

## 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 intensities. A laser beam can produce intensities up to 100,000 times greater than the sun's surface. A laser beam can produce intensities up to 100,000 times greater than the sun's surface. A laser beam can produce intensities up to 100,000 times greater than the sun's surface.

- o 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<br>[watts/cm <sup>2</sup> ] | Attenuation               |                       |
|---|---------------------------|-----------------------|
|   | Optical Density<br>(O.D.) | Attenuation<br>Factor |
| 10(-2)  | 5                         | 10(5)                 |
| 10(-1)  | 6                         | 10(6)                 |