

Press Release

Testing times as a critical factor for efficient production throughput

Customized, highest-level light measurement technology guarantees efficiency and precision in consumer electronics manufacturing

Munich, October 2019 – *As a leading manufacturer of light measurement technology, Instrument Systems offers customized solutions along the entire value-added chain from the development stage to manufacture and quality control. The latest generations of tried and tested systems of 2D imaging colorimeters, spectroradiometers and integrating spheres are geared to the latest innovative developments in LED, SSL and display production. The extensive system portfolio from Instrument Systems with diverse model variants enables individual requirements to be systematically implemented by way of tailor-made solutions: precise laboratory measurements, fast quality control, reproducible results. At Productronica (Booth A1.145) in Munich from 12–15 November 2019 Instrument Systems will be presenting a wide range of high-performance applications.*

Precise color measurement with 2D imaging colorimeters

A highlight at the trade fair stand will be the new Generation of LumiCam 2400 high-resolution imaging colorimeters. The new product boasts motorized focus and aperture setting of the lens for easy operation, added flexibility and precision coupled with a substantially higher measurement speed. It measures luminance and color distribution, e.g. of automotive interior displays, up to 50% faster than the previous models and comes with a 20 % smaller footprint. New software features such as polylines or sticking image are a part of the accompanying LumiCam software. The new LumiCam 2400B facilitates precise color measurement of dashboards, cockpits or instrument clusters.

Fast end-of-line display tests

For particularly critical tasks, Instrument Systems offers the LumiTop series of spectrally optimized imaging colorimeters. The innovative concept of these camera models combines an RGB camera and a flicker diode with a high-end spectroradiometer of the CAS series. The accurate data of the spectrometer measurement is used as a reference and guarantees spectroradiometric precision, distributed over the complete image. On account of this unique combination of precision and speed, the LumiTop series is ideal for use in display production lines and in-process quality control. A wide range of test applications can be realized in a single measuring station. Together with the accompanying LumiSuite software, the LumiTop is the perfect measurement solution for fast end-of-line testing of the latest display quality standards in the OEM sector.

Technology-driving applications such as AR/VR displays feature ever smaller and tightly packed pixels. In this regard, the likelihood of luminance and color deviations between pixels and subpixels is increased, and this may seriously influence the visual quality of the display. Instrument Systems developed the ultra-high resolution LumiTop X150 with precisely this in mind. It has a 150 MP color sensor and a pixel shift mechanism that enables a resolution of 600 MP per color channel. This permits full **display characterization at pixel level** in a single shot. Applications for the X150 are fast and precise quality control, as well as pixel calibration of OLEDs and μ LED displays.

LED binning through precise and fast sphere photometry

Sphere photometry is an extremely fast and accurate measuring procedure for the characterization of LEDs. Measuring equipment consisting of an integrating sphere and a high-end spectroradiometer enables the determination of all relevant photometric, radiometric and colorimetric quantities of LEDs. The CAS 140 and CAS 120 series of array spectrometers from Instrument Systems offer many advantages for use in a production environment: a high degree of reliability in 24/7 operation, short measuring times for high throughput, controlled timing and high reproducibility across multiple systems. In combination with integrating spheres of the ISP series from Instrument Systems (available with a range of reflective coatings) high-precision optical measurements can be performed in only a few milliseconds.

www.instrumentsystems.com

Photo:

LumiCam 2400B: Precise color measurement of dashboards, instrument clusters and displays.



Further text material and photos:

<https://services.instrumentsystems.com/owncloud/index.php/s/36M477pOkHAoNnQ>

File copy requested to:

Dr. Karin Duhnke, Instrument Systems Optische Messtechnik GmbH, Kastenbauerstr. 2, 81677 Muenchen, Germany, Tel. +49 (0)89-45 49 43-426, E-mail: duhnke@instrumentsystems.com