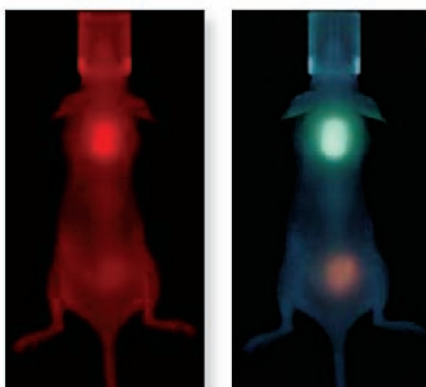


IVIS | SPECTRUM™

U P G R A D E



Advanced Capabilities:

Transmission Fluorescence

Spectral Unmixing

3D Fluorescence Tomography

Upgrade to IVIS Spectrum – See what you’ve been missing.

Go where no researcher has gone before with the latest in vivo optical imaging technology from Caliper – the IVIS Spectrum upgrade.

The IVIS Spectrum upgrade will transform any IVIS 200 imaging system into the only instrument that combines spectral unmixing capabilities with 3D tomography for both fluorescent and bioluminescent reporters — making it the most flexible and complete in vivo optical imaging package available.

Spectrum Upgrade Features

- Transillumination Stage and Assembly
- Filter Wheel and 28 Filters
- On-site Installation and Calibration

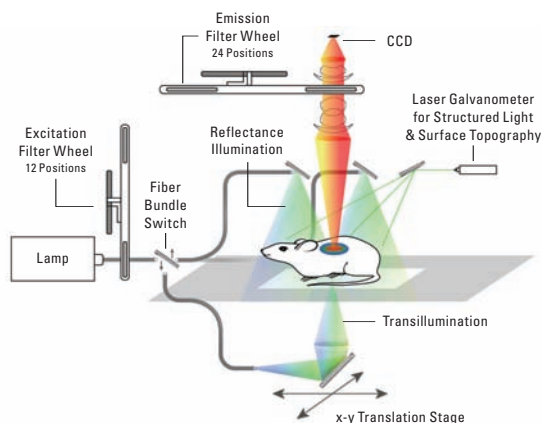
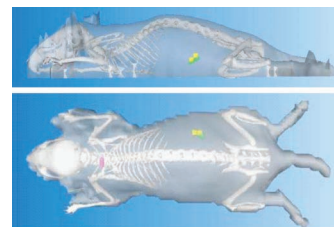
See What You've Been Missing

The Spectrum upgrade adds advanced fluorescence features to your current IVIS 200. With the Spectrum upgrade, background autofluorescence can be virtually eliminated, and detection of deep sources is greatly improved.

See 3D Fluorescent & Bioluminescent Sources

3D diffuse tomography utilizes structured light data with bioluminescence or fluorescence images to reconstruct three dimensional representations of light emitting reporters and compute signal strength. Take the next step and analyze 3D

sources in an anatomical context with the Digital Mouse Atlas. Co-register images from multiple modalities, such as MR, CT and PET using the DICOM compatible import tool.



Transmission Fluorescence Imaging

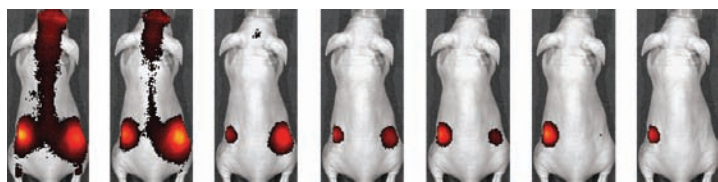
Excitation light originating underneath the stage transilluminates the subject at precise x,y-locations, enabling transmission imaging. Transmission fluorescence imaging enables more sensitive detection and accurate quantification of deep sources. Acquire transmission images to perform 3D tomographic analyses and to reduce the effects of autofluorescence via spectral unmixing.

Broad Filter Range

The IVIS Spectrum excitation and emission filters enable spectral scanning over the blue to NIR wavelength region.

- 10 narrow band excitation filters:
400nm – 760nm (35 nm bandwidth)
- 18 narrow band emission filters:
490nm – 850nm (20 nm bandwidth)

Spectral Scanning



Ex: 640 Em: 700 Ex: 640 Em: 720 Ex: 640 Em: 740 Ex: 710 Em: 760 Ex: 710 Em: 780 Ex: 710 Em: 800 Ex: 710 Em: 820

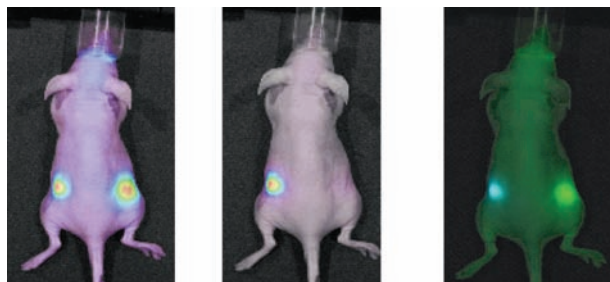
Spectral Unmixing Algorithms

The Living Image 3.1 software provides advanced spectral unmixing algorithms that:

- Enable 3D diffuse fluorescence tomography.
- Greatly reduce the effects of tissue autofluorescence.
- Effectively reduce cross talk between reporters.

Spectral Unmixing

Unmixed XF680 Unmixed XF750 XF680 + XF750



Spectrum upgrade includes

- Computer controlled optical switch
- XY Slide assembly
- Stage with three interchangeable imaging plates
- Upgraded electronic control boards
- Additional filter wheel (if required)
- 18 Emission filters
- 10 Excitation filters
- Onsite installation and recalibration of system



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