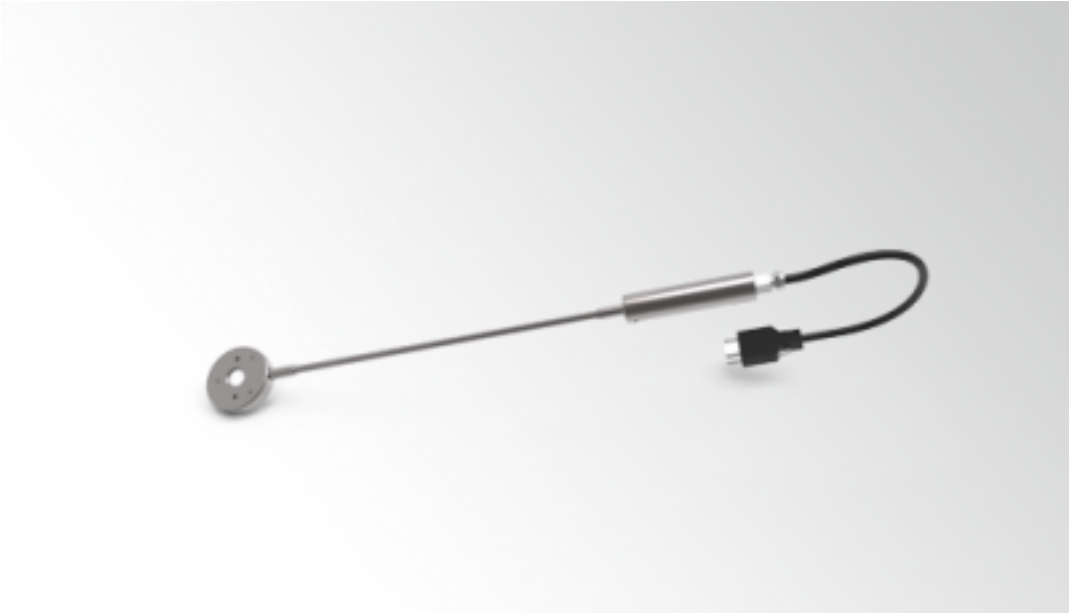
RCH-111

https://www.gigahertz-optik.com/en-us/product/rch-14/

Product tags: UV



Description

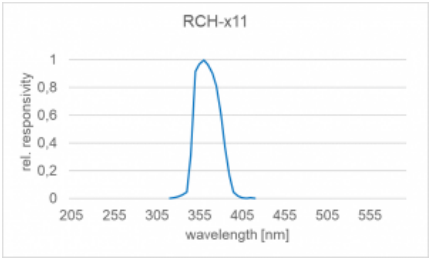
In UV curing applications requiring deep curing of adhesives and paints, UV-A radiation for stimulating photoinitiators is the largely standardized spectral range. UV radiometers for these applications must be designed in such a way that they only measure the irradiance in the actinic range of the photoinitiators. See our **application note about general UV curing measurements** and our product overview about UV curing meters.

Product description RCH-111 irradiance detector

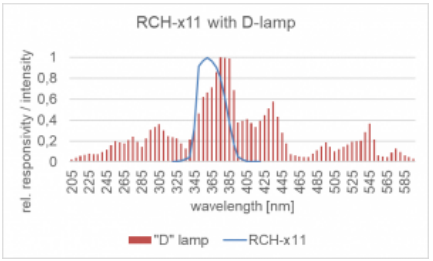
The UV detector RCH-111 was specially developed for use in UV radiation curing with discharge lamps. It offers all the features and functions of the detectors of the RCH series (see RCH-xxx Series). Its spectral responsivity covers the wavelength range from 345 nm to 385 nm, which is used in particular for the deep curing of adhesives and paints.

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-111 detectors



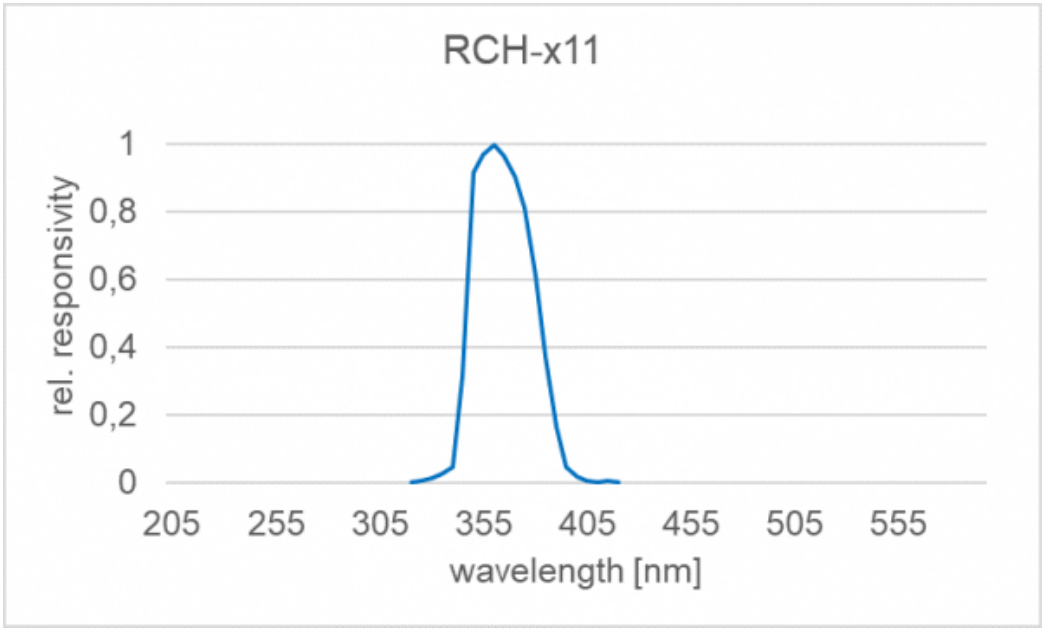
Relative spectral sensitivity of the RCH-111 detectors together with the typical emission spectrum of a mercury lamp.

RCH-111 detector with rigid light guide"/>

RCH-111 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 (see Optometers, Amplifiers, Display Meters).
Measurement ranges	Spectral responsivity 345 nm to 385 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	Calibration of the irradiance responsivity in A / (W / cm²) 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 element: Length: 65 mm / Diameter: 15 mm
Light Guide	Rigid: 22 cm / 8.7 inch
Typical responsivity	D-Type 350 nm - 400 nm: 1.6 nA/(mW/cm²)
max. Irradiance	40 W/cm²
Max. signal current	100 µA
Miscellaneous	
Temperature range	up to + 100 °C (short-term)
Humidity	<80%, non-condensing
Cable Length	50 cm
Connector	-1,-2 or -4
Info	If a different light source needs to be measured than calibrated (spectral distribution), spectral mismatch correction factors should be applied in order to achieve a low measurement uncertainty. At very high humidity leakage-currents of the radiometer at low measurement currents are possible and need to be considered. At higher temperature a temperature correction of the detector signal might be necessary in order to achieve a low measurement uncertainty.

Configurable with

Product Name	Product Image	Description	Go to product
RCH-xxx Series		UV Detectors for measuring the UV Curing Irradiance	https://www.gigahertz-optik.com/en-us/product/rch-xxx-series/

Purchasing information

Article-Nr	Modell	Description
Product		
-	RCH-111-1	Detector with -1 connector and rigid light guide
-	RCH-111-2	Detector with -2 connector and rigid light guide
-	RCH-111-4	Detector with -4 connector and rigid light guide
Re-calibration		
-	K-RCHn11-I	Calibration with Certificate

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