LASER SIGNS AND LABELS

DESIGNATED LASER AREAS

The points of access to areas in which Class 3B or Class 4 laser products are used must be marked with warning signs complying with BS 5378 and the Health & Safety (Safety Signs and Signals) Regulations 1996. The signs shall incorporate the following information:

1) hazard warning symbol

2) highest class of laser in the area

3) responsible person with contact details

For the area signs the specifications are quite simple -50% of the area should be yellow and the width of the black border is 0.06 x the length of the side.
A more detailed specification is given for the symbol used in labels, see spec on p65 of BS EN 60825-1

LASER LABELS

Laser labels are required for all laser products except for low power Class 1 devices. They are designed to give a warning of laser radiation, the class of laser, basic precautions and the laser's characteristics.

The laser warning uses the same symbol as for the door sign in an appropriate size for the laser to be labelled and should be clearly visible. Supplementary information should be black text on a yellow background in accordance with BS EN 60825-1.

Where the size of the laser product does not permit the affixing of a reasonably sized label, a sign should be displayed in close proximity to the laser with all appropriate information on.

Information over and above that specified by BS EN 60825-1 is required for Class 1 products that are Class 1 by engineering design. For these types of laser product we specify that they are totally enclosed systems and give details of the laser enclosed. The BS requirement is just to describe them on the outside as a Class 1 laser product.

Details of wording required on explanatory labels is given below.

Class 1 (by engineering design)

No hazard warning label.

Explanatory label bearing the words: **CLASS 1 LASER PRODUCT**
A TOTALLY ENCLOSED LASER SYSTEM
CONTAINING A CLASS ..... LASER

In addition each access panel or protective housing shall bear the words:-

CAUTION - CLASS .... LASER RADIATION WHEN OPEN

with the appropriate class inserted and then followed by the hazard warning associated with that class of laser (see warning statements in following labels).

Class 1M

No hazard warning label.

Explanatory label bearing the words:

NB-'Optical Instruments' can be supplemented with either 'Binoculars or Telescopes' (for a large diameter collimated beam) or 'Magnifiers' (for a highly diverging beam).

Class 2

Label with hazard warning symbol.

Explanatory label bearing the words:-

Class 2M

Label with hazard warning symbol.

Explanatory label bearing the words:-

NB-'Optical Instruments' can be supplemented with either 'Binoculars or Telescopes' (for a large diameter collimated beam) or 'Magnifiers' (for a highly diverging beam).

Class 3R

Label with hazard warning symbol.

Explanatory label bearing the words:-

For λ 400nm-1400nm ONLY.

NB - For other λ replace 'AVOID DIRECT EYE EXPOSURE' with 'AVOID EXPOSURE TO BEAM'

Class 3B

Label with hazard warning symbol.

Explanatory label bearing the words:-

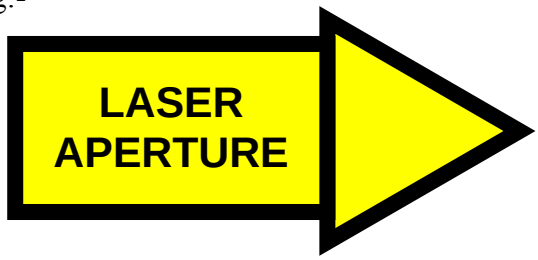
Class 4

Label with hazard warning symbol.

Explanatory label bearing the words:-

Aperture Labels for Class 3R, Class 3B & Class 4 lasers

Each Class 3R, Class 3B and Class 4 laser product shall display a label close to where the beam is emitted bearing the words 'LASER APERTURE' or 'AVOID EXPOSURE - LASER RADIATION IS EMITTED FROM THIS APERTURE'. This label can take the form of an arrow if this displays more meaning:-



Radiation Output and Standards Information

All laser products, except for low power Class 1 devices, shall be described on an explanatory label with details of :-

- maximum output
- emitted wavelength
- whether laser beam is visible, invisible or both
- pulse duration (if appropriate)
- name and publication date of classification standard

It may be found useful to also put on the labels details of the type of laser and the lasing medium, although this is not a BS requirement.

Information put on explanatory labels may be combined and LED shall be used to replace the word 'laser' when appropriate.