IVIM Light up Your World

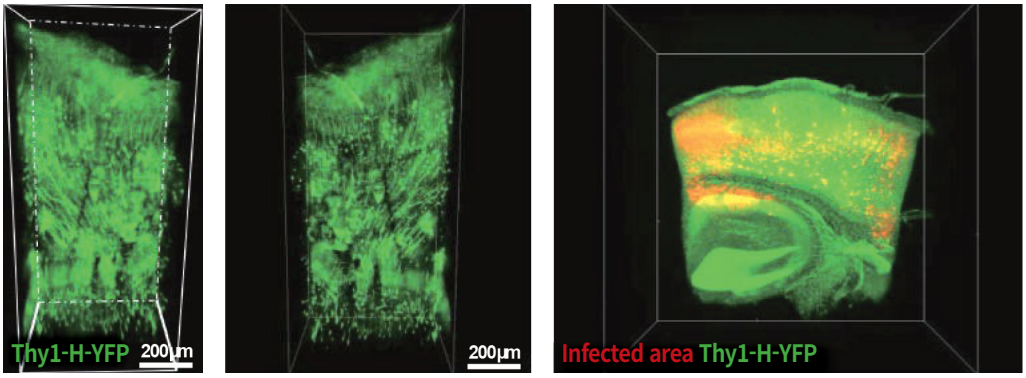
IVM-M3 (Two-Photon v. 3)

The New All-in-One Intravital Imaging Platform



Deep Tissue Imaging, High-resolution, Tunable Laser

IVM-M3 is one of the renowned members of The New All-in-One IVM Series. It has the flexibility feature of the traditional converted microscope and the high-resolution imaging ability of second-harmonic generation microscopy. It is equipped with a fully-automated tunable fs-pulse NIR laser system. IVM-M3 is the optimal system for users who need to conduct deeper-tissue imaging using less-scattering NIR wavelength. Full control functionality of the fs-laser system is integrated with the two-photon imaging software for user convenience with various automation algorithms.



Key Features

- Deep tissue imaging with a tunable long-wavelength NIR fs-laser system
- Fully Integrated *in vivo* Maintenance Unit / Animal Stage (e.g., Monitoring & Homeostatic Regulation of Animal Vitality)
- Ultra High-Speed Imaging (max. 100 fps - 512x512 pixels)
- 4D Animal Motion Compensation (XYZ & Time)
- Label-free, non-linear second and third harmonic generation ability

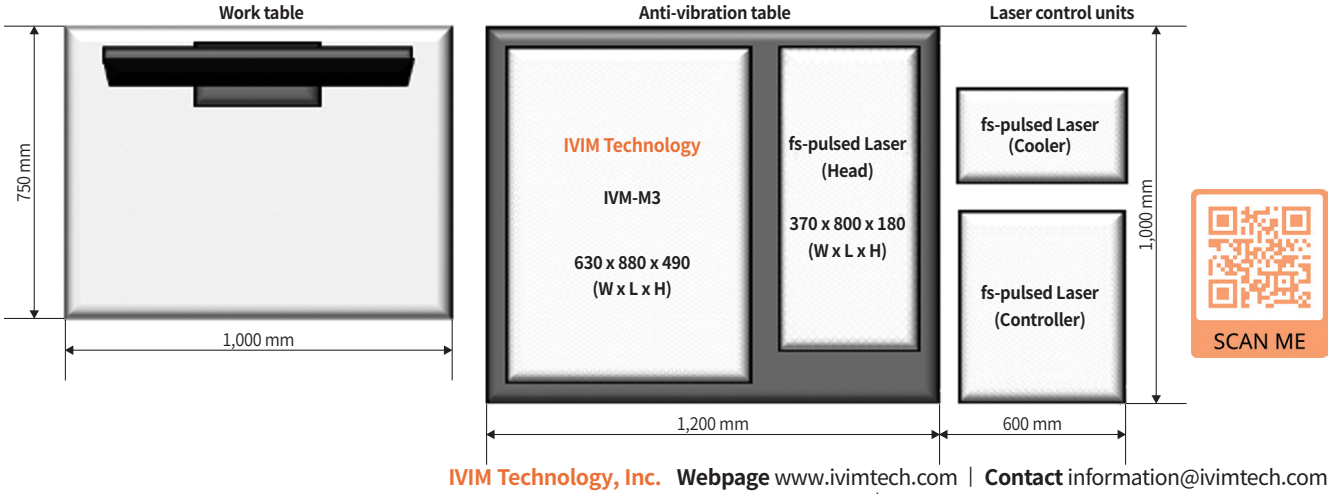
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SPECIFICATIONS

