

1550 nm, 0.6 - 2.5 GHz, Picosecond Benchtop Fiber Laser



Applications

- Spectral comb
- Transmission network characterization
- High speed O/E conversion
- Optical metrology
- High speed analog to digital conversion
- Optical sampling

Features

- Repetition rate tunable from 0.6 to 2.5 GHz
- Wavelength tunable from 1530 to 1565 nm
- Pulse width tunable from 2 to 10 ps
- Average output power > 20 mW
- Transform-limited output with low timing jitter
- Convenient fiber pigtail output
- Integral optical monitor port

The benchtop Eureka (PSL-1) series is the perfect, picosecond pulse optical source for telecommunications test and measurement applications. Along with a portable design, the series offers user-friendly front panel control knobs for adjustment of the output power, wavelength, pulse width, and repetition rates. Different synchronization signals are available through a front panel RF output and an optical monitor port.

The C-band source is an actively mode-locked fiber laser with a tunable repetition rate from 0.6 to 2.5 GHz that provides a stable and reliable optical clock with turnkey operation. It features a convenient fiber pigtail output with wavelength tunability throughout the C-band and power levels up to 20 mW. The pulse width can be varied from 2 to 10 ps with a pedestal of less -30 dB and a near transform-limited spectral width.

If the performance parameters do not quite fit your application requirements, please contact us at sales@calmarlaser.com to discuss a customized solution.

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Technical Specifications¹

| Model Number | PSL-1-TT |
|------------------------------------|---|
| OPTICAL | |
| Center Wavelength (nm) | 1530 ~ 1565 (tunable) |
| Pulse Width ² (ps) | 2 ~ 10 (tunable) |
| Average Power ³ (mW) | > 20 at 2.5 GHz |
| Repetition Rate (GHz) | 0.6 - 2.5 (discretely tunable with spacing ~ 2 MHz) |
| Pulse Amplitude Stability (% RMS) | < 1.0 |
| Polarization Extinction Ratio (dB) | > 18 |
| Output/Termination | PM 1550 fiber pigtail with FC/APC connector, key to slow axis |
| ELECTRICAL | |
| RF Driver Source Input (V) | 0.6 - 2.5 GHz, 0 - 5 dBm |
| Supply Voltage (VAC) | 85 - 264 autoranging |
| Supply Frequency (Hz) | 47 - 63 autoranging |
| MECHANICAL | |
| Operating Temperature (°C) | 15 - 30 |
| Dimensions (cm) | 48.2(W) x 46.7(D) x 10(H) |
| Weight (kg) | ~ 7 |

1. Due to our continuous improvement philosophy, all product specifications are subject to change without prior notice. Please contact sales@calmarlaser.com for customized specifications.

2. A sech² pulse shape (deconvolution factor of 0.65) is used to determine the pulse width from the second harmonic autocorrelation trace.

3. From output port A, a monitor signal (~ 0.1 mW) is available from output port B.

