

RCH-106

<https://www.gigahertz-optik.de/en-us/product/RCH-10>

Product tags: UV



Description

In some UV curing applications, measurement of the UV irradiance in the widest possible UV spectral range is required. However, it is important that any visible light produced by the curing lamps should not be included in these measurements.

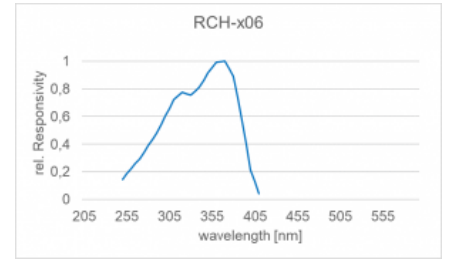
Product description

RCH-106 irradiance detector

The RCH-106 UV detector was specially developed for use in UV radiation curing with gas discharge lamps. It offers all the features and functions of the detectors of the RCH series (link to RCH-xxx series data sheet). Its spectral responsivity was designed to cover the wide wavelength range from 250 to 405 nm. A lower level of absolute radiometric spectral responsivity is accepted. If necessary, correction factors for known emission spectra can be calculated.

Calibration

The detectors are calibrated with regard to their responsivity to irradiance and are supplied with a factory calibration certificate that corresponds to the high standard of the measuring laboratory for optical radiation measurements of Gigahertz-Optik. If necessary, a test certificate accredited according to DIN EN ISO / IEC 17025 can optionally be created for the detector with the associated measuring device.



Typical spectral sensitivity (relative) of the RCH-106 detectors



RCH-106 detector with rigid light guide

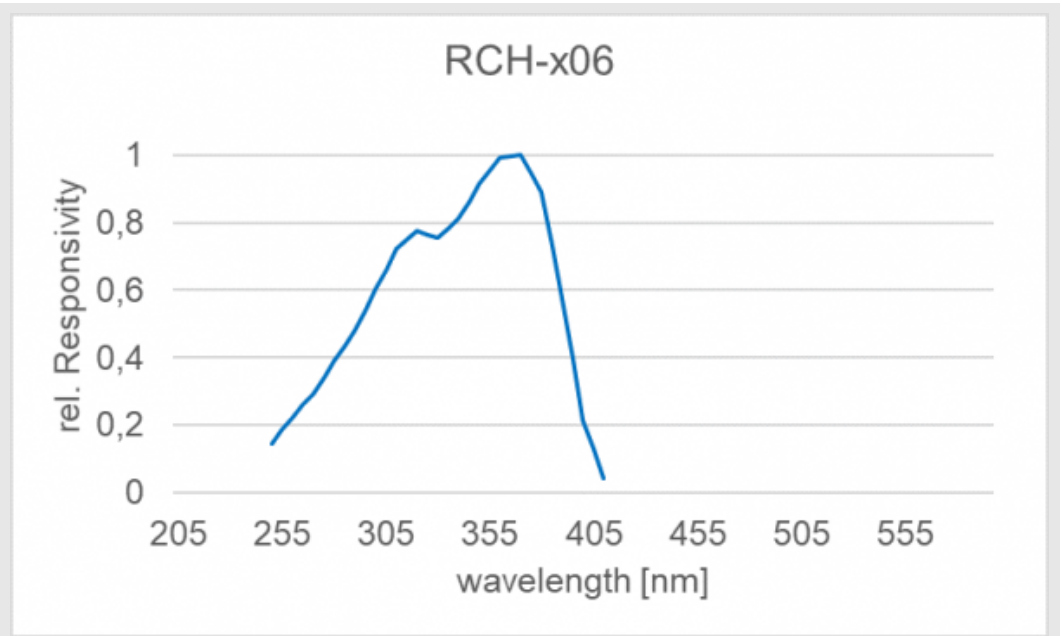
Specifications

General

Short description	UV detector for measuring the irradiance in UV curing with discharge lamps Link to RCH-xxx series datasheet
Main features	Detector for the high UV radiation levels in UV radiation curing. Large safety distance between the handle and the radiation sensor of the detector. For use with all gigahertz optics measuring devices. Link Optometer selection table
Measurement ranges	Spectral responsivity 250 nm to 405 nm. Linear measuring range from 0.1 mW / cm ² to 40,000 mW / cm ² with measuring device X1-1
typical applications	UV radiation curing with medium pressure lamps
Calibration	Calibration of the irradiance responsivity in A / (W / cm ²) with factory calibration certificate of the measuring laboratory of the Gigahertz-Optik. Optional DIN EN ISO / IEC 17025 accredited test certificate

