

InVi SPIM

PURE LIVE IMAGING

InVi SPIM – THE INVERTED LIGHT-SHEET MICROSCOPE

Luxendo's inverted light-sheet microscope is dedicated to live imaging. It allows for optimized long-term 3D fluorescence microscopy of highly sensitive samples. Providing an easy access to its sample chamber with userfriendly, disposable or exchangeable sample holders mounted from the top, the **InVi SPIM** singles out in its gentle handling of the most delicate samples and its minimization of required specimen medium. Maximized photon efficiency and short illumination times enable long-term imaging under ideal and precisely controlled environmental conditions.

The **InVi SPIM** is perfectly suited for a great variety of samples and applications including:

- › **In toto imaging of small animals and embryo models**
- › **Dynamic processes in mammalian cell culture models (e.g. spheroids, organoids)**

- › **Live imaging of intact and living plant models**
- › **Stem cell development and differentiation**
- › **In vitro fertilization research and monitoring**
- › **Functional imaging (calcium)**

By means of its optical performance and its remarkably fast acquisition speed, the **InVi SPIM** generates excellent image data for

- › **3D reconstruction**
- › **5D/6D analysis**
- › **Tracking of cellular and subcellular localizations and events**
- › **Morphological analysis**

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



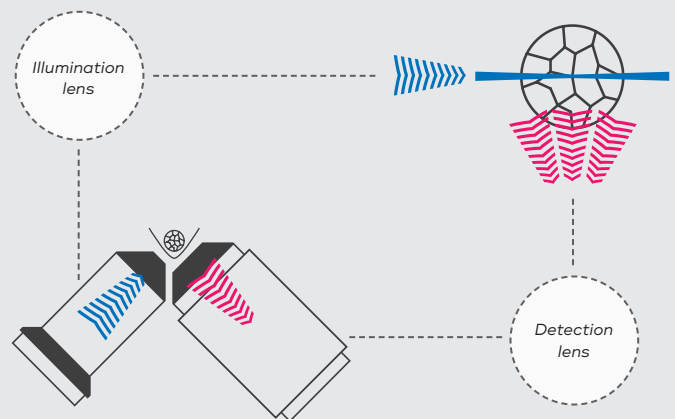
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SPECIFICATIONS

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INVERTED

- > Inverted microscope configuration
- > Easy access to the sample chamber
- > Sample medium separated from immersion medium
- > **Illumination objective:**
Nikon CFI Plan Fluor 10x W @ 0.3 NA,
water immersion
- > **Detection objective:**
Nikon CFI Apo 25x W @ 1.1 NA,
water immersion



FAST

- Imaging with highly sensitive sCMOS cameras (Hamamatsu Orca Flash 4.0 V3) at maximum speed
- > 500 fps @ 192 x 2048 px
 - > 125 fps @ 1024 x 2048 px
 - > 75 fps @ 2048 x 2048 px



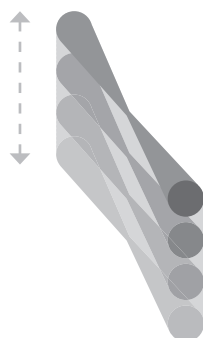
FLEXIBLE

- > 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



SCANNED

- Scanned light sheet
- > Adjustable light-sheet thickness:
2–6 μm
 - > Flexible light-sheet area
 - > Robust aberration tolerance even in complex samples
 - > Line illumination for improved background suppression



CONTROLLED

- > Small sample medium volume
- > Accurate temperature and atmosphere control
- > Easy sample accessibility
- > Compatible with photoactivation, photoablation, etc.

