

Tunable Picosecond Pulse Source

Free from the typical constraints inherent to cavity-based mode-locked lasers, the **Cavityless™ Series** is the ultrafast first fiber laser to combine seamless wavelength tunability, ultra-low jitter, and continuously programmable repetition rate that simply cannot be matched by conventional mode-locked technology.

KEY FEATURES

- Mode-hop-free C+L tunability
- Low jitter (< 45 fs)
- Short pulses (< 2.5 ps)
- High repetition rate:
 - *Up to 50 GHz, selectable*
- High power (>50 mW)
- “Instant-on” turn-key operation
 - *No cavity stabilization or locking*

APPLICATIONS

- >100 Gb/s (OTDM) networks
- Optical sampling
- Ultrafast spectroscopy
- Frequency metrology
- Sensing and ultrafast imaging
- Material and component characterization

RAM PHOTONICS, LLC.

4901 Morena Blvd., Suite 128, San Diego, CA 92117-3557

info@ramphotonics.com

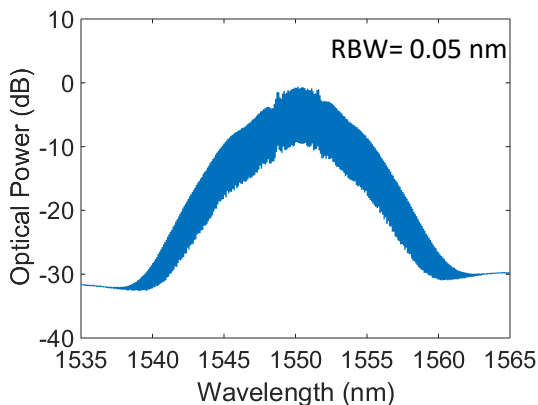
Tunable Picosecond Pulse Source

SPECIFICATIONS

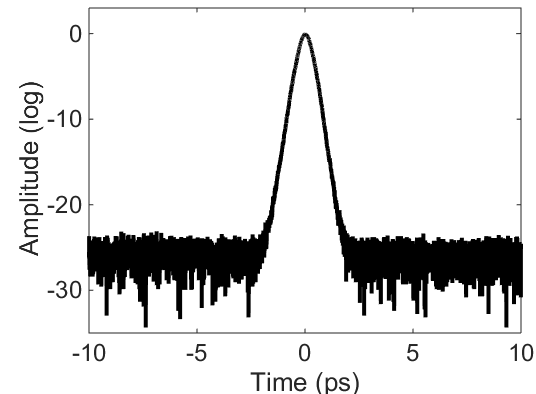
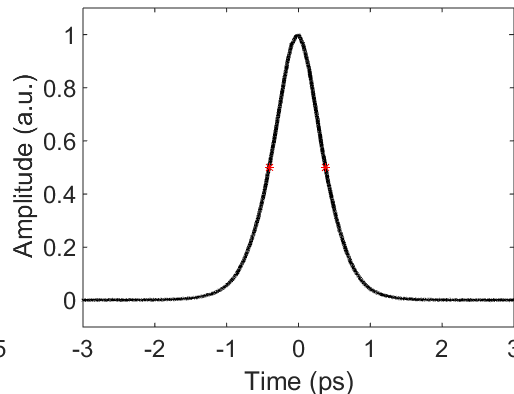
Due to our continuous improvement program, specifications are subject to change without notice.

	Typical configuration	Options	Unit
Pulse Repetition rate	40	5-50, selectable ⁽¹⁾ , tunable	GHz
Pulse Width	≤ 2.5	≤ 1.0 ^(2,3)	ps
Temporal Jitter	≤ 45	≤ 25 ⁽⁴⁾	fs
Time-Bandwidth Product⁽⁵⁾	≤ 0.60	-	-
Output Power	40	other	mW
Amplitude Noise	< 1	-	%
Extinction Ratio	20	10, 30	dB
Tuning Range	C	C+L, L-only, non-tunable, optical input	-
Output Type	FC-APC/ SMF-28	FC-PC/PM or other	
Synchronization	Internal ⁽⁶⁾	External (user input)	
Power Consumption	100		W

- (1): Integrated pulse picker (4): External synchronization required for non-fixed repetition rate
 (2): Single band only (5): Measured as 3dB widths in time and spectrum
 (3): Limited tuning range (6): With clock output for use as synchronization source



Typical spectra of the output of the Cavityless™ pulse source for sub-picosecond pulse width.



Auto-correlation traces of the Cavityless™ pulse source with sub-picosecond pulse width, in linear (left) and logarithmic (right) scales showing excellent pulse shape with high extinction ratio.