

NEW

Photobiological safety

GL PSM SYSTEM 200 – 800nm

World's first compact prefigured solution for blue light hazard assessment.
Affordable & laboratory precision.



Product Classification of the Photobiological Safety of Lamp Systems in accordance with (IEC) EN 62471 and EN 14255-1

Calculated values of hazard **to skin:**

EB, EBK, ES, EUVA, EUV, EIR Eskin

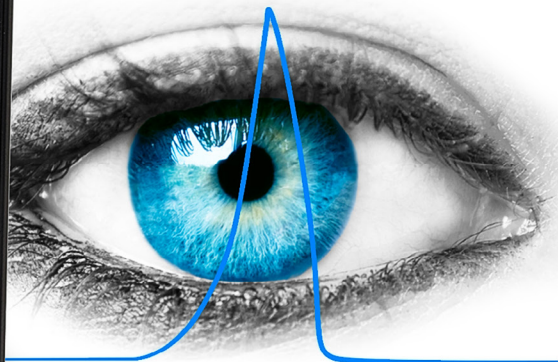
Calculated values of hazard **to eyes:**

LB, LIRA, LVISIRA

GL SPECTROSOFT

The intelligent software **guides the operator step by step through the measurement** process, leading to accurate results being gathered in **customized reports**.

To even more simplify the user's work and eliminate errors the software **automatically defines risk groups depending on the hazard**.



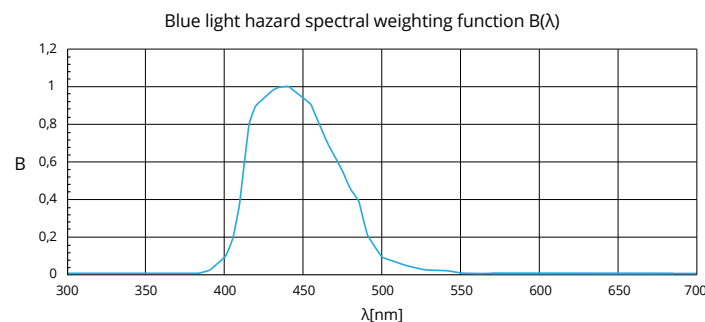
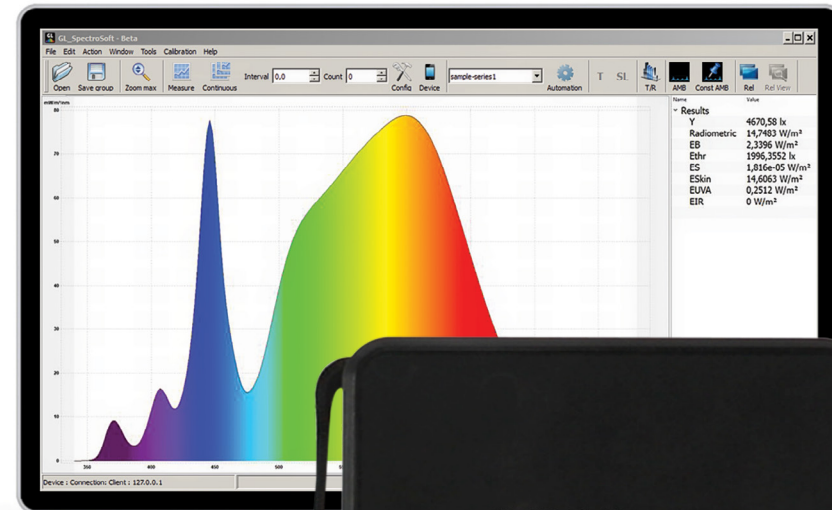
GL Optic products are made in Europe, sold and serviced on all continents.

GL PSM SYSTEM 200 - 800nm

The Photobiology Safety Measurement System, GL PSM System 200 - 800nm is world's first compact preconfigured solution for blue light hazard assessment.

To be able to provide the market with instrumentation that simplifies complicated measurement methods and at the same time guarantees high accuracy, GL Optic has announced the new revolutionary GL PSM System 200 - 800nm. This solution is designed to perform measurements and risk assessments according to standards: IEC (EN) 62471 (Photobiological safety of lamps and lamp systems) and EN 14255-1 (Measurement and assessment of personal exposures to incoherent optical radiation). The system includes hardware components which are: a high resolution factory calibrated laboratory grade spectrometer GL SPECTIS 5.0 TOUCH (UV-VIS) 200 – 800 nm, a specially designed Irradiance Probe and Radiance Telescope that recreate the properties of the human eye according to the above mentioned standards. The other component of the system is its dedicated software. GL SPECTROSOFT is a powerful tool for advanced analyses and reporting.

