Maximum Permissive Exposure

FCC ID: 2A85W-100
Product Name: Skylight
Model No: 100-FRM, 100-CAL

According to FCC CFR 47 §1.1310, the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b).

Table 1 Limits for Maximum Permissible Exposure

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (Minutes)
(A) Limits For Occupational / Control Exposures (f = frequency)				
30-300	61.4	0.163	1.0	6
300-1500	…	…	f/300	6
1500-100,000	…	…	5.0	6
(B) Limits For General Population / Uncontrolled Exposure (f = frequency)				
30-300	27.5	0.073	0.2	30
300-1500	…	…	f/1500	30
1500-100,000	…	…	1.0	30

LEADER ELECTRONICS INC. declares that the product described above has been evaluated and found to comply with the RF exposure limits for humans, as specified based on ANSI/FCC recommendation.

Mode	Max Output Power (dBm)	Tune-up factor	Tune-up max power (dBm)
2.4GHz	23.80	1.01	24
5GHz	11.52	1.042	12.0

**The value presented in the MPE is the maximum tune-up power.

2. MPE Calculation

- WIFI 2.4G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **2.716Numerical,** and the highest power output (P) is **281.838mW**, the power density (S) is **0.152286mW/cm^2.**

RF Exposure Calculations:
$S = (P * G) / (4 * \pi * r^2)$ or $r = \sqrt{(P * G) / (4 * \pi * S)}$

Where :

Based on safety distance (r)=	20	cm		
Highest Power Output (P)=	24.5	dBm =	**281.838**	mW
Antenna Gain (G)=	4.34	dBi =	**2.716**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**= (281.838*2.716)/(4*π*20^2)=**		**0.152286**	mW/cm^2

- WIFI 5G MPE

Based on safety distance (r) **20cm**, the antenna gain (G) is **4.178Numerical**, and the highest power output (P) is **17.783mW**, the power density (S) is **0.014781mW/cm^2**.

RF Exposure Calculations:
$S = (P * G) / (4 * \pi * r^2)$ or $r = \sqrt{(P * G) / (4 * \pi * S)}$

Where :

Based on safety distance (r)=	20	cm		
Highest Power Output (P)=	12.5	dBm =	**17.783**	mW
Antenna Gain (G)=	6.21	dBi =	**4.178**	Numerical
MPE (S) = (P*G) / (4*π*r^2) =	**= (17.783*4.178)/(4*π*20^2)=**		**0.014781**	mW/cm^2

2. MPE Calculation for Simultaneous

MPE			
WIFI 2.4G (mW/cm^2)	WIFI 5G (mW/cm^2)	Total (mW/cm^2)	Limit (mW/cm^2)
0.152286	0.014781	0.167067	≦1

Sincerely Yours,

Ben Cheng

Mr. Ben Cheng
Manager
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