

## Non-Ionising Radiation (Optical)

For practical purposes the non-ionising radiation spectrum is divided into 'optical radiations' covering UV, visible and infra-red, and 'electromagnetic fields' covering time varying fields and static fields.

### Optical Radiation from the Sun

Natural radiation from the sun can be harmful and common sense should guide us for to avoid excessive exposure, in particular to UV radiation. A good guide to this entitled "[Sunsense](#)" can be found on the Public Health England website.

In addition, the HSE has Publications that give advice on exposure to the sun:

- [Keep Your Top On](#) - The Health Departments of England, Scotland and Wales have endorsed this advice on the health risks from working in the sun.
- [Sun protection: advice for employers of outdoor workers \(INDG337, 04/01\)](#). This gives advice to employers on reducing the health risks to their employees when they are working outside in the sun.

So, apart from the general duties with regard to health and safety in the Health and Safety at Work etc Act 1974, the specific regulations above dealing with optical radiations are confined to artificial optical radiation sources.

### Artificial Optical Radiation

Artificial Optical Radiation (AOR) is defined as radiation in the wavelength range from 100 nm - 1 mm; anything less than 100 nm is ionising Ultraviolet and greater than 1 mm is microwave radiation.

Sources of Artificial Optical Radiation include:

- lasers
- Non-laser broadband sources (including light emitting diodes, LEDs)
- Ultraviolet (UV)
- Infrared (IR)
- Bright lights

The [Control of Artificial Optical Radiation at Work Regulations 2010, SI No. 1140](#) were implemented into UK law in April 2010; they enacted the [Artificial Optical Radiations Directive 2006/25/EC](#).

The Health Protection Agency, Radiation Protection Division assisted the EU by providing a very extensive and useful non-binding guide on AOR to accompany the Directive [Non-binding guide to good practice for implementing Directive 2006/25/EC](#).

Within the UK, the HSE produced a shorter eight page guide [Guidance for Employers on the Control of Artificial Optical Radiation at Work Regulations \(AOR\) 2010](#). The guidance was prepared to help employers to decide what they needed to do to protect workers and comply with the Regulations.

All hazardous sources should already have been identified by risk assessments under the Management of Health and Safety at Work Regulations 1999.