1. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

1.1 General Information

Client Information

Applicant: Feit Electric Company

Address of applicant: 4901 Gregg Road Pico Rivera, California 90660, United States

Manufacturer: Zhejiang Future Lighting Co., Ltd

Address of manufacturer: No.99, Jingfeng Road, Haining Warp Knitting Industrial Zone, Zhejiang

General Description of EUT:

Product Name: Self-Ballasted LED Lamps

Trade Name:

Model No.: 112U800100M0-70-6500

1130800100M0-XX; 1130800090M0-XX; 1130800070M0-XX; 1130800060M0-XX; 1130800050M0-XX; 1130800040M0-XX;

1130800088M0-XX; 1130800072M0-XX;

112U800100M0-XX-YYYY; 112U800090M0-XX-YYYY; 112U800070M0-XX-YYYY; 112U800060M0-XX-YYYY;

Adding Model(s): 112U800050M0-XX-YYYY; 112U800040M0-XX-YYYY;

112 U800088 M0-XX-YYYY; 112 U800072 M0-XX-YYYY;

OM60/927CA/AG (P1); OM60/927CA/AG/3 (P); OM60/950CA/AG (P1); OM60/950CA/AG/3 (P)

("XX" represents Ra, can be 70-100; "YYYY" represents the color

temperature, can be 2000-6500)

Rated Voltage: A120V/60Hz

Power Adapter

FCC ID: SYW-A19AGT2R2

Equipment Type: Fixed device

Technical Characteristics of EUT:

Wi-Fi

Frequency Range:

Support Standards: 802.11b, 802.11g, 802.11n

2412-2462MHz for 802.11b/g/n(HT20)

2422-2452MHz for 802.11n(HT40)

RF Output Power: 17.40dBm (Conducted)

Type of Modulation: DBPSK,BPSK,DQPSK,QPSK,16QAM,64QAM Quantity of Channels: 11 for 802.11b/g/n(HT20); 7 for 802.11n(HT40)

Channel Separation: 5MHz

Type of Antenna: PCB Antenna

Antenna Gain: 1.9dBi

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)	Magnetic Field Strength (H)	Power Density (S) (mW/cm ²)	Averaging Times $ E ^2$, $ H ^2$ or
	(V/m)	(A/m)		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)

S = power density (in appropriate units, e.g., mw/cm²)

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

For Wi-Fi

Maximum Tune-Up output power: 18(dBm)

Maximum peak output power at antenna input terminal: 63.10(mW)

Prediction distance: >20(cm)
Prediction frequency: 2412 (MHz)

Antenna gain: 1.9 (dBi)

Directional gain (numeric gain): 1.55

The worst case is power density at prediction frequency at 20cm: <u>0.0194(mw/cm²)</u> MPE limit for general population exposure at prediction frequency: <u>1 (mw/cm²)</u>

Result: Pass