

Laser Pointer - Safety Fact Sheet

Laser pointers have become common tools in the workplace. Most often laser pointers are used as a substitute for the retractable metal pointer used during lectures or presentations. Laser pointers can also be found in many power tools and levels.

Hand-held laser pointers are very popular in Canada. Unfortunately, users are not knowledgeable about the intensity of the light and the effect it may have on the eye.

Background

Laser technology was first developed in the 1960s, and has grown to touch our lives in many ways. We use laser technology in space-age medical equipment, office printers and light shows at rock concerts.

A laser is the strongest source of light ever created by scientists. The beam that comes out of a simple hand-held laser pointer is at least a million times brighter than the average light bulb in your home.

The letters in "laser" stand for Light Amplification by Stimulated Emission of Radiation

Concern about Laser Pointers

These pointers are not dangerous when used with care, but the brightness of laser light can damage the eyes of anyone who looks directly into the beam for more than a minute and a half.

A split-second look can result in a condition called flashblindness. This is similar to the effect you get during flash photography, where the image of the flash remains in your eyes for a few seconds, and then fades away.

Flashblindness is temporary. Your vision returns to normal after a few moments, and there are no long-term effects. However, a longer look can cause serious damage to your eyes. It's worse if the laser beam is being projected through a piece of optical equipment, such as a telescope or a pair of binoculars. In these situations, the laser beam could actually burn a tiny spot, or cut open a blood vessel, on the retina at the back of your eye. In a worst-case scenario, you could go blind.



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Use Common Sense

Laser pointers are not toys. Use them with caution, and only for their intended purpose. So far, there have been no reports of permanent eye damage caused by the use of laser pointers in Canada. We can keep it that way if we use our common sense. By following a few guidelines you can make sure no one gets hurt by a laser pointer.

- When buying a laser pointer, choose one that is labeled Class II and operates with a wavelength between 630 nm and 680 nm. Maximum output should be less than 5m watts
- Choose one that has a clear warning on the label about the potential to cause eye damage. Read the instructions carefully, and follow them closely.
- Choose a laser pointer that stays on only when you apply pressure with your fingers. That way you can never leave the beam on by accident.
- Never point a laser beam at anyone, and never look directly into the beam yourself.
- Never aim a laser pointer at surfaces that would reflect the light back, such as mirrors or mirrored surfaces.
- Never leave a laser pointer where children might get their hands on it.