

Press Release

High-Accuracy Optical Metrology for AR/VR, Displays and Light Sources from UV to NIR

Munich, January 14th, 2026

Instrument Systems presents its new camera system LumiTop X30 AR and a broad range of advanced optical measurement solutions at SPIE AR|VR|MR 2026 and SPIE Photonics West 2026 in San Francisco, USA.

At SPIE AR/VR/MR and Photonics West from 17–22 January 2026 in San Francisco, Instrument Systems will showcase its latest high-accuracy measurement systems in optical metrology. A key highlight will be the launch of the new LumiTop X30 AR – an advanced camera system for precise characterization of near-eye displays used in AR glasses.

Launch of LumiTop X30 AR at SPIE AR/VR/MR 2026 (Moscone Center, booth #6501)

Designed for precise characterization of near-eye displays, the new system combines high spatial resolution with the proven LumiTop X concept, enabling very accurate luminance and color measurements through spectroradiometer-based color calibration. The system provides detailed information on virtual image quality – including sharpness, contrast, distortion and uniformity – making it ideal for R&D laboratories developing next-generation AR optical systems and displays.

More information can be found here:

<https://www.instrumentsystems.com/en/systems/lumitop-ar-vr-display-testing>

Alongside the product launch of LumiTop X30 AR, visitors can expect a range of complementary solutions:

- LumiTop X150: a high-resolution imaging system with up to 600 MPx for precise Micro(O)LED display analysis, including pixel and sub-pixel structures.
- LumiTop AR/VR: a measurement system with fields of view up to 120°, enabling comprehensive evaluation of VR headsets with adjustable pupil sizes, focus settings and viewing angles.

Expert Presentation at SPIE AR/VR/MR 2026

"Impact of backgrounds on virtual image quality in AR glasses" by Dr. Sascha Reinhardt
Date / Location: 20 January 2026, 2:20–2:40 p.m. PST, Room 2008 (Moscone West)

The talk will explore how varying real-world backgrounds affect the perceived sharpness and color of virtual images in AR glasses, using precise colorimetric and contrast measurements to quantify these effects.

Instrument Systems will present its latest display measurement solutions for AR/VR technologies in collaboration with Konica Minolta and Radiant Vision Systems at booth #6501.

SPIE Photonics West 2026

(Moscone Center, booth #4205-60, German Pavilion)

At SPIE Photonics West 2026, visitors will experience Instrument Systems' high-end radiometric measurement solutions and reference standards. They cover the complete spectral range from UV -A-/B-/C (200 nm) through the visible into the NIR up to 2150 nm. These systems address demanding measurement tasks such as

- VCSEL / NIR LED testing, also in 2D (e.g. face ID, driver monitoring systems, fingerprint)
- IEC 62471 photobiological safety and BLH blue-light hazard assessment
- High-accuracy UV measurements and calibrations (e.g. PV and solar applications)
- Dedicated solutions for MIL-STD-3009 & NVIS-friendly lighting assessments



Photo: LumiTop X30 AR with CAS 140D by Instrument Systems

About Instrument Systems GmbH

Instrument Systems GmbH, founded in Munich in 1986, develops and produces high-end light measurement technology that is indispensable for manufacturers of consumer electronics, (AR/VR) displays, MicroLED wafers, VCSEL/laser systems, automotive lighting and LED/SSL modules. All solutions benefit from the CAS series of high-precision spectroradiometers that are widely recognized and used worldwide. In combination with 2D imaging colorimeters, integrating spheres and goniometer systems, they enable high-precision and accurate measurements in the entire range from UV to IR, traceable to PTB or NIST. Today, Instrument Systems is one of the world's leading manufacturers of light measurement technology. At its Berlin facility, the "Optronik Line" of products is developed and marketed for the automotive industry and traffic technology. The subsidiary in Korea supplements the product portfolio with the "Kimsoptec Line" for the Korean light & display market. Instrument Systems has been a wholly-owned subsidiary of the Konica Minolta Group since 2012.

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