# Auburn University Laser Safety Fact Sheet

# Laser Safety Program







## **Overview**

Auburn University Risk Management and Safety (RMS) is committed to establishing a laser safety program based on the ANSI Z136.1(2000) Standard for the Safe Use of Lasers. All Class 3b and 4 lasers fall under the Laser Safety Program, and they must be registered and added to the inventory. The PI is responsible for completing a laser registration form and for assuring the safe use of the laser. Additionally, Laser Safety Training is required for all users of Class 3b and 4 lasers. Auburn laser safety requirements are specified in the campus Laser Safety Manual. For more information, please contact Sevgi Kucuktas (kucukse@auburn.edu).



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## **Basic Requirements of the Auburn Laser Safety Program**

Laser Safety Training An online Laser Safety training class is available.

#### **Access Control**

Laser facilities must have proper signage at entrances and be properly secured to protect unauthorized persons from laser hazards.

#### **Laser Registration**

All Class 3b and 4 lasers present on Auburn's campus must be registered and tagged for tracking purposes.

**Laser Facility Inspections Risk Management & Safety** periodically inspects all laser facilities.

Personal Protective Equipment (PPE) Laser protective eyewear is required for laser alignments or whenever

there is an open laser beam present.

Standard Operating Procedures (SOP) SOPs are required to document laser alignment and operations for all Class 3b and 4 laser use. The SOPs must include all safety precautions.

#### Laser Incidents

All laser-related incidents must be reported to RMS.

## **Injury Potential**

Class I: Inherently safe; no possibility of eye damage.

Class 2: The blink reflex of the human eye will prevent eye damage. Do not stare at the beam for an extended period.

Class 2a: A region in the low-power end of Class II where continuous viewing produces a burn to the retina. **Class 3a:** Lasers in this class are mainly dangerous when combined with optical instruments. Output power general falls in the 1-5 milli-Watt (mW) range.

**Class 3b:** Lasers in this class may cause damage if the beam enters the eye directly. This is applicable to lasers powered from 5-500 mW. Lasers in this category cause permanent eye injury and protective eye-wear is recommended. At the high-power end, this class may present a fire hazard and can lightly burn skin.

**Class 4:** Lasers in this class have output powers of more than 500 mW in the beam. It causes severe, permanent damage to eye or skin without being magnified by optics or instrumentation.

### Laser Pointer Safety

Most red and green laser pointers used today operate at 1-5 mW output power and are classified as Class 3a laser devices. Possible hazards include startle effects, flash-blindness, glare and afterimages if a person is struck in the eye.

#### **Recommendations:**

Do not purchase a laser pointer that has an output power of greater than 5mW. Make sure the label on the pointer says Class 3a. As the beam power increases from 5mW, the hazard increases proportionally.

Purchase a red-beam laser for use in training or meetings.

Never intentionally direct a laser pointer toward your eyes or the eyes of others.

Do not point a laser pointer at shiny/ mirror-like surfaces. The reflected beam can hit you or someone else in the eye.

Ensure that the laser is inactivated when facing an audience during a presentation.