

Laser Safety

Virtually all of the U.S. domestic, as well as, all international standards divide lasers into four major hazard categories called the laser hazard classifications. The classes are based upon a scheme of graded risk and the ability of a beam to cause biological damage to the eye or skin and are assigned one of four broad Classes (I to IV) depending on the potential biological damage.

Control measures shall be devised to reduce the possibility of exposure to the eye and skin to hazardous levels of laser radiation and other hazards associated with the operation of laser devices during operation, maintenance, and service. There are three basic categories useful in laser environments. They are engineering controls, administrative and procedural controls, and general laser control measures. The controls are based upon recommendations from the ANSI Z.136.1 Standard.

Prior to any laser activity, adequate training for all personnel is required. Laser Safety training is available online at the Environmental Health and Safety website. Each laboratory should have written Standard Operating Procedures (SOPs). Also, operators of any Class IIIB or Class IV laser should have a medical examination prior to laser use and an eye examination should be conducted at termination of employment or permanent reassignment to non-laser related duties.

Contacts

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Reference

- [American National Standards for Safe Use of Lasers \(ANSI Z.136.1-1993\)](#)

Lehigh Safety Resources

- [Laser Safety Training](#)