TRIOPTICS
See the Difference
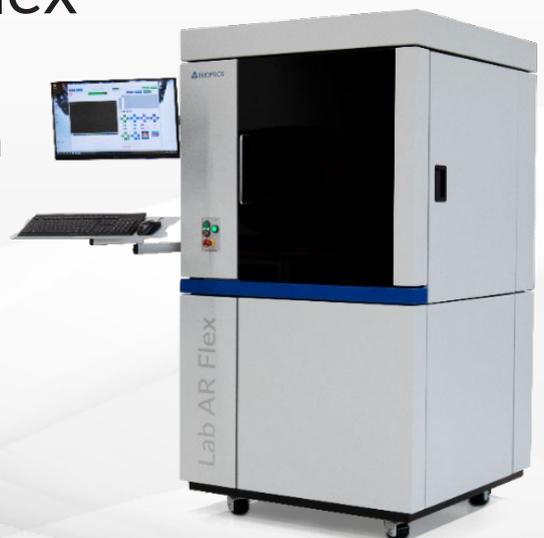

ImageMaster® Lab AR Flex

The multi-dimensional test solution
for augmented reality optics

ImageMaster® Lab AR Flex

The ImageMaster® Lab AR Flex is the ideal measurement solution when it comes to performance testing of optical components and modules for Augmented Reality, such as transmission and reflection waveguides, Near-Eye Displays, projection lenses, correction lenses and projection light sources. The flexible system is suitable for manufacturers and integrators as well as for independent testing laboratories.

It offers precise, software controlled measurement of image quality and efficiency of waveguides. Measurement parameter are:

- On- and off-axis MTF
- Field of view (FOV)
- Eyebox scan
- Chief ray angle (CRA)
- Relative efficiency
- Distortion
- Through-focus scan
- Virtual image distance (VID)
- Depth of focus (DOF)
- Absolute luminance (optional)
- Color (optional)
- Robot sample loading (optional)
- Polarization characterization (optional)

Key features

- Testing of AR components, modules and complete headsets
- Accurate MTF measurement at high spatial frequencies on- an off-axis
- Diffraction limited up to 60 lp/° (ISO, traceability, optical standards)
- Through-focus scan for measurement of object distance (VID, diopter) and depth of focus (DOF)
- Eyebox scan at various incident angles
- Adjustable pupil size and eye-relief distance along with the full flexibility of input pupil location in X/Y plane for the complete eyebox scan
- Illumination sources with wide range of wavelengths and polarization
- Fully computerized control measurement sequence with robotic sample handling (on request)
- Independent movement of telescope detector and target generator for both on-axis and off-axis measurements, one-shot wide field of view on-axis measurement (on request)