Press Release

SpecWin Pro 5.0: New Major Software Release with Enhanced Modules and Optimized Device Integration

Instrument Systems introduces powerful software enhancements for precise and efficient light measurement

Munich, December 4, 2025 – With the release of SpecWin Pro 5.0, the comprehensive software for all spectrometers from Instrument Systems, the company presents a series of significant enhancements that further improve accuracy, flexibility, and efficiency in spectral light measurement.

Expanded Goniometer Functions for Complex Beam Characteristics

The update will primarily focus on the goniometer module, which has been expanded with several powerful new functions. A notable addition is the new Sequence Calculator, which is of particular interest to luminaire manufacturers: It facilitates the calculation of multiple goniometric measurement sequences recorded with different orientations of the device under test (DUT). This allows complete characterization of luminaires with bidirectional or complex radiation characteristics.

Additionally, the module provides automatic alignment compensation and determines the minimal calculation error between sequences. The extended interpolation of measurement planes ensures even more precise beam data, which can be exported as usual in the EULUMDAT (LDT) and IES (IESNA LM-63) exchange formats. Furthermore, the calculation of the Unified Glare Rating (UGR) has been aligned with the lighting design software "Relux", and the CIE 190:2010 standard has been implemented.

Optimized Control of Fast-Pulsed VCSELs

For applications involving fast-pulsed VCSELs, the integration of high-performance current sources—Source Measure Units (SMUs)—has been significantly improved. It is now possible to take measurements with pulse durations down to 10 µs. Current SMUs from Keithley Instruments and Vektrex Inc. are comprehensively integrated into SpecWin Pro and can be conveniently controlled via the graphical user interface, eliminating the need for external programming. This greatly simplifies laboratory setups.

TOP300: Precision Measurement for AR/VR Micro Displays

Manufacturers of near-eye displays or their components for AR/VR headsets benefit from the integration of the TOP300 measurement accessory. This system, developed specifically for measuring near-eye displays, is typically combined with and calibrated to the high-end spectroradiometer CAS 140D. It features a spot size of ±1.2° and replicates the human eye through its optical design. The viewfinder camera, which is also controllable within SpecWin Pro, enables precise alignment of the measurement spot.

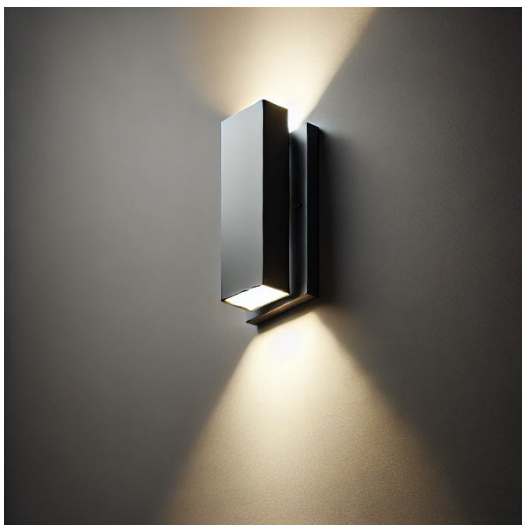*Image 1: Measurement System by Instrument Systems: TOP300 AR/VR and CAS 140D with SpecWin Pro 5.0 Software*

Image 2: Luminaire with bidirectional radiation characteristics

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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