

LightIR™

FLEXIBLE *IN VIVO* NIR FLUORESCENCE IMAGER



The LightIR™ is a cutting-edge *in vivo* fluorescence imager that delivers exceptional sensitivity and versatile functionality, seamlessly integrating open-environment operation and light-tight enclosure capabilities into a single instrument.

Flexibility

- » the LightIR™ can be used for fluorescence guided surgery, on small and large animals using either the closed setup or the optical head open configuration
- » NIR-I and NIR-II fluorescence versions are available

Sensitivity

- » the laser excitation combined to a patented real-time background subtraction and brightfield overlay makes it a highly sensitive system, adapted to various light environments
- » for NIR-II, coupled to the Alizé 1.7, a high-end scientific-grade InGaAs camera, it offers low noise levels, high efficiency, and a rapid frame rate

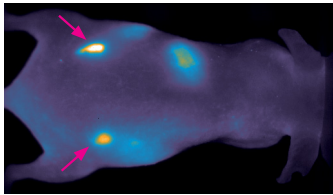
TECHNICAL SPECIFICATIONS

Imaging modes	NIR-I or NIR-II fluorescence, brightfield, subtracted, overlay Optional: RGB brightfield
Real-time processing	background subtraction, brightfield/fluorescence overlay
Emission spectral range	NIR-I : 650 - 900 nm NIR-II : 900 - 1600 nm
Fluorescent channels	1 or 2 channels
Available excitation wavelengths	640 nm, 690 nm, 750 nm, 785 nm, 808 nm, 980 nm
Emission filters	set according to chosen excitation wavelengths
Field of view	7 cm x 7 cm
Detector	CMOS (NIR-I) or Alize 1.7 InGaAs (NIR-II)
Image size (px)	1024 x 1024 (NIR-I) or 512 x 512 (NIR-II)
Output format	tiff images (16 bits) with metadata

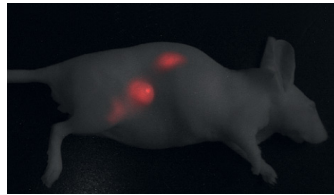


APPLICATIONS

CANCER IMAGING



White (upper arrow) and black (lower arrow) melanoma tumors labeled with Proimaging CJ215, NIR-II fluorescence



Tumor labeling with Fluoptics' AngioStamp™, targeting integrin expression Courtesy V. Josserand, Optimal, Grenoble, France



APPLICATIONS

- » Fluorescent guided surgery
- » Fluorescent agent biodistribution
- » Deep tissue lymphatic imaging
- » Vascularisation imaging
- » Infectious diseases studies

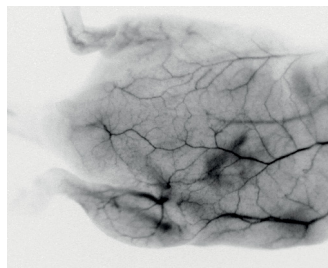
ADVANTAGES

- » High sensitivity due to high power excitation and background subtraction
- » Real time image display
- » User friendliness
- » Acquisition sequence programming
- » Preclinical Surgical Ready
- » Flexible for an open-environment operation and light-tight enclosure

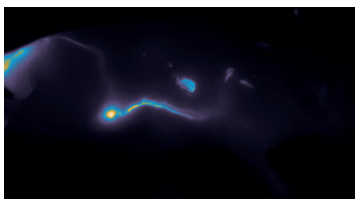
VASCULAR IMAGING



Vascular imaging in mouse with NIR-II fluorescence. Courtesy Optimal Imaging Platform, Grenoble, France

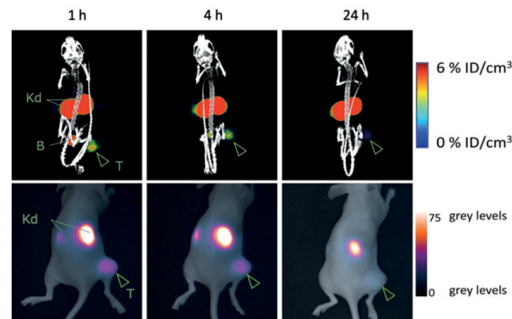


LYMPHATICS



Lymphatics imaging in mouse with ProimagingCJ215 and NIR-II fluorescence

FLUORESCENCE GUIDED SURGERY



Anti HER2 Nanobodies conjugated with Cy5 and 111In-labeling of DTPA, SKOV3 murine models

Debie P et al. *The Design and Preclinical Evaluation of a Single-Label Bimodal Nanobody Tracer for Image-Guided Surgery.* Biomolecules. 2021 Feb 26

PHOTON ETC OPTICAL PRECLINICAL IMAGER FAMILY

LIGHTIR

Compact system for NIR-I or NIR-II imaging on small and large animals



IR VIVO

The reference for NIR-II



SYNIRGY

Combining BLI, FLI and NIR-II

