

# RCH-006

<https://www.gigahertz-optik.com/en-us/product/rch-006>

**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.

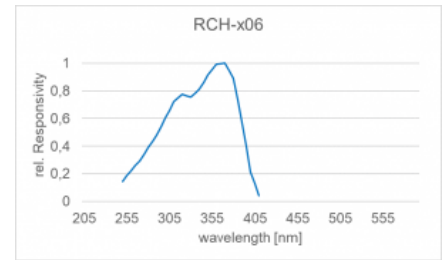
### Product description

#### RCH-006 irradiance detector

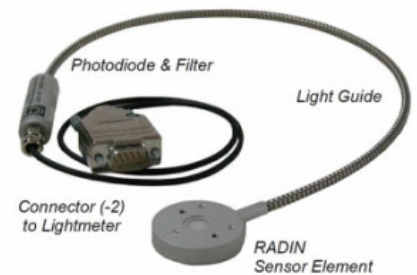
The RCH-006 UV detector was specially developed for use in UV radiation curing with gas discharge lamps. It offers all the features and functions of the detectors of the RCH series (link to RCH-xxx series data sheet). Its spectral responsivity was designed to cover the wide wavelength range from 250 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-006 detectors



RCH-006 detector with flexible light guide

## Specifications

### General

Short description	UV detector for measuring the irradiance in UV curing with discharge lamps <a href="#">Link to RCH-xxx series datasheet</a>
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 <sup>2</sup> to 40,000 mW / cm <sup>2</sup> with measuring device X1-1
typical applications	UV radiation curing with medium pressure lamps
Calibration	Calibration of the irradiance responsivity in A / (W / cm <sup>2</sup> ) with factory calibration certificate of the measuring laboratory of the Gigahertz-Optik. Optional DIN EN ISO / IEC 17025 accredited test certificate

### Product

spectral responsivity	[image src="/var/www/html/web/assets/1cef902cd5/fig1-RCH006-spectralsensitivity.png" id="6400" width="600" height="361" class="leftAlone ss-htmleditorfield-file image" title="Fig1 RCH006 spectralsensitivity"]
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	365 nm LED: 1.8 nA/(mW/cm <sup>2</sup> ) UV medium pressure lamp: 0.8 nA/(mW/cm <sup>2</sup> )
max. Irradiance	40 W/cm <sup>2</sup>
Max. signal current	100 µA
<b>Miscellaneous</b>	
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), spectral mismatch 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 considered. 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
<b>Product</b>		
15296578	RCH-006-1	Detector with -1 connector and flexible light guide
15297037	RCH-006-2	Detector with -2 connector and flexible light guide
15297038	RCH-006-4	Detector with -4 connector and flexible light guide
<b>Re-calibration</b>		
15300166	K-RCHn06-I	Calibration with Certificate