



Features of LIA's Advanced Laser Safety Hazard Evaluator Software

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1. Larger display (800 x 600) with Toolbar
2. Simultaneously displays power and energy scroll bars on screen.
3. Customizable and restorable default parameters.
4. In addition to CW, single pulse and repetitively pulsed lasers, calculates hazards from pulse groups.
5. Displays average power per exposure and average power per group on screen.
6. Determines classification according to new classification scheme in addition to original.
7. For lower power systems, determines which of the three rules determines hazard class for repetitively pulsed lasers.
8. Determines MPE according to both photochemical or thermal effects and states which is the more dominant effect.
9. Determines MPE and classification at most hazardous distance from laser, with or without the use of optical viewing aids, even if beyond normal evaluation distances.
10. Allows use of custom optics when calculating hazards from viewing aids.
11. Calculates hazards for diffuse reflections and when a lens is used to focus the laser beam.
12. Calculates exposure at various distances from the laser and easily switches between average power and energy per pulse for repetitively pulsed lasers.
13. Calculates hazards from rectangular and elliptical beams for either a top-hat or Gaussian profile.
14. Calculates hazards from extended sources expressed either as an angle or as a physical size at a location behind or at the laser exit port.
15. Calculates hazards from collimated diode lasers.
16. Adjusts source size for extended source lasers according to the distance from the laser exit port.
17. Easily creates customizable multi-page report:
 - Lists all laser parameters and allows several lines of user input.
 - Allows either standard or custom exposure durations for each type of hazard.
 - Displays hazards from custom optics or standard optics or both.
 - Allows the use of custom optics for determining hazard class.
 - Displays hazards with an external lens if desired.
 - Displays nominal ocular hazard distance (NOHD) with and without optics including custom optics.
 - Displays nominal hazard zone (NHZ) for ocular or skin diffuse reflections.
 - Displays necessary optical density (OD) for unaided viewing, aided viewing and viewing with custom optics.
 - Calculates exposure, MPE, and OD for the eye and skin at standard distances and up to two additional distances.
 - Displays hazards in terms of radiant exposure per pulse, irradiance, peak irradiance, or pulse group energy when groups of pulses are treated as one pulse.
 - Displays details of laser classification including average power, peak power energy per pulse, energy within 0.25 s for CW lasers and energy per group for pulse groups.
 - Displays only the elements that are desired and can be downloaded to a file.
18. Runs under Windows 95, Windows 98, Windows 2000, Windows NT, Windows XP.