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Laser Hazard Classification

Classes of Lasers (adopted from ANSI Z-136.1-1993*)

- **Class 1**
 1. Not capable of emitting in excess of the Class 1 AEL
 2. Most lasers in this class are lasers which are in an enclosure which prohibits or limits access to the laser radiation
- **Class 2a**
 1. Lasers in the visible region of the spectrum which do not exceed the Class 1 AEL for exposure less than or equal to 10E3 s
 2. The output of the laser is not intended to be viewed
 3. An example of a Class 2a laser is a supermarket point-of-sale scanner
- **Class 2**
 1. All Class 2 lasers are in the visible region of the spectrum
 2. Continuous wave lasers which can emit accessible radiant power which exceeds the Class 1 AEL for the maximum duration inherent in the laser, but do not exceed 1 mW
 3. Pulsed lasers which can emit accessible radiant power which exceeds the Class 1 AEL for the maximum duration inherent in the laser, but do not exceed the Class 1 AEL for an exposure of 0.25 s
- **Class 3a**
 1. Have output that is greater than or equal to 5 times Class 2 AELs
- **Class 3b**
 1. Continuous wave - between the Class 3a limits and 500 mW
 2. Repetitively pulsed - radiant energy between 30-150 mJ per pulse for visible and infrared, otherwise greater than 125 mJ per pulse; average power less than 500 mW
- **Class 4**
 - Limits exceed Class 3b limits

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