

rotation rate	rotation rate	rotation rate $\omega = (\text{RPM} \times 2 \times \pi) / 60$	period of rotation $T = 2\pi/\omega$	beam width θ	beam width θ	exposure duration $t = \theta/\omega$	duty cycle t/T
deg/sec	RPM	rad/sec	sec	deg	rad	sec	
330	55	5.7596	1.091	1.5	0.02618	0.004545	0.004167
72	12	1.2566	5.00	1.5	0.02618	0.020833	0.004167
36	6	0.6283	10.0	1.5	0.02618	0.041667	0.004167
18	3	0.3142	20.0	1.5	0.02618	0.083333	0.004167

power	power	antenna gain	EIRP $P \times 10^{(G/10)}$	distance R	power density $PD = \text{EIRP}/4\pi R^2$	duty cycle t/T	average power density $PD \times (t/T)$
P	P	G	mW	cm	mW/cm ²		mW/cm ²
dBm	mW	dBi					
29.0	800	32.5	1422624	22	233.9	0.004167	0.97