Synchronized Picosecond Programmable Laser from 2815 cm^{-1} to 3350 cm^{-1}

Genia Photonics' Synchronized Programmable Laser incorporates a tunable programmable laser and a MOPA laser into a single source with both outputs synchronized to the target. Covering the Raman shift range from 2815 cm^{-1} to 3350 cm^{-1}, this compact fiber laser is ideal for applications that deploy nonlinear spectroscopy techniques such as Coherent Anti-Stokes Raman Scattering (CARS). This laser is designed to be transportable and is well suited for translational research work in the biomedical field especially towards clinical applications.

Benefits:

- Fast and easy setup
- Versatile fiber output interface for remote applications
- Integrated synchronization source for peripherals
- No alignment - No moving parts
- Transportable
- Low maintenance
- Low lifetime cost

Features

- Fiber-based design
- Fibered output
- Short picosecond pulses
- Easy installation
- Electrical output signals
- Simple computer control

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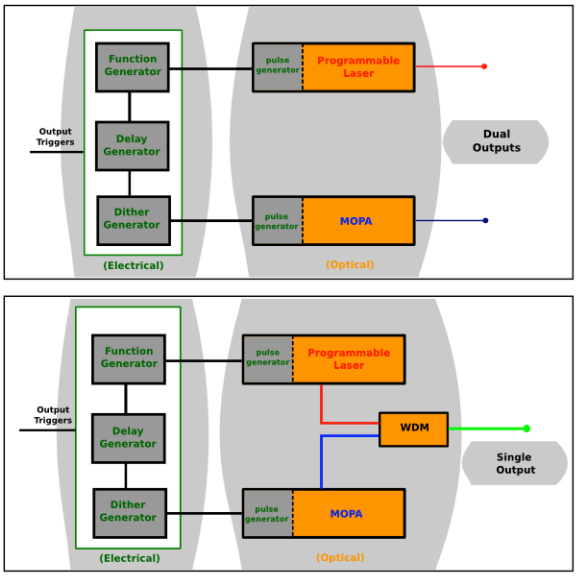
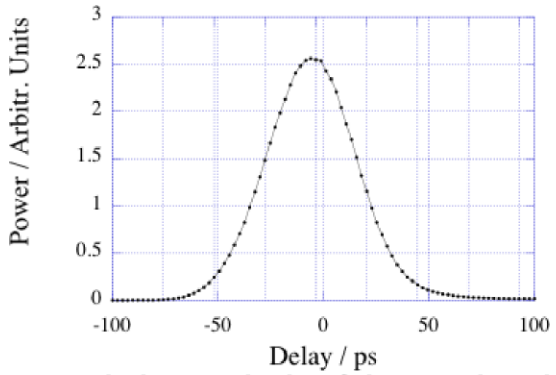


Block Diagram of the Synchronized Programmable Laser



Cross-correlation analysis of the synchronized Laser:

This curve shows the synchroniztion of the two laser outputs. As the delay between both lasers is changed, the resulting signal reaches a nominal power level. Synchronization is maintained through the wavelength tuning range of the programmable laser.

Product part number: SL-1050-0792-212-01

Main Parameters:

Tunable Programmable Laser:

Wavelength tunability range: 1020 nm to 1080 nm
Wavelength Step Resolution: >150 pm (>1.5 cm^{-1})
Spectral Linewidth: <400 pm (<4 cm^{-1})
Pulse Width: 22 ps (+/- 5 ps) fixed factory pre-set
Average Output Power: >100 mW over the entire wavelength range / PM Fiber output with FC/APC connector
Repetition Rate: 40 to 120 MHz adjustable
Trigger: PT (Electrical pulse trigger output for each optical pulse)

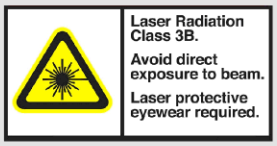
MOPA Laser:

Wavelength: fixed at 792.5 nm (with separate SHG mixer)
Spectral Linewidth: <225 pm (<2.5 cm-1)
Pulse Width: 16 ps (+/- 4 ps) fixed factory pre-set
Average Output Power: >100 mW PM free space output
Repetition Rate: 40 to 120 MHz adjustable
Trigger: PT (Electrical pulse trigger output for each optical pulse)

Synchronization Parameters:

Repetition Rate: 40 to 120 MHz
Synchronization Jitter (RMS): <5% of pulse duration
Including wavelength change signal triggers
Including electrical pulse trigger output per laser
19" rack mount enclosure with power supply included
Including GUI software

Trigger: - WC (Wavelength Change Trigger)
- PT (Electrical pulse trigger per optical pulse)



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