



Tunable Pulsed Picosecond Fiber-Based Lasers - TLA Series

The TLA series of tunable pulsed fiber-based lasers offer extensive flexibility yet are very simple to use, eliminating the guess work so you can focus on what matters most. Setting the wavelength, power level, pulse repetition rate or any parameter is as simple as a click through a PC Graphical User Interface (GUI). The powerful wavelength sweep function enables rapid wavelength sweeping in either a sequential mode or in arbitrary user defined sequences and patterns. Its fiber-based design offers all the advantages that you expect from optical fiber for flexibility, stability and robustness.

Controlling the laser is as easy as 1-2-3 with all the commands just a click away. The intuitive GUI from a PC provides all the commands and settings in one location for complete monitoring and control. Also available are external electrical timing signals for triggering data acquisition systems or other devices which are also controlled from the GUI.

The TLA series offers rapid wavelength tunability over a wide range making it the ideal choice for many applications that require variability. All control parameters can be easily programmed including the many configurable modes of the wavelengths sweep function. Whether your requirement is for spectroscopy, imaging, chemical and material analysis, or just a general versatile laser source, the TLA series offers everything you need.

Key Features

Available Wavelength Ranges

1030-1080 nm, 1525-1575 nm, 1575-1605 nm and 1900-2000 nm

Optical Output

Short picosecond pulses
 Selectable repetition rate
 Average power up to 1W*
 Low timing jitter and high SNR
 Polarized LP01 output

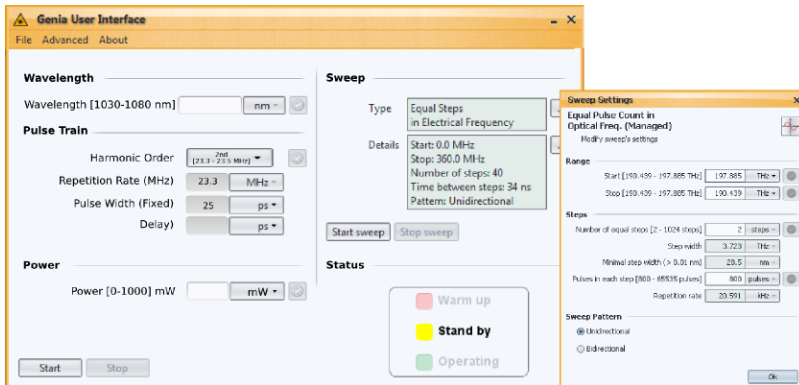
Wavelength Sweep Function

Sequential or arbitrary wavelength patterns
 User defined profiles supported
 Fully programmable patterns including dwell times

Other Features

Quick warm-up time
 Air cooled - no additional cooling
 Single mode PM fiber delivery
 Standard wall-plug powered
 Quick and easy setup
 Fully computer controlled
 Electrical output timing signals with control

Genia Photonics's Graphical User Interface



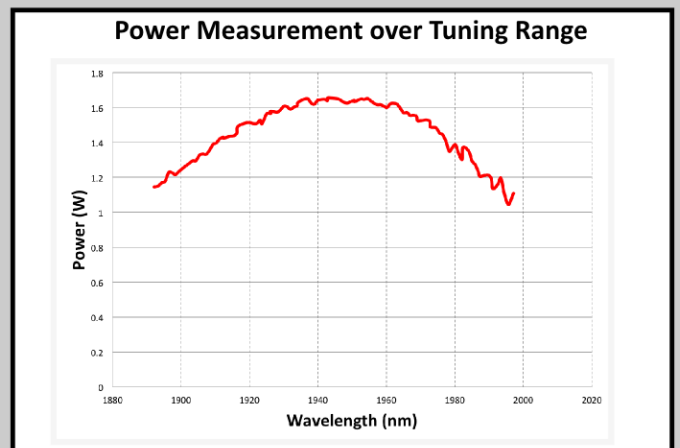
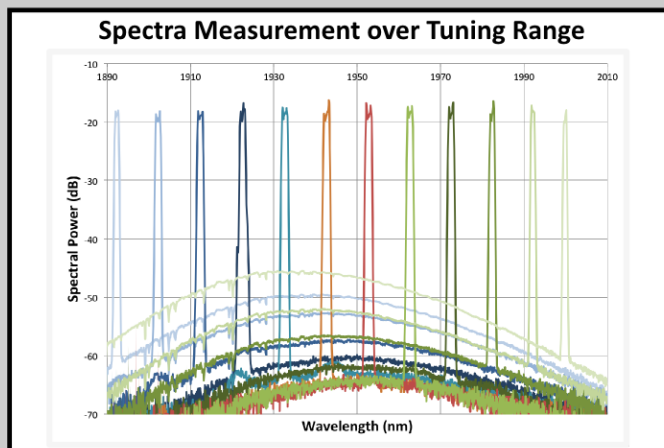
Specifications

The table below shows typical values for the associated parameters. Should you require further details or have other requirements, please contact your sales representative or Genia Photonics Inc..

		TLA-1050-050	TLA-1550-050	TLA-1590-030	TLA-1950-050
Parameters	Units				
General Laser Parameters					
- Central Wavelength	nm	1055	1550	1590	1950
- Wavelength Range	nm	1030-1080	1525-1575	1575-1605	1900-2000
- Tuning Step Size	nm	< 0.01	< 0.01	< 0.01	< 0.01
- Output Average Power	mW	1000	1000	50	1000
Pulse Train					
- Repetition Rate	MHz	10-120	10-120	10-120	10-120
- Pulse Width	ps	25 +/- 5 ps or 85 +/- 15 ps			85 +/- 15 ps
Laser Pulse					
- Maximum Peak Power	W	1000	1000	200	1000
- Form Factor	M ²	< 1.2	< 1.2	< 1.2	< 1.2
- Polarization Extinction Ratio	dB	> 15	> 15	> 15	> 15
Sweep Function					
- Sweep Rate	λ/sec	8000			
- Sweep Mode		Wavelength or Optical frequency, Uni-directional, Bi-directional. Arbitrary User-configurable.			
Deployment					
- Power Supply		120V AC 60 Hz/ 240V AC 50 Hz			
- Weight	kg	30			
- Physical Optical Output		FC/APC or Collimated Output			
- Electrical Timing Output		SMA Connectors / LVTTTL and LVPECL output signals			
- Communication Port		USB Std B Type			
- Dimensions		Typical 19" Rack X 4U (19" X 19" X 7")			

Use Case: TLA-1950-050

Programmable Laser 1950 nm Tunability



The above graphs show the tunability feature of the programmable laser at a center wavelength of 1950 nm. The spectra and power measurements are shown here over the tuning range.