

For Immediate Release

**Radiant Introduces New Two-in-One Measurement Solution
Combining Imaging Colorimeter and Integrated Spectrometer**

REDMOND, Wash. – May 10, 2022 – Radiant Vision Systems, a leading provider of visual test and measurement solutions for light sources and displays, announces its new [ProMetric® I-SC Solution](#) for light and color measurement. Combining the functions of an enhanced [ProMetric I Imaging Colorimeter](#) from Radiant with a [CAS 140D spectroradiometer](#) from Imaging Systems GmbH on a single platform, the ProMetric I-SC Solution enables efficient measurement of both spectral data and image-based colorimetric data with complete data capture, analysis, output, and calibration functions controlled through a central software interface.



In 2009, Radiant Vision Systems invented the first direct integration of a colorimetric imaging system with a spectrometer for acquiring two sets of data from the same light input (US Patent No. 8482652). At the time, this solution added capability to Radiant’s [Source Imaging Goniometer®](#) (SIG) for highly accurate, three-dimensional light source modeling. Beyond the near-field measurement data provided by the SIG’s internal ProMetric Imaging Colorimeter, spectral data (power vs. wavelength) could be acquired by the spectrometer for applications such as calculating a color rendering index (CRI). The invention used mirrors and fiber optic connectivity built into the imaging system to allow both systems to measure data from the same point and angle relative to the light source at the same time—near-field measurements (via the imaging system) and spectral data (via the spectrometer).

The combination of imaging and spectral data is similarly useful for other light and color measurement applications—for instance, understanding the output of an illuminated display or elements within an augmented or virtual reality (AR, VR) headset. In these scenarios, if imaging systems and spectrometers are applied separately, manufacturers must source and purchase both systems and can only apply one system at a time for measurement, requiring multiple stations or processes.

“In situations where spectral data and spatial measurement data are both needed for device qualification, Radiant can now offer our customers the utility of both capabilities in one system,” states Doug Kreysar, CEO at Radiant Vision Systems. “As part of the Konica Minolta family of sensing businesses, Radiant is partnered with the world-leading expertise in spectrometers. This allows us to leverage spectrometer technology into our product line and innovate on our existing technology to provide a more capable measurement option for our customers. The new [ProMetric I-SC Solution](#) is a result of this partnership and innovation. With the ProMetric I-SC, Radiant provides a single measurement solution for spectral data capture, calibration, and imaging colorimetry.”

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Using Radiant's patented technology, the ProMetric I-SC applies a polarization-insensitive mirror to enable direct integration of a ProMetric I Imaging Colorimeter and a CAS 140D spectroradiometer. This integrated solution captures two pieces of a complete measurement at once: the CAS 140D measures highly accurate correlated color temperature (CCT) and color rendering index (CRI) while Radiant's high-resolution [ProMetric I61 \(61-megapixel\) Imaging Colorimeter](#) measures precise luminance (cd/m^2) and chromaticity (CIE xy or u'v') data for all points in an image—including regions as small as a display subpixel. Because all components of the measurement system are designed together, there is no need to purchase multiple pieces of equipment or learn separate platforms to implement a complete solution. All data is captured at once with the convenience of one system, eliminating system repositioning, movement, downtime, and risk of error during manual system alignment or data transfer.

"The ProMetric I-SC leverages advantages of Radiant's ProMetric I Imaging Colorimeter," explains Kreysar. "For example, we can apply the solution with Radiant's [AR/VR Lens](#), which not only captures full-field-of-view measurement images within headsets but now places the spectral measurement point inside the headset via the imaging system's optics. Manufacturers can easily measure spectral and spatial data, monitor spectral output, and directly apply data for color calibration if needed, without moving the measurement system from the intended near-eye position. Imaging also enables visualization of the spectral measurement point and field of view in physical space (x,y coordinates or angular degrees within the context of AR/VR headsets). This point is indicated in the software interface as a circle or rectangle on the measurement image."

Through direct integration, the ProMetric I-SC also facilitates calibration of the connected imaging colorimeter for measuring new devices or device states (i.e., a different color on a display or backlit component). A calibration function can be initiated as needed to capture and apply spectral data from the spectrometer to align the imaging colorimeter's response to standard CIE color-matching functions for highly accurate, repeatable measurement of a source. This calibration function can be run on demand or programmed to run with each measurement as part of a fully automated visual inspection routine in [TrueTest™ Software](#). From the TrueTest interface, users can control functions of both spectrometer and imaging colorimeter, initiate calibrations, view the spectral measurement point, and apply a comprehensive library of analyses for test and measurement. Users can also use TrueTest to view data captured by the integrated spectrometer as chromaticity coordinates in the CIE 1931 color space and as a spectral plot.

The ProMetric I-SC Solution debuts this week at the [Display Week](#) exhibit, taking place May 10-12 at the San Jose McEnery Convention Center. From Radiant's booth (#1307) visitors can see live demonstrations of the solution measuring display devices based on LCD, OLED, and e-paper technologies. Prospective attendees are invited to apply Radiant's guest code **8KstwXvP** for complimentary registration to the exhibit.

More information about the [ProMetric I-SC Solution](#) and other display test solutions from Radiant Vision Systems can be found at www.RadiantVisionSystems.com.



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About Radiant Vision Systems

Radiant Vision Systems works with world-class brands and manufacturers to deliver creative visual inspection solutions that improve quality, reduce costs, and increase customer satisfaction. Radiant's legacy of technology innovation in photometric imaging and worldwide install base date back more than 30 years and address applications from consumer electronics to automotive manufacturing. Radiant Vision Systems product lines include TrueTest™ automated visual inspection software for quality control, and ProMetric® imaging colorimeters, photometers, and light source measurement systems. Radiant is headquartered in Redmond, Washington, USA, with strategic offices in California, Michigan, China, South Korea, and Vietnam. Radiant has been a part of Konica Minolta's Sensing Business Unit since August 2015. For more information, visit www.RadiantVisionSystems.com.

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