



## **Dear Sir or Madam**

Autumn time is exhibition time - also for Instrument Systems. We look forward to your visit at **ISAL/Darmstadt**, **LpS/Bregenz**, **LIDAR/USA** or **Vehicle Display/USA** and kindly ask you to make an appointment at <u>sales@instrumentsystems.com</u>

All trade fairs at a glance >>

Your Instrument Systems Team

# **II HIGHLIGHTS AT A GLANCE**

- New LumiCam B Generation
- Meet us at the next trade fairs
- Practical Training: "Moderne Licht- und Displaymesstechnik"
- Subpixel measurement for OLED and µ-LED displays in production lines

#### **|| 2D IMAGING COLORIMETER FOR AUTOMOTIVE APPLICATIONS**

# New LumiCam B Generation

The LumiCam B generation impresses with motorized objective lenses and apertures for increased usability, flexibility, accuracy and measurement speed. In addition, the LumiCam B generation captures luminance and color distributions of automotive interior displays up to 30 % faster than its predecessor generation and has a ca. 20 % smaller footprint. New software features such as polylines and Sticking Image are part of the LumiCam software. Have a look at the first LumiCam B model and visit Instrument Systems at ISAL in Darmstadt or Konica Minolta Sensing at Vehicle Display table #65.

Contact us for more information: Phone +49 (89) 45 49 43 - 58



Improved Usability Motorized Objective Lenses and Apertures

Faster Measurements Up to 30 % faster

Compact Housing Ca. 20 % shorter Removable Handle

Larger Objective Lens Variety



#### Meet us at the next trade fairs

### ISAL Symposium, Darmstadt

23-25 September 2019, Booth 6 Complete systems for Automotive Exterior Lighting (Optronik Line) and Automotive Interior Display Testing

# SID Vehicle Displays, Detroit

24-25 September 2019, Booth 65 Konica Minolta Sensing Preview: New LumiCam B Generation for fast and software controlled Luminance and Color Measurements Lecture: "End-Of-Line Testing of Recent Display Quality Standards", Dr. Silke R. Kirchner

#### LpS Symposium+Expo, Bregenz

24-26 September 2019, Booth A13 Goniophotometry: Evaluation of Energy Efficiency with the LGS 650

#### Automotive LIDAR, Detroit

25-26 September 2019, Booth 5 Automotive Interior & Exterior Testing of OEM Specifications

#### LeCV, Ungarn

10-11 October 2019, Lecture Characterization of Blue Light Hazard

Trade fair dates online 🚽



#### Practical Training: "Moderne Licht- und Displaymesstechnik"

Learn everything about LED, solid-state-lighting and display measurement: What are the latest applications? How to measure correctly? Our specialists will train you in theory and praxis for applications in laboratory, production and quality control. Seminar language is German.

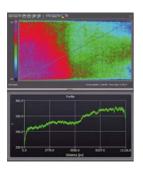
#### Register with early-bird-price until 30 September!

#### Seminar date:

26-27 November 2019 at the Novotel, Munich-East



# **NAPPLICATION NOTE**



# Subpixel measurement for OLED and $\mu\text{-LED}$ displays in production lines

The increasing desire for higher display resolutions drives display innovations. Especially  $\mu$ -LEDs are considered to be the technological future as they enable very high resolutions. For quality control and calibration of high-resolution displays (OLED or  $\mu$ -LED) in production lines, it is crucial to measure the optical properties of each individual subpixel under the constraints of production tact times. Thus, luminance and color (X, Y, Z) images with extraordinary high resolutions are mandatory for reasonably accurate measurents of luminance and color on a subpixel level.

Application Note





Detroit, USA 25-26 September 2019

# Booth #5

Vehicle Displays Detroit 26th Annual Symposium & Expo Burton Manor Conterence Center, Livonia, Mi | Sept 24-25 Presented by Detoil Chapter | Society for information Display

Detroit, USA 24-25 September 2019

## Booth #65



Darmstadt, Germany 23-25 September 2019

# Booth #6

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Bregenz, Austria 24-26 September 2019

# Booth #A13

LICHTWOCHE

Munich, Germany 31.10. - 08.11.2019

Lecture



Munich, Germany 12-15 November 2019

# Booth #A1.145



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