

RF Exposure Evaluation

Product : **PL270 Charger**

Model Number : PL-270-C

Applicant : **LED POWER, Inc.**

Address : 1731 KAISER AVENUE, IRVINE,
California, United States of America 92614

Issued By : Interocean EMC Technology Corp.
Interocean EMC Technology Tin-Fu Laboratory

LAB Location : No. 5-2, Lin 1, Tin-Fu, Lin-Kou Dist., New Taipei City,
Taiwan 244, R.O.C.

Report Issued : 2021/06/18

Prepared by : Ivan Wang
Ivan Wang

Approved: Jerry Chang
Jerry Chang

1 RF Exposure Evaluation

1.1 Portable Device

KDB 680106 D01 RF Exposure Wireless Charging Apps v03r01

1.2 Requirements

According to the item 5 of KDB 680106 D01 RF Exposure Wireless Charging App v03:

(1) Power transfer frequency is less than 1 MHz.

Yes , 120-135 kHz

(2) Output power from each primary coil is less than or equal to 15 watts.

Yes, Max power 15W

(3) The transfer system includes only single primary and secondary coils. This includes charging systems that may have multiple primary coils and clients that are able to detect and allow coupling only between individual pairs of coils.

Yes.

(3) Client device is placed directly in contact with the transmitter.

Yes

(5) Mobile exposure conditions only (portable exposure conditions are not covered by this exclusion).

Yes

(6) The aggregate H-field strengths at 15 cm surrounding the device and 20 cm above the top surface

from all simultaneous transmitting coils are demonstrated to be less than 50% of the MPE limit.

Yes

1.3 Limits

The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

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 (minutes)
(i) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*(100)	≤6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) 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
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

1.4 Test Equipment

Instrument	Manufacturer	Model	Serial No.	Next Cal. Date
Field Strength meter	NARDA	EMR-20	BC-0028	2022/02/16
Electric Field Probe	NARDA	2244/90.21	BF-0045	

Note: The above equipments are within the valid calibration period.

1.5 Description of Auxiliary Equipment

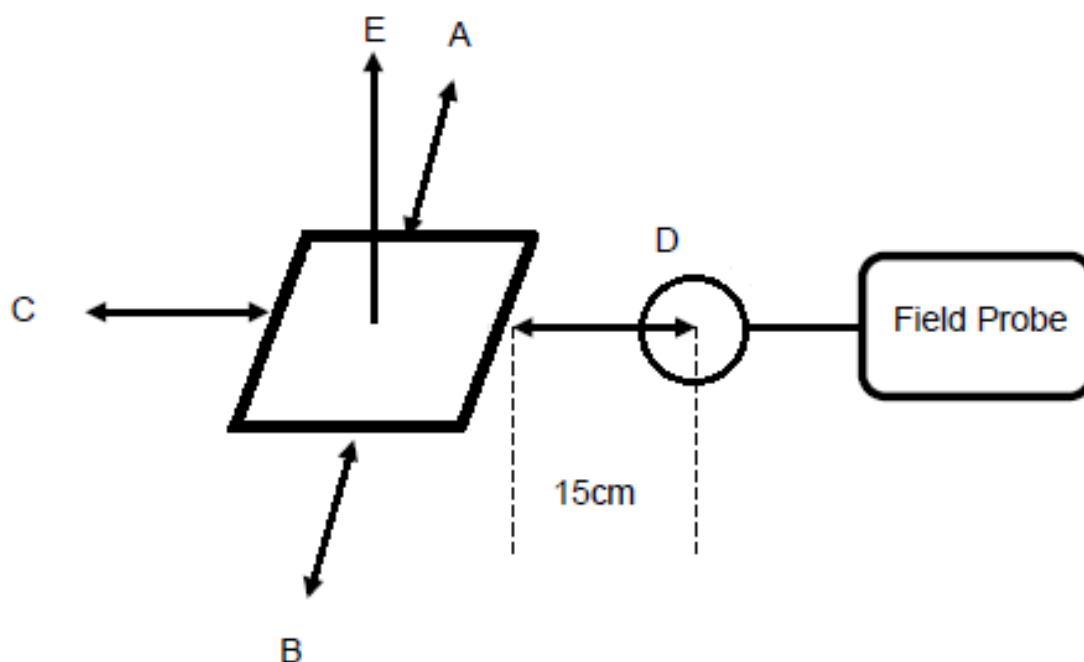
Instrument	Manufacturer	Model	Serial No.
PL270 Led	ARTLED TECHNOLOGY CORP.	PL-270-L	N/A

2 RF Exposure

2.1 Test Procedure:

For devices designed for typical desktop applications, such a wireless charging pads, RF exposure evaluation should be conducted assuming a user separation distance of (H-field & E-field strengths for all sides is 15cm, H-field strengths of top side is 20cm). E and H field strength measurements or numerical modeling may be used to demonstrate compliance. Measurements should be made from all sides and the top of the primary/client pair, with the 15 cm measured from the center of the probe(s) to the edge of the device.

2.2 Test Setup



2.3 Test Result

PASS.

E-Filed Strength at 15 cm from the edges surrounding the EUT (V/m)

Frequency Range (kHz)	Test Position A	Test Position B	Test Position C	Test Position D	Limits (V/m)
120 - 135	0.78	1.71	1.65	1.26	614

E-Filed Strength at 20 cm from the top of EUT (V/m)

Frequency Range (kHz)	Test Position E	Limits (V/m)
120 - 135	0.78	614

E-Filed Strength at 15 cm from the edges surrounding the EUT (A/m)

Frequency Range (kHz)	Test Position A	Test Position B	Test Position C	Test Position D	Limits (A/m)
120 - 135	0.021	0.035	0.018	0.027	1.63

E-Filed Strength at 20 cm from the top of EUT (A/m)

Frequency Range (kHz)	Test Position E	Limits (A/m)
120 - 135	0.030	1.63

3 Photograph of Test

