

ENVIRONMENT, SAFETY & HEALTH DIVISION

Chapter 10: [Laser Safety](#)

Quick Start Summary

Product ID: [554](#) | Revision ID: 2589 | Date published: 5 May 2023 | Date effective: 5 May 2023

URL: <https://www-group.slac.stanford.edu/esh/eshmanual/references/laserQuickstart.pdf>

1 Who needs to know about these requirements

The requirements of Laser Safety apply to workers who use low-power lasers, operate high-power lasers, or access labs where such lasers operate; their line management, supervisors, points of contact, and ESH coordinators; project managers; *laser facility program managers*, *system laser safety officers (SLSOs)*, directorate laser leads, and the *laser safety officer (LSO)*; and Occupational Health and Purchasing.

2 Why

High-power lasers (Class 3B and Class 4) used at SLAC can damage the eye and burn skin and expose workers to electrical currents, explosions, and fires; toxic materials and laser-generated air contaminants; and collateral radiation, noise, and ultraviolet light. Low-power lasers can create a startle hazard and temporary flash-blindness, after images, and glare responses.

3 What do I need to know

- Lasers are classified (Class 1, Class 2, Class 3R, Class 3B, or Class 4) based on the level of accessible radiation and the associated ability to cause injury to the eye or skin. For example, a Class 4 laser is capable of causing greater injury than a Class 3B laser. Hazard controls are based on the class.
- Work involving Class 3B or Class 4 lasers requires *qualified laser operators (QLOs)* (or, for limited work, *laser controlled area workers*) under the supervision of approved SLSOs, in *laser controlled areas (LCAs)* with *engineering and administrative controls* developed by line management and the SLSO and approved by the LSO.
- Use of other classes of lasers, including laser pointers, must meet basic safety requirements.

4 When

These requirements take effect 5 May 2023.

5 Where do I find more information

[SLAC Environment, Safety, and Health Manual](#) (SLAC-I-720-0A29Z-001)

- [Chapter 10, “Laser Safety”](#)

Or contact the [program manager](#).