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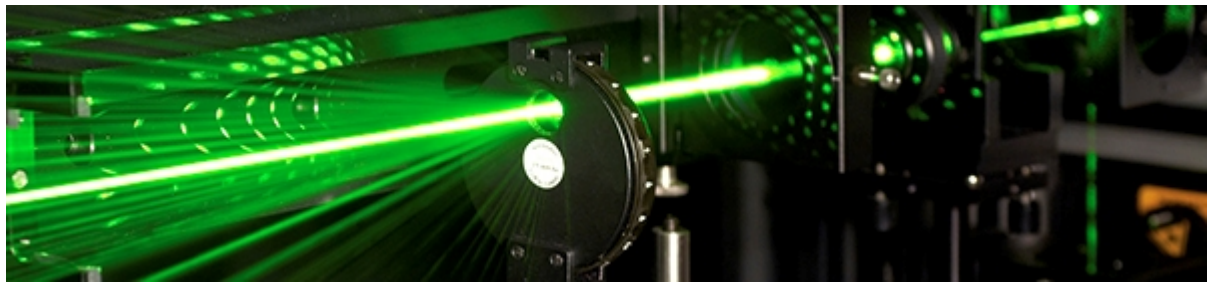

Laser, LED & Lamp Safety / Newsletter 2023/01

New Whitepaper: Classification of scanned emission laser products as extended source

Dr. Karl Schulmeister authored a whitepaper on the AEL analysis of extended sources produced by emissions from a scanner under IEC 60825-1. In the 68-page document, a systematic approach to analyse extended sources via variation of the angle of acceptance as well as emission duration is presented. The discussion, proposing dedicated symbols, is also relevant for stationary retinal images, not only for time-varying retinal images that are created by scanned emission and some arrays.

The Seibersdorf Laboratories team will be happy to support or perform AEL calculations, as well as testing of products in the accredited test house.

>> Link to Whitepaper download

New standard IEC 62471-6: Photobiological safety of lamp systems emitting ultraviolet radiation

In October 2022, IEC 62471-6 was published. The standard defines safety requirements for products emitting UV radiation such as germicidal lamp systems, insect light traps and to excite fluorescence. A European version EN IEC 62471-6 is currently in the final draft stage.

The risk group emission limits are the same as in IEC 62471, however, Part 6 defines product-type specific classification distances as well as requirements for user information and labeling.

>> Link to IEC webstore with information on the scope and content

New standard IEC 62471-7: Photobiological safety for light sources and luminaires primarily emitting visible radiation

In February 2023, IEC 62471-7 was published. The standard applies to all lighting and signaling products, both for lamps (the general term “light sources” is used, which includes lamps) as well as luminaires (what is referred to as lamp systems in IEC 62471). Luminaires are categorised

according to the blue-light hazard effective radiance. For the high radiance category BLH-C, which includes stage lighting and car headlamps, the classification distance of 1 meter has been defined. The retinal thermal limit only needs to be considered for high-radiance products. For the retinal thermal limit, the updated weighting function R(lamda), as defined in IEC 62471-5, is referenced. The identical European version EN IEC 62471-7 has already also been published in March 2023.

The Seibersdorf Laboratories test house team is happy to offer testing based on IEC 62471-7.

>> Link zu IEC webstore

New FDA Guidance for SLA laser products

The FDA has issued guidance to clarify issues related to surveying, leveling and alignment (SLA) laser products with respect to compliance with FDA's performance standard regulations.

>> CDRH-FDA Guidance document download

New edition of ANSI Z136.1

The 2022 edition of ANSI Z136.1 has been published in March 2023 and is available from the LIA website. The LIA website also provides a list of the main changes compared to the 2014 edition. With respect to updates of exposure limits, the MPEs that apply to protect the cornea, i.e. in the UV and the wavelength range above 1400 nm feature dedicated values for exposure durations between 100 fs and 1 ns. The updated UV-photochemical limit for wavelengths less than 260 nm accounts for the respective wavelength dependence. The limits applicable to protect the retina were not changed.

>> Link to LIA website

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