

For animal testing

# Photoacoustic 3D imaging system

Non-invasive Non-contrast Blood vessel imaging

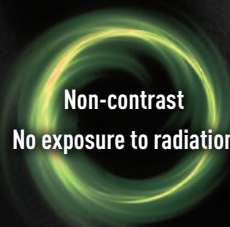
## Photoacoustic 3D imaging system for animal testing scheduled to go to market this fall

Luxonus Inc.'s "photoacoustic 3D imaging system for animal testing" uses photoacoustic imaging technology that combines light and ultrasound waves to enable the safe and convenient capture of ultra-high resolution 3D images without exposure to radiation



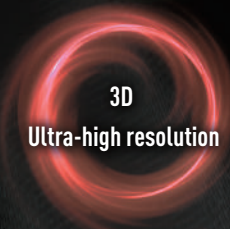
Product image

## Features of photoacoustic imaging



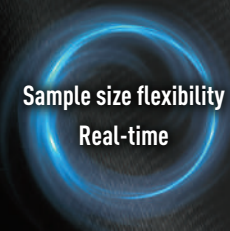
Non-contrast  
No exposure to radiation

Utilizes near-infrared light for **safety**  
Enables **repeated measurements**



3D  
Ultra-high resolution

Enables 3D images of **0.1mm resolution**  
Helpful in various types of research such as on intraorgan blood vessels and tumor-related blood vessels



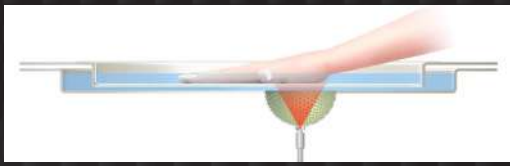
Sample size flexibility  
Real-time

From mice to rats to humans,  
various types of samples can be imaged  
**Real-time monitoring** while taking still images  
Equipped with **video-imaging function**



## Image-capturing modes

Can switch between still shot mode and video mode. As long as it's on the image-capturing tray, any sample can be imaged.



### Still Mode

Image dimensions
<b>Max. 180mm x 290mm</b>
Image capture duration
<b>Up to 6 minutes depending on size</b>

### Video Mode

Image dimensions
<b>22mm diameter range</b>
Frame rate
<b>Up to 30 MHz</b>

# Photoacoustic 3D Imaging Technology (PAI) is paving the way toward a new world of imaging

## Nude mouse (prone position)

- 3D imaging of vascular structure in abdominal region
- **Spotlight on the liver**  
Detailed observation of blood vessels that reflect the **lobular structure** of the liver
- No need for contrast agents

## Nude mouse (supine position)

- 3D imaging of vascular structure in posterior region
- **Spotlight on the kidneys**  
Detailed observation of the complete vascular network of the kidneys, from the **renal artery** to the **arcuate arteries** on the periphery of the kidney
- No need for contrast agents

**SD rat**

**Nude mouse**

Liver

Kidney

Brain (supine position)

**Nude rat**

## Nude rat

**Image of cerebrovascular structure taken through the skull**

Post-euthanasia image of mouse. Animal testing collaboration: Department of Plastic and Reconstructive Surgery, Keio University School of Medicine, Kondoh Lab., School of Life Science and Technology, Tokyo Institute of Technology

