

## Press Release

### SID Display Week 2024: Highest color accuracy with shortest cycle time

At SID Display Week 2024, Instrument Systems will be presenting its exceptional light measurement technology for displays – production-ready and with outstanding accuracy.

**Munich, May 2024** – *At this year's SID Display Week, scheduled to take place in San José, CA (USA) from 12–17 May 2024, Instrument Systems will be represented with a prominent Booth #1115 in the German Pavilion. Instrument Systems plans to showcase the complete LumiTop family of spectrally corrected imaging colorimeters, together with its portfolio for the optical characterization of AR/VR devices,  $\mu$ LEDs and automotive displays. For these challenges, Instrument Systems offers the LumiTop series of 2D imaging colorimeters. High-resolution cameras combined with high-end CAS series spectroradiometers guarantee unprecedented accuracy and fast 2D measurements. Specialized versions of the LumiTop are perfectly tailored to the special requirements for AR/VR, quality control, automotive or 24/7 production tests. Experience our experts in the "Display Metrology Short Course" on 12 May 2024 and at the symposium lecture on 16 May 2024 in Session 58.3.*

At SID Display Week 2024, Instrument Systems will be presenting its extensive portfolio for the optical quality assurance of AR/VR displays along the entire production chain – from individual AR/VR modules and the unmounted AR/VR display to the finished XR headset. The new LumiTop 5300 AR/VR 2D luminance and color measurement camera has a high-resolution sensor and a straight lens (alternatively, models with periscopic lens are available). It was designed specifically for near-eye displays (NED) and AR/VR headset characterization along the production line and final inspection. Different external pupil sizes and focal distances are possible. The 2D imaging system has a large field of view for one-shot acquisition of the virtual image including distortion and sharpness tests (MTF, etc.).

The new TOP 300 AR/VR optical probe for luminance and radiance measurements will also be on display at the exhibition stand. It has an optical system that is similar to the human eye (outer eye pupil) and can be connected to a CAS series spectroradiometer via a fiber connection. The TOP 300 is specially designed for simple optical tests along the production line of AR/VR modules.

The proven LumiCam 4000B 2D color measurement camera with various motorized objective lenses (focus and iris) can be seen live as a system with a spectroradiometer. It is ideally suited to the analysis of symbols and operating elements in vehicles, such as displays or light strips in various geometries. 6-filter measurement in combination with a color correction matrix (tested in our test laboratory accredited according to DIN EN ISO / IEC

17025) ensures maximum color accuracy. In addition to the measurement of luminance and color distribution, the user-friendly LumiSuite software can also be used to determine the homogeneity, contrast and mura of displays. The well-known, high-end CAS 140D spectroradiometer guarantees highest color accuracy with fastest overall measurement time. The fiber-based optical probe enables a wide range of measurement applications with just one spectroradiometer.

Visit us at Booth #1115 in the German Pavilion at SID Display Week 2024.

### Display Metrology Short Course

Dr. Ferdinand Deger (Instrument Systems), together with Radiant Vision Systems, will be presenting the training course “Fundamentals of Display Metrology”. The course introduces the basics and applications of display metrology as well as measurement solutions and techniques. Exciting topics from the world of light and color science will explain measuring units, measuring standards and metrology systems from spot meters to imaging systems. In addition to the latest measurement solutions for innovative display technologies with  $\mu$ LEDs or in AR/VR devices, test methods for analyzing display properties such as mura, pixel homogeneity and flicker will also be presented. As part of the SID/ICDM 2024 Display Metrology Short Course, the training course is due to take place on Sunday, 12 May 2024 from 10–12 am local time in Room 220B. Participation is subject to a fee.

### Symposium lecture: Influence of calibration sources

When narrow-band emission sources such as microLEDs are used to create full-color displays, significant measurement errors may occur with color meters calibrated against standard light sources. Experiments confirm that different calibrations of an imaging light meter offer different levels of color accuracy, depending on the similarity of the calibration source with the spectral distribution of the DUT. Dr. Tobias Steinel will be delivering his lecture “Impact of Calibration Sources on Accuracy of Chromaticity Measurements of LED-Based Displays” on Thursday, 16 May 2024 at 9.40 am local time in Session 58.3.



*Photo: The constantly evolving LumITop portfolio covers the entire spectrum of metrological applications, from smartphones, tablets and TVs to microdisplays,  $\mu$ LED wafers and AR/VR near-eye displays.*

**Copy and photos:**

<https://instrumentsystems.owncloud.online/s/aEzY2zMXLhN7Op6>

**Company portrait Instrument Systems GmbH**

Instrument Systems GmbH, founded in Munich in 1986, develops and produces high-end light measurement technology that is indispensable for the manufacturers of consumer electronics, (AR/VR) displays,  $\mu$ LED wafers, VCSEL/laser systems, automotive lighting and LED/SSL modules. All solutions benefit from our CAS series of high-precision spectroradiometers that are recognized and in use all over the world. 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. Our 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.

**[www.instrumentsystems.com](http://www.instrumentsystems.com)**

**File copy requested to:**

Instrument Systems GmbH, Kastenbauerstr. 2, D-81677 Muenchen  
Dr. Karin Duhnke, Tel. +49 89-45 49 43-426, E-mail: [duhnke@instrumentsystems.com](mailto:duhnke@instrumentsystems.com)