

MPE Calculation

MPE Calculator	SAF Tehnika	Test Number	100203
MPE uses EIRP for calculation. EIRP is based on TX power added to the antenna gain in dBi.			
dBi = dB gain compared to an isotropic radiator.			
	S = power density in mW/cm ²	Antenna Gain (dBi)	40
	Output Power	dBd + 2.17 = dBi	dBi to dBd 2.17
Tx Frequency (MHz)	24,143	(Watts) 0.099339	37.83
		Antenna minus cable (dBi)	40.00
Cable Loss (dB)	0.0	(dBm) 19.97	
Calculated ERP (mw)	602727.844	Radiated (EIRP) dBm	59.971
Calculated EIRP (mw)	993393.364	Radiated (ERP) dBm	57.801
Occupational Limit	5.00000 mW/cm ²	<div style="border: 1px solid black; padding: 5px;"> Power density (S) = EIRP ----- = mW/cm² 4 p r² [r (cm), EIRP (mW)] </div>	
General Public Limit	1.00000 mW/cm ²		
FCC radio frequency radiation exposure limits per 1.1310			
Frequency (MHz)	Occupational Limit	Public Limit	
30-300	1	0.2	
300-1,500	f/300	f/1500	
1,500-100,000	5	1	
FCC radio frequency radiation exposure limits per 1.1310			
Frequency (MHz)	Occupational Limit @ Tx Freq (mW/cm ²)	Public Limit @ Tx Freq (mW/cm ²)	
	1	0.2	
300-1,500	80.47666667	16.09533333	
1,500-100,000	5	1	
EIRP	Distance	Distance	S
milliwatts	cm	inches	mW/cm ²
993393.364	1000.00	393.70	0.07905
993393.364	900.00	354.33	0.09759
993393.364	800.00	314.96	0.12352
993393.364	700.00	275.59	0.16133
993393.364	600.00	236.22	0.21959
993393.364	500.00	196.85	0.31621
993393.364	400.00	157.48	0.49407
993393.364	300.00	118.11	0.87835
993393.364	275.00	108.27	1.04531
993393.364	200.00	78.74	1.97629
993393.364	175.00	68.90	2.58128
993393.364	150.00	59.06	3.51341
993393.364	125.00	49.21	5.05931
993393.364	100.00	39.37	7.90517
993393.364	90.00	35.43	9.75947
Frequency (MHz)	Occupational Limit minimum Distance cm / inches	Public Limit minimum distance cm / inches	
300-1,500	N/A	N/A	
1,500-10,000	125 / 49.2	275 / 108.3	

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 Revision 1

SAF Tehnika AS
 Model: CFIP-24-Lumina
 Test #: 100203 SN: 321580100038
 Test to: FCC Parts 2, 15.249, RSS-210 Annex 12
 File: RFExp Lumina 24

FCC ID#: W9Z-LUMINA-24
 IC: 8855A-LUMINA-24
 SN: 321590100037
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