

Press Release

More accurate, faster, further with the new photometer DSP 200

Newly-developed photometer in the highest accuracy class L performs ultra-fast measurements of spatial light distribution from 0.1 mlx to 200 klx.

Munich, August 2018 – Instrument Systems has introduced a new, versatile photometer to the market. The DSP 200 has an extremely broad measuring range from 0.1 mlx to 200 klx for all common light sources, including pulse-width modulated LEDs, and conforms to the highest accuracy grade L to DIN 5032-7 (2017). It is extremely well-suited to ultra-fast measurements of spatial light distributions with the goniophotometers of the AMS or LGS series.

The newly-developed DSP 200 photometer uses a silicon photo sensor as a detector that achieves outstanding stability and the highest degree of accuracy due to integrated innovative cooling to 0°C. The silicon photodiode is precisely adjusted to $V(\lambda)$ and has a light-sensitive surface of only 6 x 6 mm. This ensures an excellent local resolution that pays off, in particular with light sources with sharp gradients and new applications such as glare-free headlights, pixel headlights and scans due to the cut-off line.

In addition to traditional light sources, test specimens with pulse-width modulated LEDs or LED modules can also be measured thanks to the unique combination of high-precision analog technology and advanced digital signal processing. The measured signal passes through a digital filter that detects and eliminates possible modulations and interferences.

The most common use of the DSP 200 is goniometric raster measurements 'on-the-fly'. The fast internal sampling rate enables light distributions of pulse-width modulated light sources with a wide range of pulse frequencies to be accurately measured, even with extremely short switch-on cycles. The high data transmission rate enables the measurement of even high-resolution rasters in the shortest of times.

Instrument Systems offers extensive software for a wide range of applications. The LightCon software was specially developed for fast measurement of external automotive lighting and light sources with comparable requirements, such as airfield lighting or

variable message signs and retroreflectors. The SpecWinPro software is tailored to spectral analyses in the areas of solid-state lighting and general lighting. It supports the measurement of spatial radiation properties of lamps, luminaires and modules, as well as the control and measurement of electrical operating data.

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Illustration: The newly developed DSP 200 photometer uses a silicon photovoltaic cell as a detector, which achieves excellent stability and the highest degree of accuracy due to the integral innovative cooling to 0°C.

Company portrait of Instrument Systems GmbH

Instrument Systems GmbH, founded in Munich in 1986, develops, manufactures and markets all-in-one solutions for light measurement applications. Its core products are array spectrometers and imaging colorimeters. The company's main fields of activity are LED/SSL and display metrology, spectral radiometry and photometry, where today Instrument Systems is one of the world's leading manufacturers. The Optronik line of products for the automotive industry and traffic technology is developed and marketed at its Berlin facility. Since 2012 Instrument Systems has been a wholly-owned subsidiary of the Konica Minolta Group.

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