

RCH-002

<https://www.gigahertz-optik.de/en-us/product/RCH-002>

Product tags: UV



Description

General

In UV curing applications requiring deep curing of adhesives and paints, longer-wave UV radiation in the UV-A and blue spectral regions is used to excite the photoinitiators. UV radiometers for these applications must be designed in such a way that they only measure the irradiance in the actinic range of the photoinitiators.

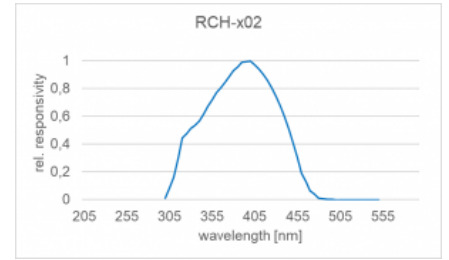
Product description

RCH-002 and RCH-102 irradiance detector

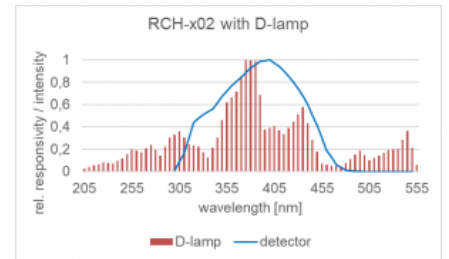
The UV detector RCH-102 was specially developed for use in UV curing with discharge lamps. It offers all the features and functions RCH-Series (link to RCH-xxx series data sheet) of the detectors. Its spectral sensitivity covers the wavelength range from 320 to 450 nm, which is used for deep curing of adhesives and paints in particular.

Calibration

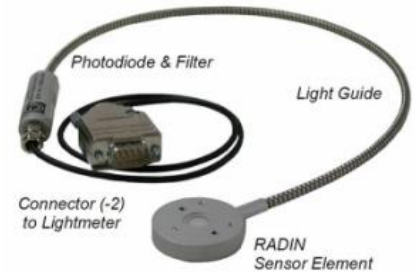
The detector is calibrated with regard to its responsivity to irradiance and is supplied with a factory calibration certificate that conforms to the high standards of the measuring laboratory for optical radiation measurements of Gigahertz-Optik. If necessary, a test certificate accredited according 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-x02 detectors



Relative spectral sensitivity of the RCH-x02 detectors together with the typical emission spectrum of a doped discharge lamp.



RCH-0 Head with Flexible Light Guide

Specifications

General

Short description

UV detector for measuring the irradiance of medium pressure lamps in UV curing.
[Link to RCH-xxx series datasheet](#)

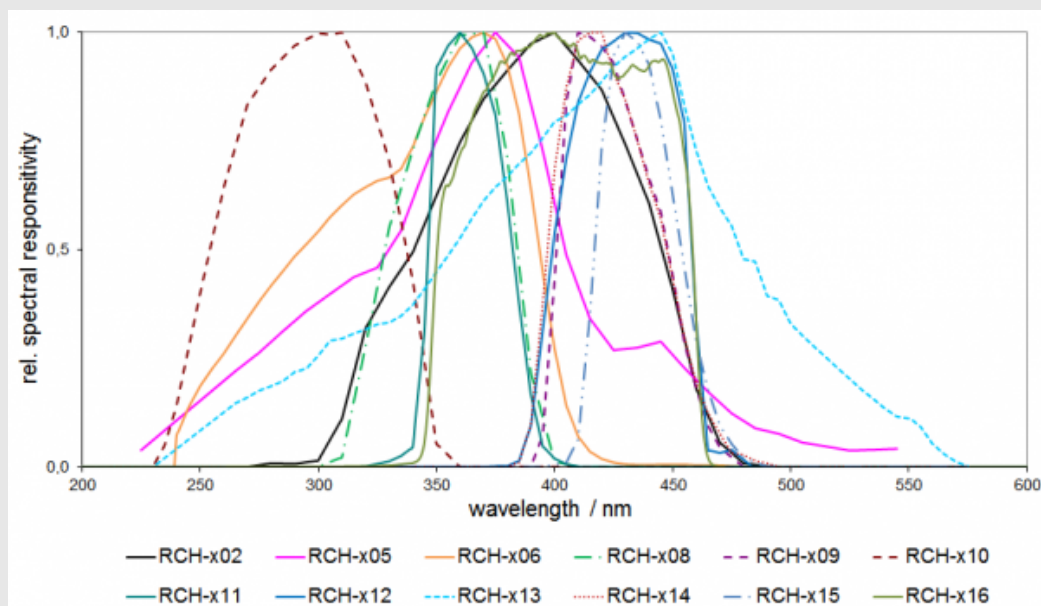
Main features

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.

Measurement ranges	Spectral responsivity 320 nm to 450 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	Kalibrierung der Bestrahlungsstärke Empfindlichkeit in A/(W/cm ²) mit Werkkalibrierschein des Messlabors der Gigahertz-Optik. Optionales DIN EN ISO / IEC 17025 akkreditiertes Prüfzertifikat

Product

spectral responsivity



Input optics

9 mm, diffuser

Dimensions

Measurement head:

Height: 8 mm / Diameter: 37 mm

Detector element:

Length: 65 mm / Diameter: 15 mm

Light Guide

Flexible: 50 cm / 20 inch

typical responsivity

UVABLU (320 - 460) nm: tbc. A/(mW/cm²)

max. Irradiance

40 W/cm²

Max. signal current

100 µA

Miscellaneous

temperature range

up to + 100 °C










Cable Length




50 cm

Connector

-1,-2 or -4

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
X1-2		<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

Produktname	Product Image	Description	Show product
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 1×10-3 A/V.</p>	https://www.gigahertz-optik.de/en-us/product/P-9202-5
P-9202-6		<p>Highly sensitive trans-impedance signal amplifier.</p> <p>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.</p>	https://www.gigahertz-optik.de/en-us/product/P-9202-6
X1-PCBC		<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-PCBC

Purchasing information

Article-Nr	Modell	Description
Product		
-	RCH-002-1	Detector with -1 connector and flexible light guide
15297674	RCH-002-2	Detector with -2 connector and flexible light guide
15297676	RCH-002-4	Detector with -4 connector and flexible light guide
Re-calibration		
15300198	K-RCHn02-I	Calibration with Certificate
15300213	K-RCHn02-S	Monochrome Calibration at 395nm