

## LASER COMPONENTS (UK) LTD

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# VISualize - *bringing lasers to light*

## PRODUCT DATA SHEET

### Multi-purpose Laser alignment head

#### Introduction

VISualize is an essential aid to the alignment, location and visualization of a wide range of visible through to NIR lasers.

As a general safety tool it is ideal for inspection of visible laser sources such as argon ion, HeNe, and laser diodes when laser safety goggles are being worn.

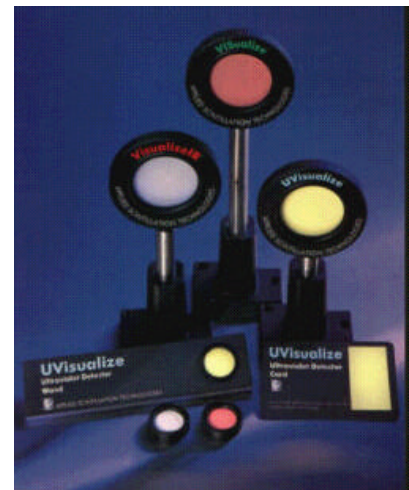
#### Features

- Gives orange/red emission.
- Active in visible bands including HeNe, HeCd, doubled Nd:YAG
- Active in popular laser diode, Nd:YAG and communications wavelength bands.
- Detects IR at powers as low as  $1 \text{ nW/cm}^2$
- **Free** from hazardous reflections.
- A low cost alternative to beam profilers.

#### Product Styles:

The VISualize 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  $\sim 4.5 \text{ cm}^2$

##### **Disc + Wand**

Disc OD 25 mm  
optical mount compatible  
Active area  $\sim 3 \text{ cm}^2$   
Wand  $\sim 130 \text{ mm} \times 35 \text{ mm}$

##### **Optical Bench Mounted Head**

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

Active area  $\sim 12.6 \text{ cm}^2$

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### Performance Specifications

#### Stimulation Range: (see graph)

Band 1: <400 nm to >640 nm  
Band 2: <800 nm to >1700 nm

#### Typical Applications

Band 1: Ar<sup>+</sup>, HeNe, HeCd, Nd:YAG etc  
Band 2: NIR LEDs, LDs, Nd:YAG etc  
1550 nm telecommunications

#### Emission Colour: (see graph)

Orange/red centred @ 655 nm  
Broad band emission <575 nm to >750 nm

#### Persistence (stimulation removed)

IR stimulation < 0.5 secs  
Visible stimulation 0.5 – 3 secs  
(Ambient lighting dependent)

#### Minimum Stimulation for Visible Emission:

Continuous:  
<1 nW/cm<sup>2</sup> @ 450 nm  
<25 μW/cm<sup>2</sup> @ 950 nm

(measured under darkened conditions)

#### Nd:YAG

2 kW/cm<sup>2</sup> @ 1064 nm

(7 ns pulse @ 10 Hz, low ambient light)

#### Maximum Stimulation:

Single pulse: (Card format only)  
130 MW/cm<sup>2</sup> @ 337 nm, 4 ns

(Disk + head formats only)  
850 MW/cm<sup>2</sup> @ 337nm, 4 ns

(All formats)  
60 MW/cm<sup>2</sup> @ 1064 nm, 7 ns

Continuous: (All formats)  
100 W/cm<sup>2</sup> @ 512 nm

