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RADIANT VISION SYSTEMS

A Konica Minolta Company

**For Immediate Release**

## Radiant Demonstrates Display Test Solutions for Augmented & Virtual Reality Devices at Photonics West 2020

**REDMOND, Wash. – January 8, 2020** — Radiant Vision Systems, a leading provider of test and measurement solutions for lighting and displays, announces that it will demonstrate augmented (AR) and virtual reality (VR) display testing from booth #4282 at the Photonics West Exhibition. In two live demonstrations, the company's AR/VR Lens system will be showcased evaluating the visual performance of displays from the human eye position inside a VR headset and a pair of AR smart glasses, thus ensuring accurate qualification of the entire display field of view as seen by the wearer. The Photonics West Exhibition takes place February 4-6, 2019, at The Moscone Center in San Francisco, California, U.S.A.

Near-eye (NED) and head-mounted display (HMD) devices have proliferated in recent years in a race to provide new capabilities, improved visualization, and a functional viewing experience. Augmented and virtual reality devices include industrial AR goggles, lightweight and unobtrusive consumer smart glasses, and immersive VR headsets. Display technologies range from OLED and microLED to LCoS and DLP, with fields of view from 30 to over 100 degrees, and capabilities such as foveated rendering, eye tracking, and more. All designs cater to the visual perception of the human eye, taking into account pupil size, shape, position, and field of view in their optical specifications. Likewise, a method for testing the visual experience of displays within headsets should take these factors into account, replicating how the human eye perceives digital projections through any AR/VR device frame and integrated optical design.

Unlike traditional measurement systems, Radiant's AR/VR Lens system accommodates the diverse viewing geometries of AR/VR devices with a front-located lens aperture that enables positioning the imaging system's entrance pupil inside headsets and glasses at the same place as a human eye. Applying wide-field-of-view (FOV) optics, the system captures an entire display up to 120 degrees horizontal in a single measurement to evaluate critical performance qualities such as brightness, color, contrast, uniformity, and sharpness of projected images. The system can be connected to AR/VR device controls to push test images to the headset display, which are captured by the imaging photometer and lens, and analyzed by applying software tests in sequence with images for fully automated display evaluation.

From booth #4282 at the Photonics West Exhibition, Radiant will showcase its AR/VR Lens solution in two live demonstrations to illustrate the system's effectiveness as an all-in-one

automated visual inspection solution for both AR and VR display devices. Requiring no costly equipment, robotics, complex setup, or advanced programming, the Radiant AR/VR display test system operates from a single position within the headset to evaluate the complete display FOV as seen by the viewer. With benefits for compact size and cost-efficiency, as well as multiple imaging resolutions available up to 43 megapixels, the AR/VR Lens solution can be applied in both lab and production settings for end-to-end display quality inspection. The AR/VR Lens has been recognized for technology innovation by the *Vision Systems Design* Innovators Awards (Silver honoree) and *Laser Focus World* Innovators Awards (Gold honoree) programs.

In addition to AR/VR display testing, Radiant will demonstrate its NIR Intensity Lens solution for measuring near-infrared LEDs and lasers. Using Fourier optics, the lens system captures precise radiometric values of angular near-IR light emissions to +/-70 degrees in a single image without rotating the system or source. The solution comprehensively evaluates the radiant intensity, uniformity, and scope of bare LEDs, diffuse "flood" sources, and patterns produced for 3D sensing by diffractive optical elements (DOE), which may contain tens of thousands of emission points. The system is designed for precise measurement of 940-nanometer wavelengths—the range used by many 3D sensing devices for facial recognition, gesture tracking, and lidar. The NIR Intensity Lens was recently recognized for innovation by the *Vision Systems Design* Innovators Awards (Silver honoree), *Laser Focus World* Innovators Awards (Gold honoree), and *GLOBAL SMT & Packaging* GLOBAL Technology Awards ("Metrology" category) programs.

Radiant's team of automated test and measurement experts will be on-site at the Photonics West Exhibition to demonstrate these lens solutions from the Radiant booth as well as meet with attendees to discuss unique measurement challenges for any illuminated display or light source. For more information about light and display test systems, visit the Radiant Vision Systems booth #4282 at Photonics West, or explore solutions at www.RadiantVisionSystems.com.

**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 25 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, and South Korea. 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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