

Infrared-to-Visible Converters

IR Laser Beam Visualizers / IR Detectors

IR-VIS Series



The IR-VIS series from ALPHALAS are unique infrared-to-visible converters suitable for CW and pulsed IR laser sources as well as IR laser diodes. They are ideally suited for tasks like detecting invisible IR radiation, identifying mode structure, etc. Therefore, the visualizers are indispensable tools for every laboratory using Nd:YAG or other IR lasers.

Based on a special durable ceramic-like material, the detectors combine high sensitivity with high damage threshold. In contrast to other conventional infrared-to-visible converters, the IR-VIS series from ALPHALAS

do not need any activation with daylight or UV light and can therefore be used in darkened rooms. In addition, the irradiated area does not bleach. If the surface of the active area has been damaged, the upper layer can be simply removed using a fine file or sand paper. The new fresh surface is as good as the original one.

The standard -S and -D models cover two IR spectral ranges from 800 nm to 1100 nm and from 1460 nm to 1600 nm, resulting in green and orange emission correspondingly. The diameter of the active area is 15 mm or 40 mm.

Applications

- Detection & Visualization of IR Radiation from CW Lasers, Pulsed Lasers, and IR Laser Diodes
- Identification of Mode Structure

Features

- High Sensitivity
- High Damage Threshold
- Cover Wide Spectral Ranges
- No Activation Needed
- No Bleaching

The -S models are single-sided and the -D model is double-sided.

The special -QM model is for Q-switched and modelocked lasers only. It is based on an efficient second-harmonic generation process and covers the wide spectral range from 800 nm to 1400 nm. It is also double-sided and has a diameter of 30 mm.

IR-VIS Series · Available Models

Model	IR Wavelength Ranges (nm)	Emission	Sensitivity	Damage Threshold	Dynamic Range	Suitable for Type of Lasers	Active Area (mm)
IR-VIS-40-S	800 - 1100 and 1460 - 1600	green and orange	CW: 40 mW/cm ² Pulsed: 0.1 mJ/cm ²	CW: 300 W/cm ² Pulsed: 1 J/cm ²	> 100:1	CW, pulsed	Ø 40
IR-VIS-40-D	800 - 1100 and 1460 - 1600	green and orange	CW: 40 mW/cm ² Pulsed: 0.1 mJ/cm ²	CW: 300 W/cm ² Pulsed: 1 J/cm ²	> 100:1	CW, pulsed	Ø 40 double-sided
IR-VIS-15-S	800 - 1100 and 1460 - 1600	green and orange	CW: 40 mW/cm ² Pulsed: 0.1 mJ/cm ²	CW: 300 W/cm ² Pulsed: 1 J/cm ²	> 100:1	CW, pulsed	Ø 15
IR-VIS-30-QM	800 - 1400	second harmonic	Pulsed only: min. 100 kW/cm ²	QCW: 1 W/cm ² Pulsed: 1 mJ/cm ²	> 1000:1	pulsed, low-average, high peak power	Ø 30 double-sided

Note: All models are in anodized holders.

Always use laser safety eyewear when working with the IR-VIS detectors.