

Laser Pointer Safety Guidance

The misuse of laser pointers (sometimes referred to as laser pens), as reported in the press, has generated public concern over the safety of these devices.

Laser pointers used in the University should be of Class 1, Class 2 as defined in the British Standards for laser safety.

The current standard relating to laser safety are; BSEN 60825-1.

Pointers of a class higher than Class 2 should not be used unless they have been measured and advice on their use has been sought from the Safety, Health and Environment (SHE) team.

Laser standards

The standards for laser safety set out seven classes of laser. These are; Class 1, Class 1M, Class 2, Class 2M, Class 3R, Class 3B and Class 4. The higher the Class number, the greater the power of the laser and the hazard posed by the laser.

The Radiation Protection division of the Public Health England (PHE) considers the professional use of a Class 1 or Class 2 laser pointer as a training aid in the workplace to be justified, and regards these Classes of laser product as being generally adequate for such use. The use of Class 3R lasers up to 5 mW may be justified for some applications in the workplace where the user has received adequate training. PHE has urged Trading Standards authorities to use their powers to remove laser pointers of a higher than Class 2 from the general market. They are however still fairly easy to come by using online retailers and auction sites. Such devices are too powerful for general use as laser pointers and present an unacceptable risk of eye injury in normal reasonably foreseeable use – In 2016 over 157 permanent retinal eye burns have been documented from use of excessive laser pointers.

Staff wishing to purchase laser pointers should only buy from reputable suppliers in the UK who will sell laser pointers only of Class 1 & 2. Pointers should be marked clearly with the Class assigned to them under the British Standard. Staff should also review existing laser pointers which are in use to confirm that they are Class 1 & 2 and are marked accordingly. Individuals using or wishing to use a hand held laser pointer which has not been measured to confirm its suitability for use should liaise with the safety team (SHE) in the first instance to determine if measurement of the pointer is necessary.

Green Laser pointers are visually brighter than red ones for the same optical power. This is because the green wavelength is close to the peak sensitivity [spectral response](#) of the eye. Some cheap red pointers are actually comparatively dim and not seen by all students in a well-lit lecture room. Further advice on existing laser pointers and on purchasing new pointers can be obtained from the SHE office.

Misuse of laser pointers / pens

“Recreational” use of laser pens and pointers is strictly prohibited. Misuse of a laser pointer in such a manner that it could cause harm to anyone is strictly forbidden.

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November 2017