

Tucsen release fastest sCMOS at SFN 2025

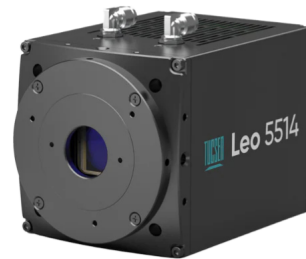
Tucsen releases it's new Leo 5514 the fastest sCMOS camera designed for high-speed applications such as voltage imaging and multichannel fluorescence imaging

FUZHOU, FUJIAN , CHINA, November 16, 2025 /EINPresswire.com/ -- At the Neuroscience meeting in San Diego, [Tucsen Photonics](#) today releases its new [Leo 5514](#) Pro camera designed to double the speed and/or light efficiency of high-speed cameras in advanced life science applications.

The camera delivers impressive specifications including a wide spectral response peaking at 83% 500nm, low noise of 1.6 electrons, 14 million 5.5-micron pixels all operating at up to 670 frames per second. However, what sets this camera apart is what has been unseen in high-sensitivity, high-speed sCMOS cameras up to this date: a global shutter architecture.

"The Leo 5514 global shutter design allows for higher speeds or higher quantum yields for customers using fluorescence triggered acquisitions as they no longer have to wait for the completion of a blanked frame between images. Due to this unique combination of sensitivity and a global shutter architecture, the Leo 5514

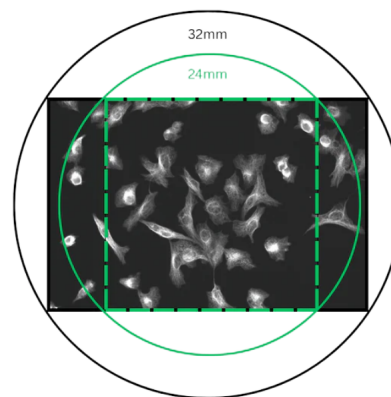
enables customers who work with speed critical applications to maximize either their speed of



Leo 5514 Pro High Speed camera

ROI	FPS (10 Bits)
3072 x 3072	670
2500 x 2500	820
2048 x 2048	994
1024 x 1024	1926
512 x 512	3625

Leo 5514 speed by region size



Leo 5514 Field of View

data collection or their photon efficiency driving up to 2 x more light per acquisition cycle.” Head of business development, Lou Feng.

“Additionally, in high-speed life science applications such as voltage imaging, classical rolling shutters digitize the top of the image before those at the bottom meaning intensity measurements made in frame may happen milliseconds apart. The Leo 5514 Pro's Global Shutter ensures events in the same image happen at the same time.” Senior Strategy & Expansion Director, James Francis.

Other example applications where we expect significant advantages include Super resolution & Lightfield and other advanced microscopy techniques. The technology also has a place in advanced instrumentation where the collection of thousands of images is common. Examples include High Content Screening, Spatial Biology, Next Gen Sequencing, Pathology slide scanning, etc.

The Leo5514 is an sCMOS (Scientific CMOS) device designed to ensure consistent, stable, clean, high bit-depth data with a linear response to light and minimal artefacts and patterns when operating with photon-starved imaging applications. The camera uses a proprietary 100Gb COF (CoaXPress over Fiber) technology to move 14 Million pixels at frame rates up to 670 fps.

Useful Links:

Link to Launch Webinar - <https://www.linkedin.com/events/7383110667068665856/>

Product Information - <https://www.tucsen.com/leo-5514-pro-product/>

Product Values Web Page - <https://shop.tucsencameras.com/pages/fastest-scmos>

SFN 2025 – Booth 3119 - <https://www.sfn.org/>

About Tucsen Photonics:

Tucsen Photonics is a leading developer and manufacturer of high-performance imaging solutions for scientific and industrial applications with operations in China, Singapore, UK, USA and Europe. With a commitment to innovation and quality, Tucsen Photonics continues to redefine the possibilities of digital imaging.

Media Contact

Yuki Tang

Marketing Director

Email: yukitan@tucsen.com

Tucsen Photonics

LinkedIn: www.linkedin.com/company/tucsen

Web : www.tucsen.com

James Francis
Tucsen Photonics UK Ltd
+44 7979 596932

[email us here](#)

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