

FO-100

Fiber Oscillator

The FO-100 Fiber Oscillator from Vescent Photonics is the engine for your femtosecond laser and frequency comb work. Based on an Er:doped fiber, it delivers sub-200 fs pulses with a bandwidth of over 15 nm, given an appropriate pump input and thermal control loops (not included). Additionally, it features our unique PZT-based cavity length adjustment tool. With an appropriate user-supplied signal, >100 Hz of fine control over the repetition rate is possible. In combination with coarse temperature tuning and factory centering, one can precisely set the repetition rate - including matching the repetition rates of two oscillators for applications such as dual-comb spectroscopy.



FO-100 Fiber Oscillator

Designed for performance, the FO-100 accepts a user-supplied pump input. Modulation and control of the pump power as well as fast (PZT) and slow (temperature) tuning of the repetition rate makes the FO-100 ideal as the engine for frequency comb development.

Features:

- 1560 nm center wavelength
- >1 mW of mode locked power
- 100 or 200 MHz models
- Short pulses & broad bandwidth
- Low temperature drift

Applications:

- Timing & frequency measurements
- Frequency comb development
- Dual-comb spectroscopy
- Quantum Sensing

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FO-100 Performance Specifications

Performance	
Center Wavelength	1560 nm
Output Power	>1 mW
Pulse Width	<200 fs
Bandwidth	>15 nm
Nominal Repetition Rate	100 or 200 MHz
Repetition Rate Control	
PZT Control Range ¹	>100 Hz or 400 Hz (note 2)
PZT Control Bandwidth ³	>300 kHz
Temperature Control Range ⁴	>40 kHz or >160 kHz (note 2)
Repetition Rate Stability ⁵	<1 ppm/°C
Physical Properties	
Dimensions	2.5 x 4 x 3/4"

All specifications subject to change without notice.

¹0-100 V input

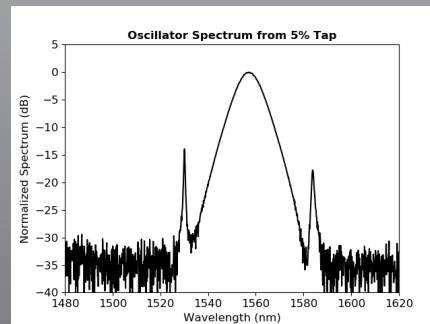
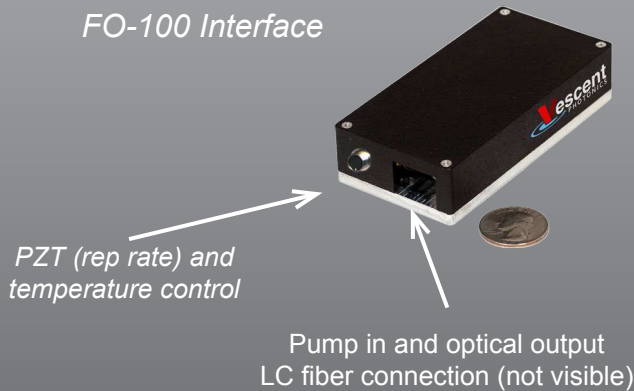
²100 MHz and 200 MHz repetition rates, respectively

³Small signal

⁴40°C temperature range

⁵With respect to room temperature

FO-100 Interface



FO-100 output spectrum

The SLICE-DPC Dual Pump Controller can drive the oscillator (and amplifier) pump diodes



The SLICE-DHV High-Voltage Amplifier is just right for PZT control of the FO-100 repetition rate.

