Picosecond Programmable Mid-IR Fiber-Based Lasers

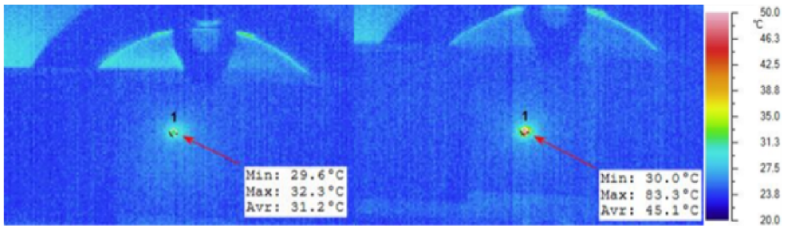
Genia Photonics' fiber-based Mid-IR lasers deliver short picosecond pulses covering the lower mid-IR region at a repetition rate that is fully programmable. The lasers can deliver varied output power up to 10 mW while maintaining a very high signal to noise ratio.

Among the many advantages of the Mid-IR lasers is its tunability capability in the high wavenumber band (2850cm-1-3200cm-1) or in the fingerprint region; enabling the detection of various chemical substances over a wide spectrum. Light delivery is over extended fiber, which allows for remote detection of substances of interest.

Genia Photonics' Mid-IR lasers are the ideal Mid-IR sources for applications that target applications involving the investigation and analysis C-H O-H and N-H bonds as well as applications such as explosive detection and industrial gas analysis. The fiber delivery allows for such analysis to be performed at a remote distance from the area being analyzed.

Genia Photonics' Mid-IR lasers offer great flexibility that can meet many demanding configurations and setups.

Use Case: Chemical Sensing Application

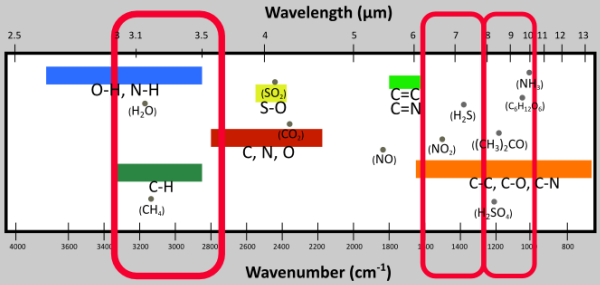


The results above show the detection and sensing of a chemical substance with high sensitivity and high specificity using Genia Photonics' Mid-IR fiber laser.

Key Features:

Available Emission Wavelengths

3.1µm - 3.5µm*, 6.7µm - 8µm and 8µm - 10µm



Pulse train

Repetition rate : 10 - 40 MHz
Average Power : up to 10mW for 3.1 - 3.5µm
up to 250µW for 6 - 10 µm
Good SNR and low time jitter

Laser pulse

Pulse duration : 100 ps
Free-space/Collimated output

Laser deployment

Short warm-up time < 5 mn
Air cooled
Remote control interface.
Power Supply: 110 - 240 VAC
Network Connection: USB Std Type B

*Range from 2.95µm to 3.67µm available upon request

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