



WARNING



IF YOU DO NOT POSSESS THE MATURITY AND DISCIPLINE TO ADHERE METICULOUSLY AND CONSISTENTLY WITH LASER SAFETY HANDLING PRECAUTIONS AND DISREGARD THE WARNINGS AND CAUTIONS BELOW, THIS LASER WILL CAUSE SERIOUS PERMANENT INJURY. THIS IS NOT A Hand-Held LASER, AND IT IS **DEFINITELY NOT A TOY.**

Safety Rules	Hazards of Exposure
<p>1 – Do not allow children to use or handle any handheld LASERS. Furthermore, only allow adults to use Hand-Held LASERS after they have understood the responsibilities and risks involved.</p> <p>2 – Never point a LASER at anyone, especially at their face. Even temporary exposure can cause significant and permanent damage to the eye. This is especially true of this 1,000 mw BLUE LASER. LASERS are designed to point at inanimate objects.</p> <p>3 – Always be conscious of where you're pointing. Avoid aiming a LASER at any reflective surfaces. Unintentionally reflected beams can easily result in severe consequences from accidental indirect exposure.</p> <p>4 – Never use your LASER in the vicinity of airports, highways, construction sites or anywhere individuals need to constantly pay attention to their work for their own safety. A split-second distraction, a sudden LASER light in a plane cockpit, for example, can be disastrous. In addition, with BLUE LASERS – even at great distances – can cause eye damage to the pilot of an aircraft, or the driver of a vehicle, which in turn can result in loss of control and subsequent loss of life.</p> <p>5 – Be especially cautious around high-powered LASERS, like green handheld LASERS used for stargazing. They are far stronger than the conventional red LASERS commonly used during lectures. The 1,000mw blue LASER is extremely dangerous on two counts: 1) its high power, and 2) the cumulative detrimental effect of exposure to the blue wavelength.</p> <p>6 – Do not purchase a handheld LASER at all if it does not <u>identify its class or power</u>.</p> <p>7 – Do not purchase a handheld LASER if it does not have a caution or danger sticker on it identifying its class or its power output. Never remove these warning stickers.</p> <p>8 – Always post warning posters if you are going to be using any LASER over 50mw where the general Public can view the beam or its reflections. You must be a Certified LASER Operator and have a permit in most States to conduct LASER Light Shows in dance clubs or in other public places.</p>	<p>Prolonged exposure to blue LASER light can alter and have a diminishing effect on a person's perception of the color green.</p> <p>The blue wavelength can cause a distinct biochemical action in the release of free radicals which are then effectively absorbed by red blood cells in the capillaries. Blue LASER light, 445nm or 470nm is absorbed more effectively by retinal tissue compared to 532nm green or 650nm red LASER light. Direct or indirect skin exposure to blue LASER light is also harmful. The MPE (Maximum Permissible Exposure) for skin for a 3mm beam of this wavelength is approximately 200mw/CM². This LASER can easily generate a power density (irradiance) of about 15 Watts/CM². Therefore, this laser's beam exceeds the skin exposure MPE by (15 / 0.2) = 75 times. At this level of irradiance, skin exposure to the intense blue LASER light can cause delayed-onset necrotizing tissue damage, and can possibly cause cancer. Do not allow bare skin to be exposed, including your face when wearing safety goggles, to light diffusely reflected from any surface closer than several inches. This LASER is a thousand times stronger than sunlight on skin and any type of exposure should be avoided whether it be from the collimated beam or close exposure to its bright diffused reflections.</p> <p>Blue light hazard can cause BLINDNESS and not just color perception issues. The power of this LASER is no joke. At 1 WATT this is a <u>Class IV Laser</u>. Do not allow unprotected eye exposure to diffusely scattered light from the beam terminating on a wall, the floor or other flat surface from this LASER closer than 3 feet.</p> <p>Accidental eye exposure will definitely result in instant retina tissue damage even within just milliseconds of exposure. This means that the normal "aversion reaction" to bright light cannot protect you – by the time you react and turn away, the damage will already have been done. Direct eye contact with the beam or reflections of it will cause instant permanent damage and blindness. In some cases, blindness may take a day or longer for the onset. Unlike instant injury from a bright flash of a red or green LASER, this effect is cumulative. It is also possible that such an exposure could cause retinal degeneration and even loss of vision later in life.</p> <p>Accidental exposure is a very serious issue and would like to reiterate that extreme care, proper safety gear and the necessary safety precautions be followed METICULOUSLY when using this LASER. It is not a <u>toy</u>, it is a high power <u>Class IV 1 Watt LASER</u>. In addition, this LASER must NEVER be used to play with your pets. At close range, this Class 4 beam will cause immediate and irreversible retinal damage. Close proximity to the beam's diffused reflection off floors and walls could potentially cause injury and blindness. In general, DO NOT aim this LASER on yourself, on your skin, on animals, on others or target moving vehicles and airplanes.</p> <p>This Blue LASER should only be handheld by individuals who have appropriate LASER safety training and product familiarity in using <u>Class 4 LASERS</u>. For more information and guidance please refer to ANSI Standard Z136.1 from the American National Standards Institute on the safe use of LASERS.</p>



Blue-light Hazard is defined as the potential for a photochemical-induced retinal injury resulting from radiation exposure at wavelengths primarily between 400nm and 500nm. The mechanisms for photochemical-induced retinal injury are caused by the absorption of light by photoreceptors in the eye. Under normal conditions when light hits a photoreceptor, the cell bleaches and becomes useless until it has recovered through a metabolic process called "the visual cycle". Absorption of blue light, however, has been shown to cause a reversal of the process where cells become unbleached and responsive again to light before they are ready. This greatly increases the potential for oxidative damage. By this mechanism, some biological tissues such as skin, the lens of the eye, and in particular the retina may show irreversible changes induced by prolonged exposure to moderate levels of UV radiation and short-wavelength light. (source: http://en.wikipedia.org/wiki/Blue-light_hazard)