Our general purpose laser safety eyewear range represents excellent value for money despite making no compromises on quality or performance. The polycarbonate filters are robust enough to withstand all but the highest laser powers and are provided in a wide range of different wavelength formats. With over 125 laser filters and easy-to-wear frames that fit any face, there’s a pair of laser safety eyewear for every user and every application.

The unprotected human eye is extremely sensitive to laser radiation and can be permanently damaged from direct or reflected beams. Protective eyewear in the form of goggles, glasses, or shields provides the principal means to ensure against ocular injury, and must be worn at all times during laser operation of Class IIIb (CDRH), 3B (IEC) or higher lasers.

Selecting the right type of eyewear is critical in reducing the amount of incident light to safe levels, while transmitting sufficient light for good vision. The following flowchart summarizes the decision-making plan for selecting the right protective eyewear for your laser and application. A custom solution can also be developed quickly and at low cost. The pricing is filter dependent and independent of the frame style.

Global Laser supply laser safety eyewear for medical, dental, military, aerospace, scientific, communications and industrial applications.

CE-certified Laser Safety Eyewear meet US and international laser safety standards, including ANSI Z136.1, EN207/EN208/EN60825 and Z87.1 for impact.
Choosing Eye Protection

1. **Facts - Specifications of the Laser and conditions of use.**
   - Consult your laser’s manufacturer’s userguide for eyewear requirements.
   - Calculate OD and power density requirements based on wavelength, power in watts (or for pulsed systems, using wavelength, power in joules, pulse length in seconds and pulse repetition rate in hertz), using laser safety software such as Lazan, LaserSafePC, Easy Haz or the LIA’s Laser Hazard Evaluator Software.
   - Consider: Are there engineering controls limiting exposure to the beam? Is partial beam visibility required for alignment of visible beams? Is protection required for intra-beam exposure or is protection primarily for diffuse or scattered energy? For medical applications, are there different eyewear considerations for the Clinician and patient (in terms of VLT-visible light transmittance, full orbital coverage, weight of eyewear)? Will filter colour / colour rendition affect use? Are there multiple laser systems in the area, or is the eyewear designated for a single system?

2. **Filter - OD, damage threshold and Visible Light Transmittance (VLT) requirements.**
   - Make sure the filter will reduce possible energy exposure to below the Maximum Permissible Exposure (MPE).
   - Check the Photopic Visible Light Transmittance (VLT) of the filter. VLT is the percentage of visible light transmitted through a filter, calculated against the spectral sensitivity of the eye to daylight. The higher the better. VLTs below 20% should be used in well-illuminated working environments.

3. **Frame - Style and mode of wearing.**
   - Rule #1: if the glasses are uncomfortable, users will be tempted to not wear them.
   - Rule #2: Vanity rules, even in the lab. Users will wear what they like.
   - Many frames are designed to fit-over prescription glasses. Some are universal, fitting well for those who do and those who do not wear prescription glasses.
   - Ensure that the selected frame is face-forming, well-fitting with no gaps. Models with side-shields increase ambient light, cut down on obstructed viewing and decrease the non-beam hazard of walking into a door.
   - Polymer filters are available in the most variety of frames, often with the widest field of view and full angular coverage.

4. **Fit - adjustability, comfort, vanity.**
   - Repeat of Rule #1: If the goggles don’t fit, users won’t wear them.
   - Repeat of Rule #2: Users won’t wear what doesn’t fit well or what they don’t like.

5. **Factors - additional considerations.**
   - Eye protection is only effective when worn. It’s of no use if it’s sitting on the shelf.
   - If eye protection is too heavy, poorly fitted, poorly designed or the VLT is too low, users will make the wrong choice: not to wear it.
   - Risk assessment must be part of the equation, use engineering controls to reduce the risk.
   - Filter technical data, including batch data, absorption characteristics, test reports, CE certificates and documentation of conformity should be available upon request or online.
   - Consider the source. You only get two eyes.
Fitover Style

Small universal fit, comfortable over prescription glasses or alone, offering a full field of view.

Medium or Large universal fit, comfortable over prescription glasses or alone. Modern styling and comfort-fit temples.

Medium or Large universal fit, comfortable over prescription glasses or alone, offering a full field of view. Adjustable temples.

Extra Large universal fit, comfortable over prescription glasses or alone, offering a full field of view.

Medium universal fit, in Retro styling. Insert for RX or secondary filter.

Medium universal fit, comfortable over prescription glasses or alone. Adjustable temples; Flip down RX or secondary filter.

www.globallasertech.com

Switchboard: +44 (0)1495 212213 | UK Sales Office +44 (0)1495 322350
Wraparounds Style

Universal soft comfort fit goggle with insert for RX or secondary filter. Anti-fog venting and adjustable strap.

Mediun modern style wraparounds with wide field of view, comfort-fit temples and a faceform fit.

Medium universal soft comfort fit goggle with Anti-fog venting and adjustable strap. Comfort able over prescription glasses or alone.

Medium modern style wraparounds with comfort-fit temples and nose pads, rimless edges and faceform fit. Insert for RX or secondary filters.

Pediatric or Petite wraparounds with slender faceform fit

Medium modern style wraparounds with comfort-fit temples and nose pads for a faceform fit.

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Switchboard: +44 (0)1495 212213 | UK Sales Office +44 (0)1495 322350
Caution

Never look directly into the path of a laser. The laser safety eyewear offers protection against incidental exposure to specified beam energy only. Consult a laser safety officer, appropriate laser safety standards and/or laser system documentation to ensure correct eyewear and safe laser use. The use of incorrect eyewear may lead to serious personal and/or blindness.

Please note: Global Laser reserve the rights to change descriptions and specifications without notice.