

EH&S Fast Facts

SAFE LASER PRACTICES FOR CLASS 4



The Principal Investigator is responsible for ensuring that lasers under his/her control are used safely. The following control measures are recommended as a guide to safe laser use.

Class 4 Controls

- Strictly control access to laser area or localized enclosure to necessary personnel
- Indoor laser operations should be in a light-tight room with interlocked entrances to ensure that the laser cannot operate while the door is open
- Eye protection is needed for all individuals working in the controlled area
- If laser beam irradiance is sufficient to be a serious skin or fire hazard, suitable shielding or protective clothing must be present between the laser beam and any personnel or combustible material
- Operating the laser or laser system with remote controls and video monitoring or other remote (safe) viewing techniques should be done whenever possible
- Beam shutters, beam polarizers, and beam filters should always be used to limit exposure
- The flashlamps in optical pump systems should be shielded to eliminate any direct viewing
- Backstops should be diffusely reflecting and fire-resistant target materials
- Safety enclosures should be used around microwelding and microdrilling work pieces to contain hazardous reflections
- Microscopic viewing systems used to study the work piece should prevent hazardous levels of reflected laser irradiation back through the optics
- Eye exams are mandatory

Visit www.ehs.ucr.edu for additional information or call EH&S at 827-5528 if you have any questions.