XD-45-HUV

https://www.gigahertz-optik.com/en-us/product/xd-45-huv/

Product tags: UV

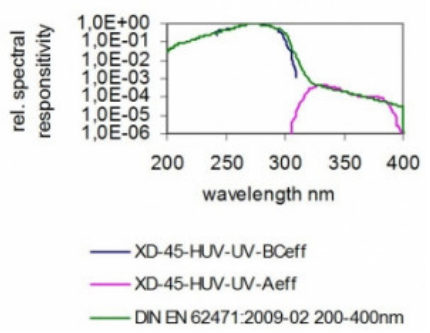
Description

The XD-45-HUV irradiance detector is designed for the evaluation of light exposure hazard values for artificial light sources. The three sensor design of this unique device covers the requirements for skin and eye risk assessment. It supports a number of standards and regulations:

- IEC 62471:2006 and EN 62471:2008
- 2006/25/EC
- EN 14255-1

ICNIRP/ACGIH spectral responsivity

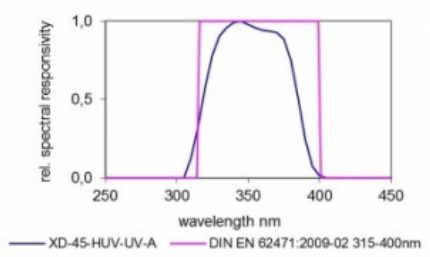
The spectral effective function required for skin and eye risk evaluation is formed using two filtered sensors. This prevents the cross-talk and limited sensitivity between the UV-A, UV-B and UV-C spectral ranges inherent in a single filtered sensor solution. Using the two sensor method also produces a much better simulation of the intended spectral effectiveness function.



XD-45-HUV - UV-CBeff and UV-Aeff Sensor - Typical Spectral Responsivity

Additional radiometric UV-A responsivity

An additional UV-A sensor for the evaluation of UV-$A_{315nm-400nm}$ human eye risk is included. All three sensors are mounted behind one 20 mm diameter cosine diffuser. For measurements of eye dependent radiance values a front adapter is supplied to limit the detector field-of-view to 80 degrees.



XD-45-HUV - UV-A Sensor - Typical Spectral Responsivity

Traceable calibration

Calibration of the detector ICNIRP (W/m²) and UV-A (W/m²) responsivity is performed by the Gigahertz-Optik GmbH calibration laboratory for optical radiation measurements quantities. As with all light detectors supplied by Gigahertz-Optik calibration of absolute detector responsivity as well as detector individual measured relative spectral responsivity data is included.

