FCC RF Exposure Report

Report No.: SABEKK-WTW-P20080111

FCC ID: 2AARN-DLWPH-8M

Test Model: DLWPH-8M

Series Model: DLWPH-8M-RW

Received Date: Aug. 06, 2020

Date of Evaluation: Oct. 14, 2020

Issued Date: Oct. 21, 2020

Applicant: PHIHONG TECHNOLOGY CO. LTD.

Address: No.568, Fu Xing 3rd Rd., Guishan, Tao Yuan Hsien, 333 Taiwan

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch

Lin Kou Laboratories

Lab Address: No. 47-2, 14th Ling, Chia Pau Vil., Lin Kou Dist., New Taipei City, Taiwan

Test Location: No. 19, Hwa Ya 2nd Rd., Wen Hwa Vil., Kwei Shan Dist., Taoyuan City 33383, Taiwan

FCC Registration / Designation Number: 788550 / TW0003

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Release Control Record

Issue No.	Description	Date Issued
SABEKK-WTW-P20080111	Original Release	Oct. 21, 2020

1 Certificate of Conformity

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Product:	EV charging system module 4G with WI-FI
Brand:	Phihong Technology Co., Ltd.
Test Model:	DLWPH-8M
Series Model:	DLWPH-8M-RW
Sample Status:	Engineering Sample
Applicant:	PHIHONG TECHNOLOGY CO. LTD.
Date of Evaluation:	Oct. 14, 2020
Standards:	FCC Part 2 (Section 2.1091)
References Test Guidance:	KDB 447498 D01 General RF Exposure Guidance v06
	IEEE C95.3 -2002

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's RF characteristics under the conditions specified in this report.
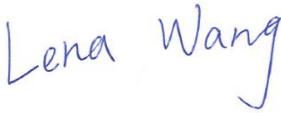
Prepared by : _Lena Wang_ , **Date:** Oct. 21, 2020

Lena Wang / Specialist

Approved by : _____ , **Date:** Oct. 21, 2020

Dylan Chiou / Senior Project Engineer

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
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
1500-100,000	…	…	1.0	30

f = Frequency in MHz; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

pi = 3.1416

r = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.

So, this device is classified as **Mobile Device**.

3   Calculation Result of Maximum Density Power

Function	Frequency Band (MHz)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)
WCDMA Band 2	1850.7-1909.3	24.56	20	0.057	1
WCDMA Band 4	1712.4-1752.6	25.06	20	0.064	1
LTE Band 2	1850.0~1910.0	25.16	20	0.061	1
LTE Band 4	1710.0~1755.0	25.37	20	0.069	1
LTE Band 66	1710.0~1780.0	25.11	20	0.065	1
WLAN	2412-2462	19.79	20	0.019	1

Function	Frequency Band (MHz)	ERP (dBm)	EIRP (dBm)	Distance (cm)	Power Density (mW/cm²)	Limit (mW/cm²)
WCDMA Band 5	826.4-846.6	20.85	23.00	20	0.040	0.551
LTE Band 5	824.0~849.0	21.39	23.54	20	0.045	0.550
LTE Band 12	699.0~716.0	21.10	23.25	20	0.042	0.466
LTE Band 13	777.0~787.0	19.04	21.19	20	0.026	0.520
LTE Band 14	788.0~798.0	18.63	20.78	20	0.024	0.527
LTE Band 71	663.0~698.0	19.29	21.44	20	0.028	0.444

EIRP = ERP + 2.15dB

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. All models are listed as below.

Brand	Model	Difference of WLAN Antenna type
Phihong Technology Co., Ltd.	DLWPH-8M	internal antenna
	DLWPH-8M-RW	external antenna

Conclusion:

The formula of calculated the MPE is:

CPD1 / LPD1 + CPD2 / LPD2 + ……etc. < 1

CPD = Calculation power density

LPD = Limit of power density

WLAN 2.4GHz + WWAN = 0.019 / 1 + 0.069 / 1 = 0.088

Therefore the maximum calculations of above situations are less than the "1" limit.

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