

CT-4501

<https://www.gigahertz-optik.de/en-us/product/CT-4501>

Product tags: VIS , Detector , Color Temperature , Luminous Color , Photometry , General lighting



Description

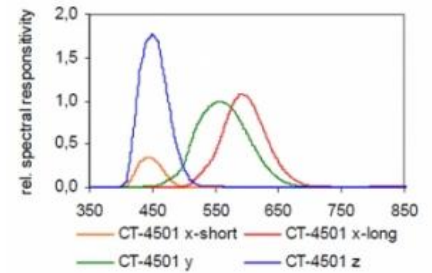
The CT-4501 is an RGB detector for measurement of the illuminance and luminous color. Its photometric responsivity and the cosine field of view function of the Y-detector correspond to the DIN 5032- Article 7 quality class B. Instead of the red, green and blue receptors found in the human eye and in many competitive products, the CT-4501 is equipped with four photodiodes. Separation of the x function in x-short and x-long photodiode enables the CT-4501 RGB detector to guarantee outstanding measurement results when combined with blue dominant light spectra.

Each measurement channel in the CT-4501-1 RGB-detector has a signal line with a BNC connector. This enables connection of the measurement head to P-9801 series optometers. Typical applications of these measurement devices include industrial manufacturing processes where the switching mode of luminaires and light flashes have to be evaluated.

The CT-4501-4 RGB detector is equipped with –4 plug suitable for connection onto both mobile and stationary optometers from the X1 series. Typical applications of these measurement devices include RGB monitor detectors and integrating sphere light sources.



CT-4501-1 RGB detector for P-9801 optometers



CT-4501 typical XYZ responsivity

Traceable Calibrations





The CT-4501 detectors are calibrated in terms of their absolute illuminance responsivity, luminous color responsivity and relative spectral responsivity by the Gigahertz-Optik calibration laboratory for optical radiation measurands. The calibrations are documented in an individual calibration certificate. The design and contents of the calibration certificate are in accordance with the ISO 17025 specifications.

Specifications

Calibration	
K-CT4501-I	Calibration of the RGB responsivity in A/lx, xy and CCT by the usage of an halogen tungsten lamp at 2856K and illuminance of 1600lx
K-VIS-SR	Calibration of the four sensors relative spectral responsivities within the visible wavelength range
Specification	
spectral miss matching x-short sensor	$f_1 \leq 9.5\%$
spectral miss matching x long sensor	$f_1 \leq 8\%$
spectral miss matching y sensor	$f_1 \leq 4\%$
spectral miss matching z sensor	$f_1 \leq 8\%$

typ. responsivity x-short sensor (2856K)	0.07nA/lx
typ. responsivity x-long sensor (2856K)	0.03nA/lx
typ. responsivity y sensor (2856K)	0.04nA/lx
typ. responsivity z sensor (2856K)	0.01 nA/lx
input optic	diffuser window with 10mmØ, f2≤3%
operation temperature	5-40°C
Miscellaneous	
cable CT-4501-4	coax cable 2m long with ITT (-4) connector
cable CT-4501-1	4 coax cable each 2m long with BNC (-1) connector

Configurable with

Produktname	Product Image	Description	Show product
X1		<p>Four-channel USB optometer designed for mobile use.</p> <p>Features: Compact device for use with all photometric, radiometric, colorimetric, plant-physiologic and photo-biologic measurement heads from Gigahertz-Optik. USB interface. Battery operation or power supply USB.</p>	https://www.gigahertz-optik.de/en-us/product/X1
X1-RM		<p>Optometer in 3HE housing for use in 19" racks.</p> <p>Features: Its USB and RS232 remote interface and two additional RS232 device interfaces make the device highly flexible when it comes to system integration. Its four signal inputs enable use with all photometric, radiometric, colorimetric, plant-physiologic and photo-biologic measurement heads from Gigahertz-Optik.</p>	https://www.gigahertz-optik.de/en-us/product/X1-RM
X1-PCB		<p>Optometer module.</p> <p>Feature: The X1 optometer is available as a printed circuit board either with or without a housing and is suited for applications that do not require a keyboard or display. Four signal inputs enable connection with all measuring heads from Gigahertz-Optik.</p>	https://www.gigahertz-optik.de/en-us/product/X1-PCB
P-9801		<p>Eight-channel optometer.</p> <p>Features: State-of-the-art 8 channel laboratory optometer with a signal amplifier and sample & hold ADC per channel for clocked recording of the measurement signals. RS232 and IEEE488 interface. Trigger input and output.</p>	https://www.gigahertz-optik.de/en-us/product/P-9801

Purchasing information

Article-Nr	Modell	Description
Product		

Article-Nr	Modell	Description
100651	CT-4501-4	detector, protection cap, calibration certificate
102378	CT-4501-1	detector, protection cap, calibration certificate
Re-calibration		
15300676	K-CT4501-I	re-calibration with calibration certificate