Product

spectral responsivity



Input optics

9 mm, diffuser

Dimensions

Measurement head:

Height: 8 mm / Diameter: 37 mm

Detector unit:

Length: 65 mm / Diameter: 15 mm

temperature range

up to + 100 °C

Light Guide

Rigid: 22 cm / 8.7 inch

typical responsivity

UV Broadband 200 nm - 400 nm: 0.3 nA/(mW/cm²)

max. Irradiance

40 W/cm²

Max. signal current

100 µA

Miscellaneous

Cable Length

50 cm

Connector

-1,-2 or -4

Configurable with

Produktname

Product Image

Description

Show product

X1





Four-channel USB optometer designed for mobile use.

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.

<https://www.gigahertz-optik.de/en-us/product/X1>

Produktname	Product Image	Description	Show product
X1-2		<p>Four-channel RS232 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 and RS232 interface. Battery operation or power supply USB.</p>	https://www.gigahertz-optik.de/en-us/product/X1-2
P-9710		<p>High-quality device for measurement of CW-, single pulse and modulated radiation.</p> <p>Features: Optometer for all detector heads with calibration data plug. Measurement modes: CW, pulse energy, dose, peak-to-peak, effective luminous intensity (Blondel-Rey), data logger, battery, main power, RS232</p>	https://www.gigahertz-optik.de/en-us/product/P-9710
P-2000		<p>Two-channel optometer.</p> <p>Features: For use with most photometric and radiometric detectors supplied by Gigahertz-Optik. Modes: CW, pulse energy from both single and multiple flashes, effective luminous intensity (Blondel-Rey), data logger and others.</p>	https://www.gigahertz-optik.de/en-us/product/P-2000
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
P-9802		<p>Light meter for laboratory use with up to 36 measurement heads.</p> <p>Features: For use with up to 36 photometric and/or radiometric measurement heads. RS232 interface.</p>	https://www.gigahertz-optik.de/en-us/product/P-9802
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-9202-4		<p>Fast response time trans-impedance signal amplifier.</p> <p>Features: High quality analogue amplifier with current-voltage conversion. Minimal diode offset voltage for short circuit operations. Bandwidths of up to 330kHz. 1µs rise time. Large I-U amplification range from 10pA/V to 1mA/V.</p>	https://www.gigahertz-optik.de/en-us/product/P-9202-4
P-9202-5		<p>Universal trans-impedance signal amplifier.</p> <p>Features: High quality analogue amplifier with current-voltage conversion. Minimal diode offset voltage (1mV) for short circuit photodiode operations. 5µs to 20ms rise time depending on the amplification. Large I-U amplification range – 1×10⁻¹⁰A/V to 1×10⁻³A/V.</p>	https://www.gigahertz-optik.de/en-us/product/P-9202-5

Produktname	Product Image	Description	Show product
P-9202-6		Highly sensitive trans-impedance signal amplifier. Features: High quality analogue amplifier with current-voltage conversion with minimal diode offset voltage (0.5mV) for short circuit photodiode operation of . 2.5s to 25s rise time depending on the amplification. Large I-U amplification range – 1×10-11A/V to 1×10-4 mA/V.	https://www.gigahertz-optik.de/en-us/product/P-9202-6
X1-PCBC		Optometer module. 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.	https://www.gigahertz-optik.de/en-us/product/X1-PCBC

Purchasing information

Article-Nr	Modell	Description
Product		
15296581	RCH-106-1	Detector with -1 connector and rigid light guide
15297049	RCH-106-2	Detector with -2 connector and rigid light guide
15297050	RCH-106-4	Detector with -4 connector and rigid light guide
Re-calibration		
15300166	K-RCHn06-I	Calibration with Certificate