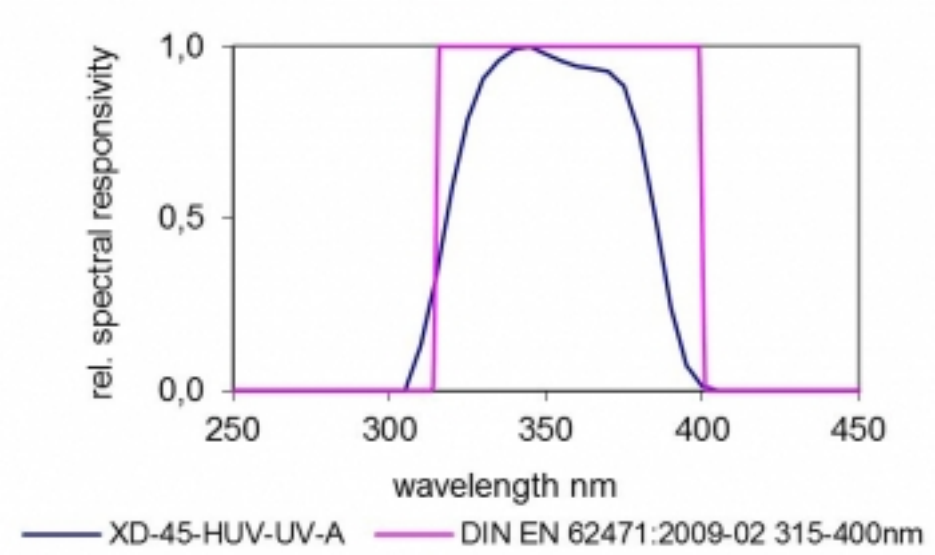
Recommended optometer

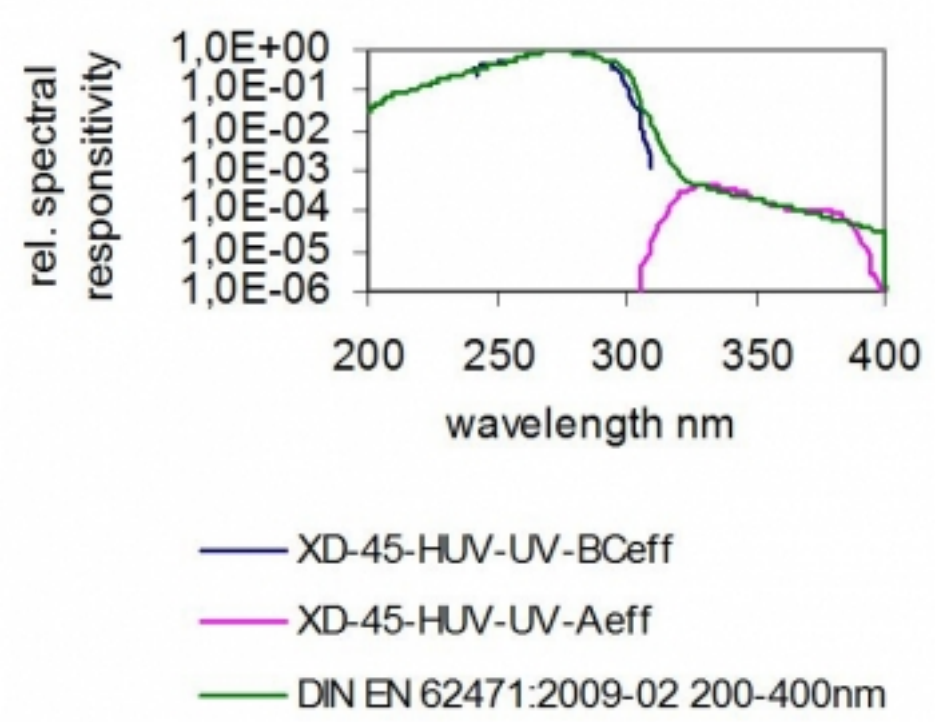
For applications involving steady state light the $X1_3$ optometer is recommended. For unstable or short event light the optometer P-9801 should be selected.

Specifications

General

General	SUV(λ) IEC/EN 62471 spectrum detector useful for evaluation of artificial light sources. Set-up with in sum three photodiodes. Two are forming with a optical filter correction the SUV(λ) actinic UV-A und UV-BC spectral responsivity. A third detector with a radiometric UV-A responsivity is used for the measurement of the UV-A exposure of the human eye.
Specification	
Field of View	20 mm diameter diffuser with removable 80 ° F.O.V. front adapter
Measurement range	SUV(λ) (Σ of 2 cells): effective irradiance 0.5 mW/m² to 10 W/m² (max. resolution 0.05 mW/m²), details see spectral plot.
Measurement range	SUV (200 - 320) nm: effective irradiance 0.5 mW/m² to 10000 W/m² (max. resolution 0.05 µW/m²), details see spectral plot (usage starts at 230 nm).
Measurement range	SUV (320 - 400) nm: effective irradiance 0.5 µW/m² to 10 W/m² (max. resolution 0.05 µW/m²), details see spectral plot.
Measurement range	UV-A (315 - 400) nm: irradiance 0.2 mW/m² to 10000 W/m² (max. resolution 0.02 mW/m²), details see spectral plot.
Spectral responsivity	





(remark: limited responisivity on the edge of the measurement range)

Miscellaneous	
Weight	XD-45-HUV detector: 45 mm diameter, 30 mm high, 200 g (with cable) FOV adapter: 60 mm diameter, 32/49 mm high, 50 g
Note	Specifications stated are for a X1-3 meter including the detector **) The maximum measurable signal value may be limited by heat radiated by the source under test*
Warranty	12 month

Configurable with

Product Name	Product Image	Description	Go to product
X1-3		Optometer for the measurement of UV and Blue-light hazard of artificial radiation source.	https://www.gigahertz-optik.com/en-us/product/x1-3/

Purchasing information

Article-Nr	Modell	Description
Product		
15298013	XD-45-HUV-4	Detector head, protective cap, 80° FOV adapter, calibration certificate
Calibration		
15311983	KP-XD45HUVX1-E-I	Option: DIN EN ISO/IEC 17025:2018 Test Certificate (DAkkS). Integral irradiance in the wavelength range from 315 nm to 400 nm and the ICNIRP / ACGIH weighted integral irradiance in the wavelength range from 200 nm to 400 nm. In combination with X1 optometer.
Re-calibration		
15300459	K-XD45HUV-I	Re-calibration of irradiance responsivity with calibration certificate
15311982	KKP-XD45HUVX1-E-I	Factory Calibration Certificate with DIN EN ISO/IEC 17025:2018 Test Certificate. In combination with X1 optometer.

Contact, Calibration, Service & Support

We are known worldwide for excellent technical consulting and after sales support. Contact us to find together the best solution for you. Our services:

- Technical Consulting & Sales
- After-Sales Support
- Calibrations & Re-Calibrations (ISO/IEC 17025 Calibration Services, factory calibration, Calibration of Third-Party Products)
- Repairs & Updates
- OEM & Feasibility Consulting of Customized Solutions

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