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Radiant Vision Systems Honored by Vision Systems Design 2022 Innovators Award Program

REDMOND, Wash. – June 7, 2022 – Radiant Vision Systems, a leading provider of scientific imaging systems for automated visual inspection of light sources and displays, announces that its ProMetric® I61 (61-megapixel) Imaging Colorimeter has been recognized among the best in machine vision today by the judges of the Vision Systems Design 2022 Innovators Awards program. The judging panel consisted of esteemed experts from system-integrator and end-user companies. The awards were announced on June 6 at the 2022 Automate show in Detroit, Michigan, U.S.A.

"The *Vision Systems Design* team would like to congratulate Radiant Vision Systems for their score in the 2022 Innovators Awards program," says Chris Mc Loone, Editor in Chief. "Each year this unbiased and increasingly competitive program aims to celebrate the most innovative products and systems in machine vision. The Radiant team should be very proud."

Throughout the design and production of light sources and displays, imaging colorimeters are applied to evaluate visual performance based on universal and user-centric light measurement methods. Imaging colorimeters have scientific image sensors and optical filters that allow them to replicate the human eye's sensitivity to light, following a model of standard human visual perception defined by the CIE (International Commission on Illumination). Radiant's ProMetric imaging colorimeters apply tristimulus filters to achieve the closest innate system response to CIE color-matching functions. Using ProMetric systems, manufacturers can measure highly accurate brightness (luminance), color (chromaticity), and other values, and assess their visual differences over a spatial context—according to how devices are actually perceived.

As display technology has evolved, increasingly small light-emitting elements are applied for greater visual detail and more dynamic control of brightness, color, and contrast. Beyond challenges associated with their small size, pixels in new emissive displays (OLED, microLED, miniLED) are also prone to variability. Each pixel produces its own light independently, with different brightness and color values depending on its response to input driving currents. This variability can cause non-uniformity that may be visible across the display.

"Manufacturers of emissive displays need measurement systems that can discern individual pixels and accurately quantify their output," says Doug Kreysar, CEO of Radiant Vision Systems. "This data is not only relevant for display qualification, but also for pixel uniformity correction (or 'demura'), which corrects pixel-to-pixel output differences to reduce waste of high-value components and increase production yields. Most imaging systems on the market offer insufficient resolution for these applications. These lower resolution

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systems are unable to define individual pixels with enough precision to capture accurate pixel-level measurements. This inaccurate data results in inaccurate calculation of correction factors necessary to adjust pixel output, negating the effectiveness of a demura process."

To address the growing need for resolution in colorimetric measurement, Radiant Vision Systems introduced a new imaging colorimeter with more than double the resolution of its existing imaging systems. Released on May 17, 2021, the ProMetric I61 offers the highest-resolution imaging sensor available in tristimulus imaging colorimeters at 61 megapixels (9568 x 6380). This allows the system to maximize the number of sensor pixels applied to measure each display pixel—to ensure measurement accuracy—while still capturing the entire display in a single image—to ensure efficiency. The ProMetric I61 measures millions of data points, characterizing all pixels in a display in less than 2 seconds. With this speed advantage, manufacturers can apply the ProMetric I61 for production-level applications that include in-line quality control and demura.

"At Radiant, we invest significant development effort to continue to increase the resolution of our systems to meet more demanding applications without sacrificing overall imaging performance," states Kreysar. "High resolution doesn't guarantee better measurement. In imaging, there are constant trade-offs between resolution, accuracy, and speed. The ProMetric I61 is the result of extensive component testing and innovative engineering by the Radiant team to ensure all of these qualities are maximized to meet real manufacturing demands for metrology in automated visual inspection. We are proud to have this effort recognized by the Vision Systems Design 2022 Innovators Awards program."

The ProMetric I61 provides the foundation for several solutions beyond emissive display testing. The system pairs with several Radiant lens options, including the XRE Lens and AR/VR Lens for measuring displays inside augmented and virtual reality headsets; the FPD Conoscope Lens for view angle measurement of flat panel displays; the Microscope Lens for five- to ten-times effective resolution; and standard electronic focus imaging lenses. Each solution is controlled by a unique TrueTest™ Software package, developed for a variety of measurement scenarios from AR/VR display testing to automotive head-up display (HUD) characterization.

For more information about the ProMetric I Imaging Colorimeter, visit www.RadiantVisionSystems.com.

About Vision Systems Design
Published since 1996, *Vision Systems Design* is a global resource for engineers, engineering managers and systems integrators that provides comprehensive global coverage of vision systems technologies, applications, and markets. Vision Systems Design's magazine, website (www.vision-systems.com), email newsletters and webcasts report on and analyze the latest technology and business developments and trends in the worldwide machine vision and image processing industry.

About the Vision Systems Design 2022 Innovators Awards
The Vision Systems Design 2022 Innovators Awards program reviews and recognized the most innovative products and services in the vision and image processing industry. Criteria used in the Innovators Awards

ranking included: originality; innovation; impact on designers, systems integrators, and end-users; fulfilling a need in the market that hasn't been addressed; leveraging a novel technology; and increasing productivity.

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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