

[OEINS-MPM-100]

Multi-Photon Microscopy

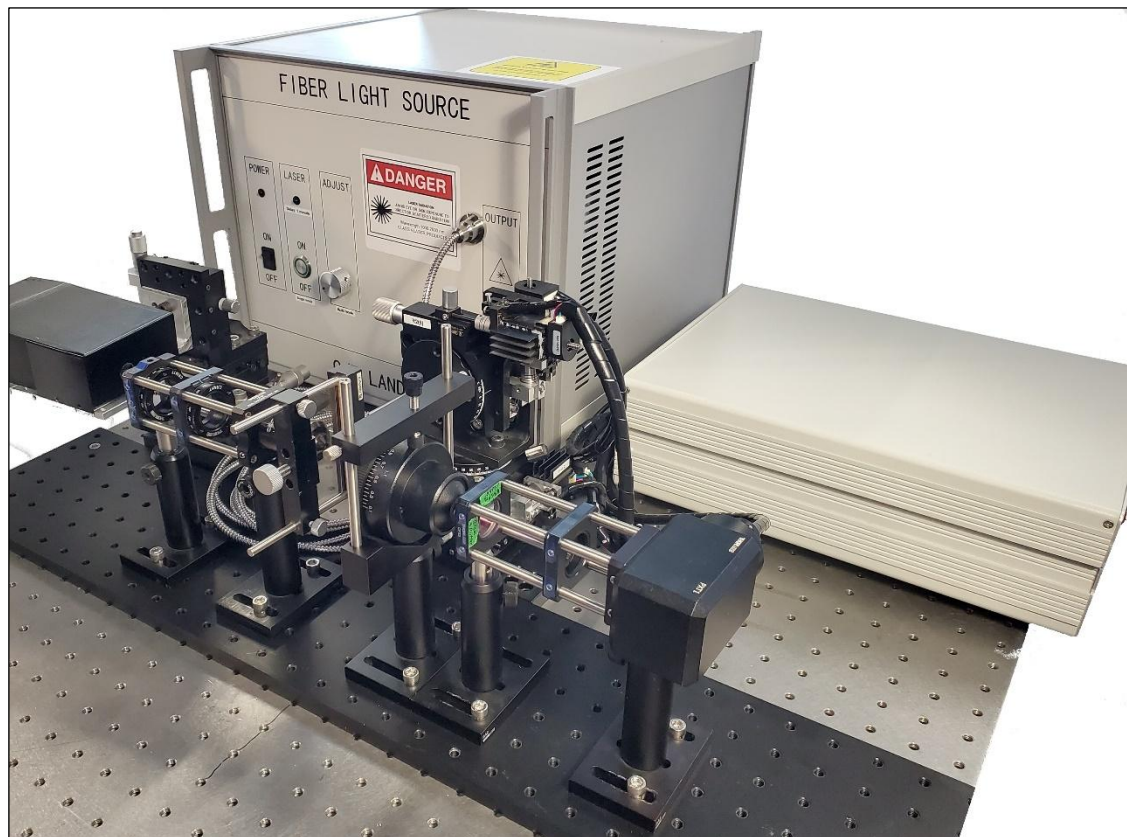


Fig.1. OEINS-MPM-100 Multi-Photon Microscopy System

Features:

- Compact size and robust
- Real-time 2D visualization
- Advanced 2D measurement
- Easy workflow customization
- Large Field of View
- High-sensitivity deep imaging
- Low operating cost

Applications:

- Research and Development (R&D)
- Optical imaging
- Multi-Photon Microscopy (MPM)
- Optical coherent tomography (OCT)
- Imaging/Characterization fibrosis of internal organs (kidneys, liver, lungs)

Product description:

Compared to what is feasible with confocal microscopy, multiphoton microscopy (MPM) is better suited for functional imaging deeper into biological tissues. With or without fluorescent labelling, this imaging method is frequently utilized in intravital imaging of both healthy and sick tissues and cells.

Multiphoton microscopy technology has recently made strides that enable quick, in vivo imaging with single-cell resolution and a wide field of view. Optogenetics and multiphoton imaging integration has created new research opportunities for examining the computational capabilities of the animal brain in vivo.

O/E Land is a supplier of a variety of light sources. We are committed in providing a top-notch research and development tools to support the expansion of medical breakthroughs.

The O/E Land's Imaging system is well designed for bio-medical applications and includes a second harmonic generation (SHG) microscope and a turn-key source with ultra-fast femtosecond pulsed fiber laser. The laser source can provide ultra-short pulses (<150 fs) in the 1 and 1.5-micron wavelength range, with the fundamental oscillator repetition rate of 1KHz to 100 MHz.

Also, these lasers produce an average power of more than 50 mW. The combination of femtosecond pulsed fiber laser and MPM microscope as one compact device, makes the O/E Land Imaging system a unique device. This reliable compact device contains a laser source and microscope together. User friendliness and easy alignment are the other two advantages of this package. In addition, since femtosecond light source operating in the near-infrared (NIR) region is ultra-stable, the images are with good enough deepness in the tissue, and with the good quality.

Product specifications:

LIGHT SOURCE PERFORMANCE		
Parameter	Unit	Value
Center Wavelength (CWL)	nm	1030-1064-1550
Pulse Width for free space output	fs	<150
Average Output Power	mW	>50
Power stability over 2 hours	%	<2.5
Repetition Rate	MHz	10-100
Polarization Extinction Ratio	dB	> 18
Pulse to pulse stability over 1million pulses	%	0.5
Operation Temperature	°C	-20 to +40
Laser Output	-	Free space, collimated beam
Dimensions of the package*	mm	320x320x90

***Package includes:** OEPLS-FS-100 Unit, Power Cable, User manual.

MICROSCOPE PERFORMANCE	
Parameter	Value
Methodology	Multi-Photon Microscopy
Image guidance	Bright-field live fundus image
Light source	femtosecond, ultrafast pulsed fiber laser
Imaging depth	Few micrometer
Repetition Rate	10-100 MHz
Scan Patterns	Line
Objective Lenses	Olympus
File formats	TIFF
Detectors	Highly sensitive photo multiplayer tube
Analysis tools	O/E Land software
Dimensions of the package*	700x300x200 mm

***Package includes:** Power Cable, User manual.