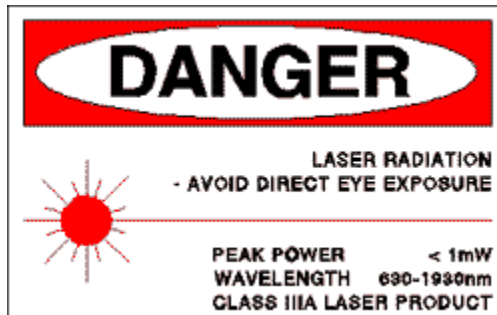


Lasers



Laser work and similar operations create intense concentrations of heat, ultraviolet, infrared, and reflected light radiation. A laser beam, of sufficient power, can produce intensities greater than those experienced when looking directly at the sun. Unprotected laser exposure may result in eye injuries including retinal burns, cataracts, and permanent blindness. When lasers produce invisible ultraviolet, or other radiation, both employees and visitors should use appropriate eye protection at all times.

Determine the maximum power density, or intensity, lasers produce when workers are exposed to laser beams. Based on this knowledge, select lenses that protect against the maximum intensity. The selection of laser protection should depend upon the lasers in use and the operating conditions. Workers with exposure to laser beams must be furnished suitable laser protection. [29 CFR 1926.102(b)(2)]

LENS REQUIREMENTS



Figure 6. Laser Safety Lenses

Every pair of laser safety spectacles or goggles must bear a label with the following information:

- Windows are available in both removable or lift-front designs:
 - Removable windows allow the replacement of damaged windows.

- Lift-front windows may be raised, as needed, or left in the lowered position.

SELECTING LASER SAFETY GLASS

The following table shows the maximum power or energy density for which adequate protection is afforded by safety goggles of optical densities from 5 through 8. [29 CFR 1926.102(b)(2)(i)]

Intensity, CW maximum power density [watts/cm(2)]	Attenuation	
	Optical Density (O.D.)	Attenuation Factor
10(-2)	5	10(5)
10(-1)	6	10(6)
1.0	7	10(7)
10.0	8	10(8)

When lasers emit radiation between two measures of power density (or light blocking capability) lenses must be provided that offer protection against the higher of the two intensities.