MIRAGE PHOTONICS

MFL-3500

*prototype design shown

Compact widely tunable mid-IR fibre laser

- Efficient 3.5 µm output via patented dual-wavelength pumping
- High output power of up to 1 W (for fixed wavelength)
- Wide tunability of greater than 450 nm
- Reliable and robust single-mode fibre construction
- Built-in wireless remote control via app

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MFL-3500

Compact widely tunable mid-IR fibre laser

The MFL-3500 is the first compact, turn-key mid infrared fibre laser.

Based on the highly efficient, patented dual wavelength pumping technology, the MFL-3500 outputs up to 1 W of continuous power from a single-mode fibre, delivering reliable mid infrared light to wherever it is needed.

An automated grating allows an ultra wide tunability of up to 450 nm around 3.5 µm, enabling tuning to a variety of molecular absorption lines such as various greenhouse gases and proteins.

The MFL-3500 comes with built-in wireless remote control of all laser parameters via an app, giving you the freedom to easily control the laser from anywhere in the lab.

The MFL-3500 is a simple, turn-key solution that can be readily incorporated into any experiment requiring mid-Infrared light.

Applications:

- Mid-IR spectroscopy
- Greenhouse gas sensing
- Atmospheric laser radar
- Molecular fingerprinting
- Polymer processing

Maximum power @ 3.5 µm band	1 W (fixed wavelength) (a)
Wavelength range	3.33 – 3.78 µm
Typical linewidth	0.3 nm (b)
Beam quality	TEM_{00} $M^2 < 1.1$
Power stability	0.4 % (c)
Duty cycle	1-100 %
Polarization	Linear (30:1) Unpolarised (fixed wavelength)
Dimensions	45 x 45 x 53 cm^3 (d)

Preliminary

(a) Free running laser at fixed wavelength. Lower for tunable system
(b) Narrower linewidth optional
(c) Standard deviation over 15 minutes - free running
(d) Laser head size 43 x 43 x 13 cm^3
*all specifications are preliminary and subject to change