

InVi SPIM AIM

PURE LIVE IMAGING

InVi SPIM AIM – THE ADVANCED ILLUMINATION MODULE FOR THE INVERTED LIGHT-SHEET MICROSCOPE

Luxendo's Advanced Illumination Module (AIM) expands the capabilities of the **InVi** SPIM: while maintaining the ease-of-use and stability of the system, it adds tailorable, interactive adaptability of the beam shape to suit the highly specific requirements of your sample. AIM offers a variety of illumination patterns: single or multiple variable Bessel beams, optical lattices and structured illumination, or static or scanned Gaussian beams. You choose what gives you the best results for your 3D high resolution imaging experiment – large field of view, high speed or optimal spatial resolution.

Similar to the **InVi** SPIM platform, it maximizes photon efficiency and short illumination times for gentle long-term imaging with precise control of physiological environmental conditions. A choice of customized light-sheet patterns allows you to optimize for a large field-of-view, very high acquisition speed or spatial resolution at the physical limit.

The **InVi** SPIM AIM is suited for a variety of applications including:

- › Dynamic cellular interactions
- › Cell cycle imaging
- › Membrane dynamics
- › Subcellular structure visualization
- › Tracking protein movements in 3D
- › Long time-lapse imaging

The optical concept and performance of the **InVi** SPIM AIM enables

- › High level of flexibility
- › Minimal phototoxicity
- › Confocal resolution
- › Remarkably high imaging speed
- › Highest sensitivity and minimal noise

Join us on our journey to a fascinating world of new applications – come and explore it with us!



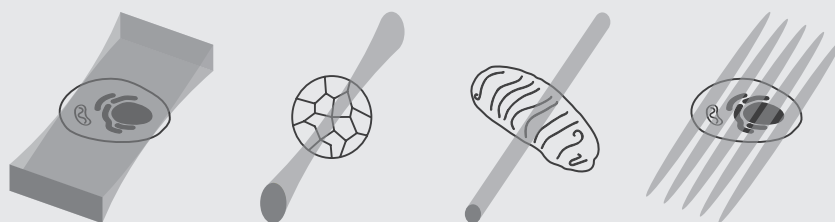
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SPECIFICATIONS

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UNIQUE VERSATILE LIGHT-SHEET GEOMETRIES

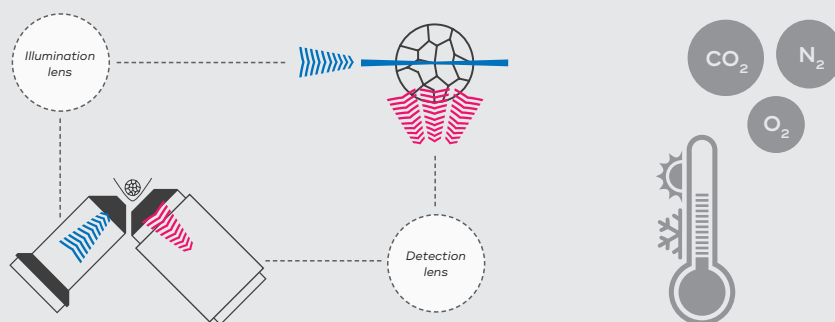
- > Flexible light-sheet geometries
 - > Static Gaussian light-sheet
 - > Scanned Gaussian beam
 - > Scanned Bessel beam
 - > Optical lattices
- > Robust aberration tolerance even in complex sample structures
- > Line illumination for improved background suppression



	Static Gaussian	Scanned Gaussian	Scanned Bessel	Optical lattices
Fast	+++	++	++	++
Gentle	++	++	+	+
Resolution	+	++	++	+++
FOV	+	+	+++	++

INVERTED & CONTROLLED

- > Inverted microscope configuration
- > Illumination objective:
 - Special Optics 28.6x W @ 0.7 NA, water immersion
- > Detection objective:
 - Nikon CFI Apo 25x W @ 1.1 NA, water immersion
- > Easy access to the sample chamber
- > Small sample medium volume (separated from immersion medium)
- > Accurate temperature and atmosphere control



FLEXIBLE

- > Customizable laser combiner, up to 6 positions:
 - 405 / 445 / 488 / 515 / 561 / 594 / 642 / 685 nm @ 50 mW
- > Flexible spectral configurations in two simultaneous channels
- > Fast filter wheels with 10 positions each
- > Easily exchangeable sample holder – customizable, disposable and biocompatible

