RCH-002

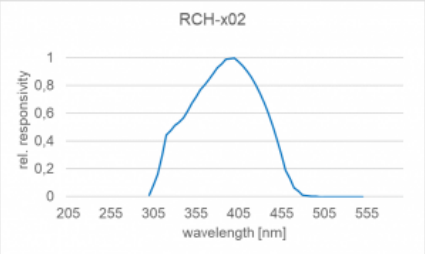
https://www.gigahertz-optik.com/en-us/product/rch-002

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.

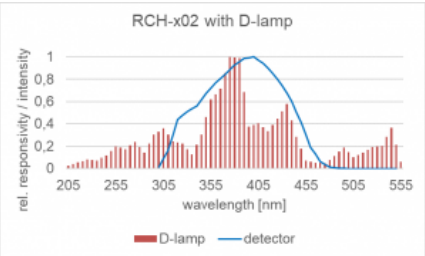


Typical spectral sensitivity (relative) of the RCH-x02 detectors

Product description

RCH-002 and RCH-102 irradiance detector

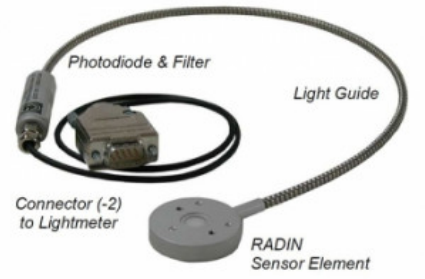
The UV detector RCH-102 was specially developed for use in UV curing with discharge lamps. It offers all the features and functions RCH-Series (link to RCH-xxx series data sheet) of the detectors. Its spectral sensitivity covers the wavelength range from 320 to 450 nm, which is used for deep curing of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



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

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.



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 / cm² to 40,000 mW / cm² with measuring device X1-1
typical applications	UV radiation curing with medium pressure lamps
Calibration	Kalibrierung der Bestrahlungsstärke Empfindlichkeit in A/(W/cm²) mit Werkkalibrierschein des Messlabors der Gigahertz-Optik. Optionales DIN EN ISO / IEC 17025 akkreditiertes Prüfzertifikat
Product	
spectral responsivity	[image src="/var/www/html/web/assets/RCH-Functions3.png" id="6406" width="600" height="349" class="leftAlone ss-htmleditorfield-file image" title="RCH Functions3"]
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	405 nm LED: 0.6 nA/(mW/cm²) UV medium pressure lamp: 0.4 nA/(mW/cm²)
max. Irradiance	40 W/cm²
Max. signal current	100 µA
Miscellaneous	
temperature range	up to + 100 °C (short-term)
Cable Length	50 cm
Connector	-1,-2 or -4
Humidity	<80%, non-condensing
Info	If a different light source needs to be measured than calibrated (spectral distribution), spectcral missmatch correction factors should be applied in order to achieve a low measurement uncertainty. At very high humidity fault-currents of the radiometer at low measurement currents are possible and need to be consiered. At higher temperature a temperature correction of the detector signal might be necessary in order to achieve a low measurement uncertainty.

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