



**Prediction of MPE limit at a given distance**

Equation from page 18 of OET Bulletin 65, Edition 97-01

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

where: S = power density  
P = power input to the antenna  
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

Maximum peak output power at antenna input terminal: 16.00 (dBm)

Maximum peak output power at antenna input terminal: 39.81072 (mW)

Maximum antenna gain: 12 (dBi)

Maximum antenna gain: 15.84893 (numeric)

Prediction distance: 20 (cm)

Prediction frequency: 1900 (MHz)

MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)

Power density at prediction frequency: **0.125525** (mW/cm<sup>2</sup>)

Maximum allowable antenna gain: **21.0127** (dBi)

Given the above information, the manufacturer recommends a minimum separation distance of 20 cm. and maximum antenna gain of 21 dBi.