PS 3

REPORT NUMBER:
231200444SHA-002

ISSUE DATE:
Jul 25, 2024

DOCUMENT CONTROL NUMBER:
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TEST REPORT

Report no.: 231200444SHA-002

Applicant:	Atlas Copco (Wuxi) Compressor Co., Ltd. No.45 Ximei Road, Xinwu District, Wuxi, Jiangsu, China
Manufacturer:	FUZHOU CONSSIN LIGHTING CO.,LTD No.6 Tie Ling West Road, Tie Ling Industrial Centralized, Fuzhou City, Fujian Province, 350100 China
FCC ID:	2BBHM-HILIGHT

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

PREPARED BY:	**REVIEWED BY:**
Teddy yin	
Project Engineer Teddy Yin	Reviewer Wakeyou Wang

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Revision History

Report No.	Version	Description	Issued Date
231200444SHA-002	Rev. 01	Initial issue of report	Jul 25, 2024

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	Portable LED Luminaire
Type/Model/PMN/HVIN:	HiLight PE 3, HiLight PS 3
Description of EUT:	The EUT is Portable LED Luminaire. The EUT contains WIFI mode only. Both models are same except for the stand. HiLight PE 3 was tested as representative, and the worst data is listed in the report.
Rating:	100-125V~, 60Hz, Max. 480W
EUT type:	☐ Table top ☒ Floor standing
Software Version:	/
Hardware Version:	/
Sample No.:	0240108-05-001
Sample received date:	Jan 14, 2024
Date of test:	Jan 14~Apr 15, 2024

1.2 Technical Specification

Frequency Range:	2412MHz ~ 2462MHz
Support Standards:	IEEE 802.11b, IEEE 802.11g, IEEE 802.11n-HT20
Type of Modulation:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64-QAM, 16-QAM, QPSK, BPSK) IEEE 802.11n-HT20: OFDM (64-QAM, 16-QAM, QPSK, BPSK)
Channel Number:	11 Channels for 802.11b, 802.11g and 802.11n(HT20)
Data Rate:	IEEE 802.11b: Up to 11 Mbps IEEE 802.11g: Up to 54 Mbps IEEE 802.11n-HT20: Up to MCS7
Channel Separation:	5 MHz
Antenna Information:	-1.27dBi, PCB antenna

1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200

TEST REPORT

Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Registration No.: R-14243, G-10845, C-14723, T-12252
	A2LA Accreditation Lab Certificate Number: 3309.02

2 MPE Assessment

Test result: Pass

2.1 MPE Assessment Limit

Mobile device exposure for standalone operations:

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (uT)	Equivalent plane wave power density S_{eq} (W/m^2)
0-1 Hz	-	$3,2 \times 10^4$	4×10^4	-
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	-
8-25 Hz	10 000	4 000/f	5 000/f	-
0,025-0,8 kHz	250/f	4/f	5/f	-
0,8-3 kHz	250/f	5	6,25	-
3-150 kHz	87	5	6,25	-
0,15-1 MHz	87	0,73/f	0,92/f	-
1-10 MHz	$87/f^{1/2}$	0,73/f	0,92/f	-
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375\ f^{1/2}$	$0,0037\ f^{1/2}$	$0,0046\ f^{1/2}$	f/200
2-300 GHz	61	0,16	0,20	10

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

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2.2 Assessment Results

Power density (S) is calculated according to the formula:

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

Where S = power density in mW/cm^2

P = Radiated transmit power in mW

G = numeric gain of transmit antenna

R = distance (cm)

As we can see from the test report 231200444SHA-001:
The maximum WIFI EIRP = 10.77dBm = 11.94mW;
Here R is chosen to be 20cm,

$S = PG / (4\pi R^2) = 11.94/ (4 * 3.14 * 20 * 20) = 0.0024 mW/cm^2 < 1 mW/cm^2$

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Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

********** END **********