

OCT(Optical CoherenceTomography) Introduction

Optical coherence tomography (OCT) is an imaging technique that uses low-coherence light to capture micrometer-resolution, two- and three-dimensional images from within optical scattering media (e.g., biological tissue). It is used for medical imaging and industrial nondestructive testing (NDT).

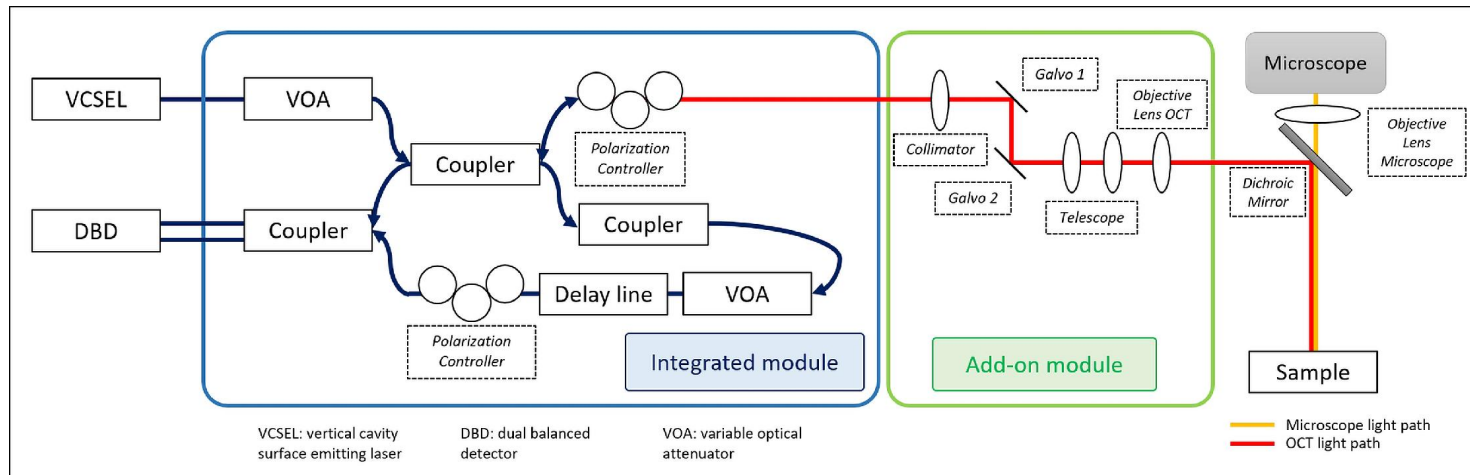


Figure: Citing from: Surgical microscope integrated MHz SS-OCT with live volumetric visualization
Anja Britten, Philipp Matten, Jakob Weiss, Michael Niederleithner, Hessam Roodaki, Benjamin Sorg, Nancy Hecker-Denschlag, Wolfgang Drexler, Rainer A. Leitgeb, and Tilman Schmol



Figure: Ophthalmic OCT instrument

Solutions For OCT Instrument

Fiber Optics(Polarzation Maintain Fiber is also available)

1.Fused Fiber Coupler

1*2/2*2

50:50/10:90/60:40

2.In-Line Circulator

3.In-Line Reflector

4.Filter-WDM(Wavelength Division Multiplexing)

5.fiber optics probe

6.interferometer module

7.VOA(Variable Optical Attenuator)

8.Fiber Collimator

Glass Optics

1.Dispersion compensation prisms

2.Spherical Lens/Aspherical Lens for Collimator

3.Neutral-Density filter / Dichroic Mirror/Bandpass Filter

4.PBS/BS (Polarization Beam Splitter/Beam Splitter)

5.Optical Reflector

6.Grin lens

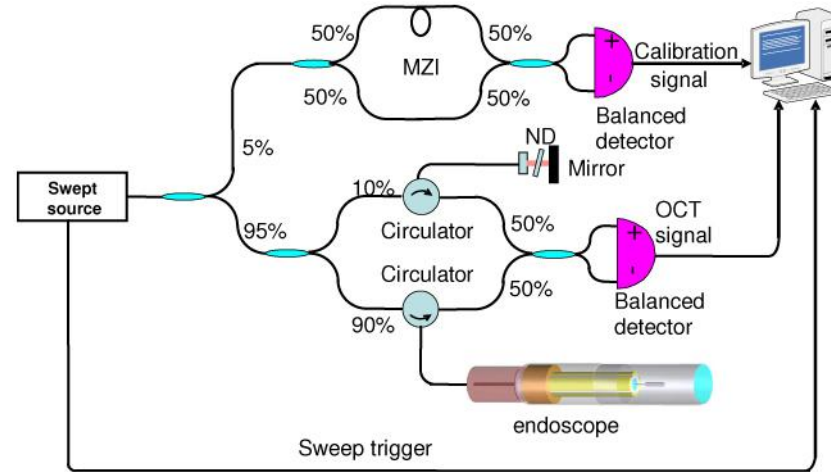


Figure:Schematic of the SS-OCT system based on a 40-kHz FDML source