Until now to be able to measure blue light hazard we could only use advanced and complicated systems equipped with double monochromators, which required proper understanding and wide metrological knowledge. GL Optic's plug-and-play concept supports precise measurement procedures. Accessories are automatically recognized by the spectrometer.



GL PSM SYSTEM 200 - 2400nm

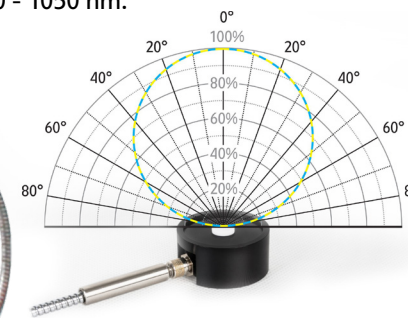
Extended Range 2-channel measurement system

GL PSM System 200 - 2400nm is designed for wider application, it is necessary where a photobiological hazard from thermal radiation must be measured.



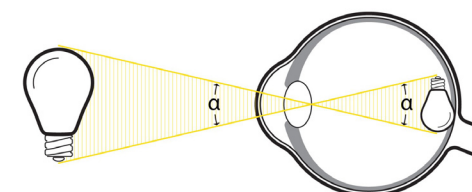
+ IRRADIANCE [W/m²]

All spectrometers offered by GL Optic are calibrated and provide absolute values. The cosine corrected measurement head is designed for precise measurement of illuminance and conforms to the requirements of DIN 5032 Part 7 Class B. This probe is calibrated in spectral range from 200 - 1050 nm.



+ RADIANCE [W•sr⁻¹•m⁻²]

A Radiance Telescope that recreates the properties of the human eye according to the above mentioned standard EN 62471:2008. This telescope is calibrated in spectral range from 300 - 1050 nm.



GL SPECTROSOFT

GL Spectrosoft is an intelligent software which guides the operator step by step through the measurement process, leading to accurate results being gathered in customized reports. The software automatically defines risk groups depending on the hazard.

COMPLETE SOFTWARE SUITE ANALYZES, INTERPRETS AND PRESENTS YOUR RESULTS

GL SPECTROSOFT LAB

Laboratory quality tools for advanced users focusing on detailed spectral analysis, comparisons, testing and customized measurement setups.

Calculated values:

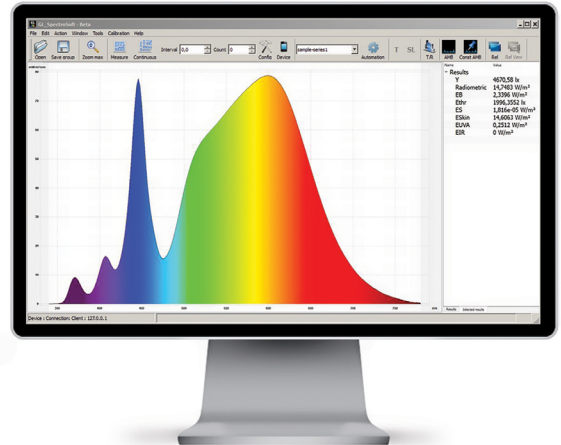
Irradiance

- EB, EBK, ES, EUVA, EUV, EIR

Eskin

Radiance

- LB, LIRA, LVISIRA



CLASSIFICATION OF RISK GROUPS

The principles of lamp classification into risk groups with respect to hazards were specified in the standard, and lamps and luminaires were divided into four risk groups:

- risk-free group (RG0),
- risk group 1 (low risk) (RG1),
- risk group 2 (moderate risk) (RG2),
- risk group 3 (high risk) (RG3).

PHOTOBIOLOGICAL HAZARD FOR EYES AND SKIN

PHOTOBIOLOGICAL HAZARD	DAMAGE	SPECTRAL RANGE [nm]	SOLUTION
Inflammation of the cornea caused by ultraviolet light	Eyes/cornea	200 – 400	GL PSM System 200 – 800nm
Cataracts caused by ultraviolet	Eyes/lens	290 – 325 (400)	
Erythema caused by ultraviolet	Skin	200 – 400	
Inflammation of the retina caused by blue light	Eyes/retina	400 – 700	
Thermal damage of the retina	Eyes/retina and choroid	400 – 1400	GL PSM System 200 – 2400nm
Cataracts caused by infrared	Eyes/lens	700 – 1,400 (3,000)	

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