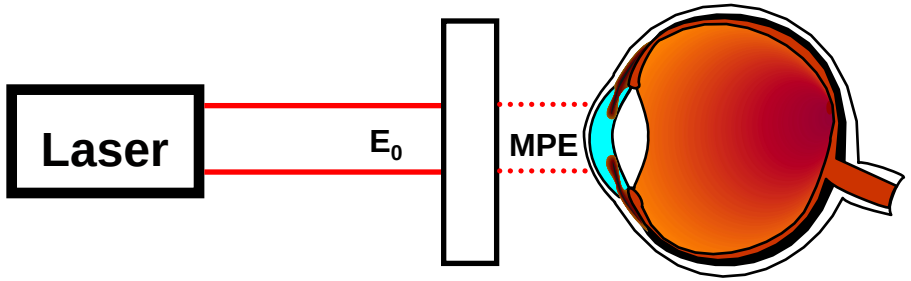
OPTICAL DENSITY OF LASER SAFETY EYEWEAR



Eyewear

OD	% Transmission
0	100%
1	10%
2	1%
3	0.1%
4	0.01%
5	0.001%
6	0.0001%

$$OD = \log \frac{E_0}{MPE}$$

Given:

λ = .488 μm
Φ = 5 W
d = 7 mm
A = 0.4 cm^2
E_0 = (5W)/(0.4 cm^2) = 12.5 W/cm^2

Area of Limiting Aperture (Table 8)

MPE = 2.5 x 10^{-3} W/cm^2 (for 0.25 sec.)

$$OD = \log_{10} \left[\frac{12.5\ W/cm^2}{2.5 \times 10^{-3}\ W/cm^2} \right]$$

OD = 3.7