



## WEBINARS

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# Novel Solutions for XR Optical Testing: Displays, Waveguides, Near-IR, and Beyond

Thursday, November 18, 2021 1:00 PM - 2:00 PM EST

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Presented by



A Konica Minolta Company

## .: About This Webinar

Extended reality (XR) devices invoke a host of optical innovations — from micro-LED microdisplays to waveguide optics to near-infrared sensing systems. Combinations of these components have yielded an array of architectures to address varied requirements, all with a singular goal: to enable high-performance, near-eye visualization for human users. Defects and deviations in specific component architectures must be tested to ensure a device's usability.

In this webinar, test and measurement expert Davis Bowling from Radiant Vision Systems provides guidance on XR optical performance testing. Bowling demonstrates novel technologies that emulate the human eye and that are optimized to be accurate, fast, and easy for an operator.

Visual inspection and measurement can be uniquely applied at each stage of XR device manufacturing to test optical performance. While a display module may require inspection of pixel-level defects, projected images must be evaluated for brightness, sharpness, distortion, aberration, and more. Near-infrared light sources that enable eye-tracking and proximity detection have their own requirements as well, including parameters for radiant intensity of LED or laser distributions.

When a device is nearly finalized, measurement equipment must be able to evaluate the complete field of view seen by a user. In the case of an XR headset, this measurement involves capturing an area from 20° to 120° horizontal at the human eye position, fitting measurement optics inside a variety of headset form factors, and often accounting for left- and right-eye positions.

Photometric imaging systems provide a fundamental inspection solution to meet all XR optical testing requirements, but engineers have several considerations to make when choosing the optimal imager, lens, and configuration for each job. Join this webinar to learn about:

- XR optical components' measurement needs and challenges.
- Measurement equipment for XR optical testing.
- Novel solutions for optimizing measurements at every component manufacturing stage.

### Who should attend:

This webinar is ideal for optical design engineers or test engineers who develop or manage the production of consumer electronics and augmented reality (AR), virtual reality (VR), mixed reality (MR), and sensing systems.

### About the presenter:

Davis Bowling is sales manager for North America at Radiant Vision Systems. Applying a diverse background in industrial imaging metrology, Bowling has supported customer applications with photometric, colorimetric, and radiometric inspection systems since 1997. Manufacturers of displays and illuminated devices apply these systems, calibrated to unique lens options, to enable automated visual inspection within precise viewing parameters and ensure quality according to human visual perception. As a sales leadership team member at Radiant, Davis is responsible for facilitating solutions for unique customer applications worldwide. These solutions include emerging AR, VR, and MR display types and optical geometries. Bowling has a thorough understanding of the technical considerations required for a successful implementation. He builds on Radiant's success by sharing his expertise on measurement equipment and providing a consultative approach to system integration.

### About Radiant Vision Systems:

Radiant Vision Systems engineers scientific imaging systems, lenses, and software to critically evaluate light, color, and unique visual characteristics of illuminated components. Radiant provides test and measurement for a range of AR, VR, and MR components — including displays, optics, and near-IR light sources. Manufacturing leaders around the world rely on Radiant solutions to ensure quality, reduce costs, and improve efficiency in design and production. Thousands of Radiant cameras are currently testing millions of devices worldwide.

## .: Mark Your Calendar

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