

Lumenera Aids the HORIBA Group in Developing Fluorescence Measuring Instrument

The HORIBA Group Develops Advanced Scientific Instrument

The HORIBA Group, an organization providing scientific researchers with solutions to meet their needs, developed DynaMyc, a user friendly photon counting instrument. Used for investigating dynamic events in microscopic samples and measuring fluorescence lifetimes on the micron scale, DynaMyc assists researchers in identifying areas of interest in samples.

This sensitive application required an imaging component with incredible low-light sensitivity and advanced fluorescence capabilities to capture the fine details of a scientific sample.

Lumenera's INFINITY3-1C Camera Chosen for Clear Images and Superior Color Reproduction

HORIBA's DynaMyc required a megapixel camera capable of capturing crisp and clear images of difficult samples and fluorescence stains. Color reproduction was also a concern due to the nature of fluorescence and the importance of deciphering the areas of interest. HORIBA looked to Lumenera's INFINITY3-1C to meet their rigorous imaging requirements.

Due to its incredible low-light sensitivity, the INFINITY3-1C allows DynaMyc users to preview the fluorescence intensity across a sample. The high resolution images produced by the INFINITY3-1C help define the relevant sample areas where the fluorescence lifetime can be measured, mapped and analyzed.

Lumenera was also selected for its USB connection capabilities, making it easy to use with any PC as there is no need for additional PCI or FireWire ports. The INFINITY camera's DirectX compatibility allows HORIBA to quickly integrate live video display and video capture capabilities in their software.



DynaMyc - Lifetime Microscope System featuring the INFINITY3-1C

Highlights

- HORIBA Scientific offers an extensive array of instruments and systems for scientific research and applications.
- HORIBA Scientific developed DynaMyc a user friendly photon counting instrument.
- HORIBA chose Lumenera's INFINITY3-1C to provide the imaging component of the DynaMyc solution.
- The INFINITY3-1C was selected for its incredible low-light sensitivity, low noise, and cooling capabilities for capturing challenging fluorescence samples.
- DynaMyc is used for investigating dynamic events in microscopic samples, such as energy transfer and molecular binding.



Easily Define Areas of Interest

HORIBA's DynaMyc features fluorescence lifetime imaging capabilities, which exploits the power of fluorescence dynamics using time-correlated single photon counting (TCSPC), the most sensitive method for fluorescence measurements. Combined with Lumenera's imaging solution users can work with fluorescence easily and efficiently.

"The Lumenera INFINITY3-1C camera has the ability to produce high quality fluorescence images. Thanks to the intensity and spectral information it provides selecting the region of interest for fluorescence lifetime imaging applications is easier." said Marion Toury, R&D engineer, HORIBA Group. "The INFINITY3-1C is a key addition to the single photon counting capabilities of our DynaMyc microscope".

Lumenera has allowed HORIBA to offer a CCD imaging component to the DynaMyc solution to identify the area of interest and allow for fluorescence imaging using a high dynamic range, low noise cooled camera. Together the DynaMyc and INFINITY3-1C can perform full reconvolution analysis to generate maps of the fit parameters such as lifetimes, relative amplitudes, average lifetime, and fluorescence intensity.

About Lumenera

Lumenera Corporation, a division of Roper Industries, headquartered in Ottawa, Canada, is a leading developer and manufacturer of high performance digital cameras and custom imaging solutions. Lumenera cameras are used worldwide in a diverse range of industrial, scientific and security applications.

Lumenera solutions provide unique combinations of speed, resolution and sensitivity in order to satisfy the most demanding digital imaging requirements. Lumenera customers achieve the benefit of superior price to performance ratios and faster time to market with the company's commitment to high quality, cost effective product solutions.

For further information about Lumenera, please visit www.lumenera.com or call 613-736-4077. To receive Lumenera press releases as they are issued, contact us at marketing@lumenera.com.