Laser	Tunable Two-Photon Laser Unit	• Ti : Sapphire laser • Wavelength : 690-1050 nm, Pulse width < 75 fs, Rep. rate : 80 MHz • Avg. power > 2.5 W, Dispersion compensation : 0 to -49,000 fs2
Fluorescence Detector	Two-Photon Detector	• Wavelength : 185 - 760 nm (DAPI, CFP, GFP, YFP, RFP, Cy5, Cy5.5, etc.) • 4 High quantum efficiency PMTs (UV to Near IR, Ultra High Sensitivity, Low Dark Current)
	Variable Emission Filter (Optional)	• 2 or 6 emission filters can be mounted on each of four detectors
Scan Head	Scanner	• Polygonal mirror (Fast axis scanning, Max. 66 kHz) • Galvano scanner (Slow axis scanning, Max. 200 µs / step)
Imaging Head	Objectives	• Max. 5 objectives are mountable on S/W controlled motorized turret (1X – 100X) • Compatible for commercial objectives
Image	FOV	• 100 x 100 µm² - 10 x 10 mm²
	Pixel Resolution	• Max. 2,048 x 2,048 pixels
	Imaging Speed	• Standard : 30 fps @ 512 x 512 pixels • (Optional) High Speed : 60 fps @ 512 x 512 pixels • (Optional) Ultra High Speed : 100 fps @ 512 x 512 pixels
Animal / Sample Stage	3D Stage	• Travel Range : 50,000 x 50,000 x 75,000 µm (XYZ) • Micromanipulation (Max. 0.2 µm resolution) • 3-axis independent control with Jog Dial & IVM Engine software
	Specimen Holder	• Flexible-design universal *in vivo* / *ex vivo* / *in vitro* specimen holder can be mounted • (Optional) Homeothermic warming system, Holders for window chamber
Animal Motion Compensation	4D *In vivo* Imaging Motion Compensation	• XY motion compensation : Averaged image acquisition with motion artifact compensation • Z motion compensation : Image-based sample Z position adjustment for long-term intravital microscopic imaging & sample tracking (Feedback-loop automatic stage control) • T motion compensation : Image-based image XY position adjustment for long-term intravital microscopic imaging & sample tracking (Feedback-loop automatic stage control) • Combination of above three compensation for 4D *in vivo* motion compensation • Controllable by IVM Engine software
Additional *In vivo* Modules	Live Animal Maintenance Unit	• Body Temp. Monitoring & Feedback Heater Control, including tablet PC • 4CH Rectal Probe, Body Plate Heater, Thermometer Sensor & Cover Glass Heater
	In vivo Imaging Chamber SET	• Standard Dorsal Skinfold Chamber SET • Lung Imaging Chamber SET • Cranial Window SET • Abdominal Imaging Window SET • Pancreas Imaging Window SET • Mammary Imaging Window SET • Heart Imaging Window SET
	Inhalation Anesthesia System	• Whole Rodent Animal Inhalation Anesthesia System • Anesthesia Mask and Connections
Engine & Studio Software	Image Display	• Independent 4 single channel display (RGBA channel) • Overlay channel display (Selection among RGBA channel)
	In vivo Imaging Mode	• Mosaic imaging (XY), Z-stack imaging (Z), Time-lapse imaging (T) • Time-lapse imaging at Multi-position (T- M), • Time-lapse & Z-stack imaging (TZ), • Time-lapse & Z-stack imaging at Multi-position (TZ- M)

New All-in-One IVM Series Size Information



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