

INTERTEK TESTING SERVICES

RF Exposure

The Equipment Under Test (EUT) is a Remote Work Light with FHSS function operating at 902-928MHz for 35.56kbps, 50 channels with 0.5MHz channel spacing. The EUT is powered by DC 24V rechargeable adaptor. For more detailed features description, please refer to the user's manual.

Antenna Type: PCB antenna

Antenna Gain: 0dBi

Modulation Type: GFSK

The maximum conducted output power for the EUT is 13.46dBm.

According to FCC Part 2.1091, this unlicensed transmitting devices is categorically excluded from routine environmental evaluation for RF exposure prior to equipment authorization or use, According to the KDB 447498 D01 v06and OET 65, the simple calculation as below:

Radio Frequency Exposure Limit

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)
300-1,500	--	--	f/1500
1,500-100,000	--	--	1.0

Radio Frequency Exposure Calculation Formula

$$S = \frac{PG}{4\pi R^2}$$

where: 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

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

or:

$$S = \frac{EIRP}{4\pi R^2}$$

where: EIRP = equivalent (or effective) isotropically radiated power

TEST RESULTS

Worse case data:

Frequency (MHz)	*Measured RF Output Power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	FCC Limit (mW/cm ²)
902-928	13.46	0	20	0.0044	0.601

Conclusion

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit.

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