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UVisualize - bringing UV lasers to light

PRODUCT DATA SHEET

Ultra violet laser alignment head

Introduction

UVisualize is an essential aid to the alignment, location and visualization of ultraviolet beams from pulsed UV and blue lasers.

Specifically designed to provide long after glow imaging, laser pulses can be safely viewed allowing beam profile and beam alignment to be checked.

Features

- Gives **yellow** emission under UV stimulation.
- **Long persistence**
- Active in popular laser bands including N₂, HeCd, tripled Nd:YAG etc.
- **Always ready for use** with no optical charging necessary.
- Detects UV at powers as low as **1 nW/cm²**
- Free from hazardous reflections.
- A low cost alternative to beam profilers.

Product Styles:

The UVisualizeIR product comes in 3 formats:

- **Laminated "credit card" style** - budget format suitable for low power lamp and laser use
- **25 mm disc and clip-on wand** - specifically designed for laser engineers and optics experimentalists where frequent component positioning is required
- **Optical bench mounted head** - rugged, 40 mm active area, free standing 13.7 mm mounting post and post holder allowing centre adjustments from 90 - 235 mm. Ideally suited for laser alignment component positioning and beam profiling – complete with alignment target



Product Style Information:

Credit Card Style

Dimensions 86 mm x 54 mm
Active area ~4.5 cm²

Disc + Wand

Disc OD 25 mm
optical mount compatible
Active area ~3 cm²
Wand ~130 mm x 35 mm

Optical Bench Mounted Head

Head OD 70 mm
Depth 8 mm
Post dia. 12.6 mm

Active area ~12.6 cm²

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Performance Specifications

Stimulation range: (see graph)
Band 1: <250 nm to >550 nm

Typical Applications

Band 1: N₂, HeCd, Ar⁺, tripled Nd:YAG etc.

Emission Colour: (see graph)

Yellow centred @ 580 nm
Broad band emission <430nm to >750nm

Persistence (stimulation removed)

Emission visible 6 secs – 4 mins
(ambient lighting conditions dependent)

Note: Emission can be quenched using NIR

Quenching of Yellow Fluorescence

Minimum Stimulation:

Pulsed: 7ns, Nd:YAG @ 1064 nm
2 MW/cm² (10 pulses, low ambient)

Minimum Stimulation for Visible Emission:

Pulsed: < 8 W/cm² @ 337 nm, 4 ns, 20 Hz
< 40 W/cm² @ 337 nm, 4 ns, 1 Hz

(measured under darkened conditions)

Continuous: < 1 nW/cm² @ 450 nm
< 1 nW/cm² @ 365 nm

(measured under darkened conditions)

Maximum Stimulation:

Single pulse:

(Card format only)
130 MW/cm² @ 337 nm, 4 ns

(Disk + head formats only)
850 MW/cm² @ 337nm, 4 ns

(All formats)
60 MW/cm² @ 1064 nm, 7 ns

Continuous: (All formats)
100 W/cm² @ 512 nm

