1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

1.1 General Information

Client Information

Applicant:	LEEDARSON LIGHTING CO., LTD.
Address of applicant:	Xingda Road, Xingtai Industrial Zone, Changtai County, Zhangzhou, Fujian, China
Manufacturer:	LEEDARSON LIGHTING CO., LTD.
Address of manufacturer:	Xingda Road, Xingtai Industrial Zone, Changtai County, Zhangzhou, Fujian, China

General Description of EUT	
Product Name:	LED lamp
Brand Name:	/
Model No.:	A9BR3065WESDZ02
Adding Model(s):	9aZy-BR650ST-Q4Z-xx; A9BR3065WESDZxx
	Where "y" may be "A"-"Z" for different enclosure appearance;
	"xx" may be "00" to "99", which designates for different beam
	angle, color of eyelet contact, color of enclosure, CCT and
	Package style.
FCC ID:	2AB2QA9BR3065WESDZ2

Technical Characteristics of EUT	
Support Standards:	IEEE802.15.4
Frequency Range:	2405-2480MHz
RF Output Power:	10.23dBm (Conducted)
Type of Modulation:	OQPSK
Quantity of Channels:	16
Channel Separation:	5MHz
Type of Antenna:	PCB
Antenna Gain:	-1.08dBi

1.2 Standard Applicable

According to § 1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(a) Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm^2)	Averaging Times $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz: * = Plane-wave equivalents power density

1.3 MPE Calculation Method

$S = (30*P*G) / (377*R^2)$

S = power density (in appropriate units, e.g., mw/cm^2)

P = power input to the antenna (in appropriate units, e.g., mw)

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor is normally numeric gain.

R = distance to the center of radiation of the antenna (in appropriate units, e.g., cm)

1.4 MPE Calculation Result

Maximum Tune-Up output power: 10.23 (dBm)
Maximum peak output power at antenna input terminal: 10.54(mW)
Prediction distance: >20(cm)
Prediction frequency: 2402 (MHz)
Antenna gain:-1.08 (dBi)
Directional gain (numeric gain): 0.78
The worst case is power density at prediction frequency at 20cm: 0.0016(mw/cm^2)
MPE limit for general population exposure at prediction frequency: 1 (mw/cm^2)

Result: Pass