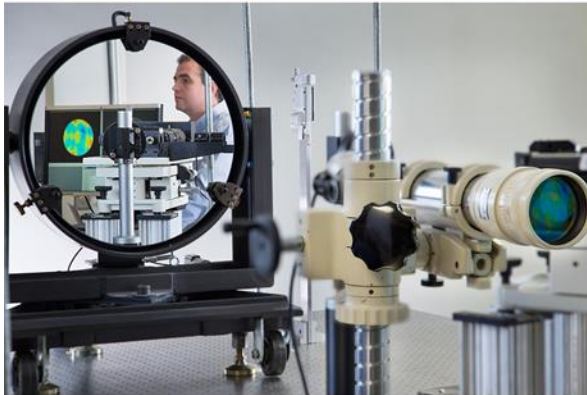
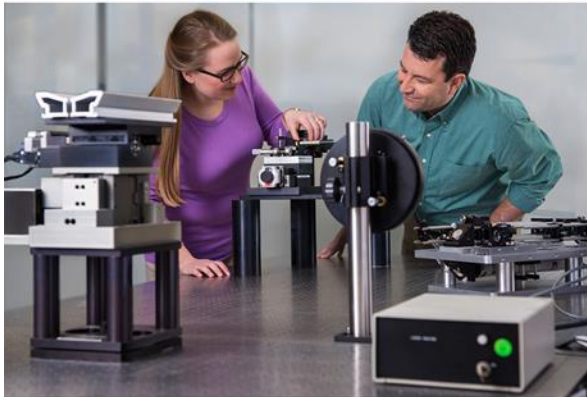




The Optical Engineering Experts®

***IQ LAB™ SERVICES***

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## SEAMLESS PROCESS

It's easy to get started, and expedited services are available if you need your test results right away:

- 1** Tell us about your optical testing requirements. Give us a call or send an email and an IQ Lab™ engineer will review your requirements and recommend next steps.
  - Call [+1 617.354.7557](tel:+16173547557)
  - Email [sales@optikos.com](mailto:sales@optikos.com)
  - Complete our online questionnaire: <http://www.optikos.com/lens-testing-questionnaire>
- 2** You'll receive a quotation for your project within one to two days.
- 3** After submitting your purchase order, send your material to:  
**Optikos Corporation**  
107 Audubon Road, Bldg. 3  
Wakefield, MA 01880 USA  
  
Attn: IQ Lab™ Services
- 4** Typically within two weeks or less, we'll email your test results and return your material.

## YOUR OPTICAL SYSTEM IS IN GOOD HANDS

**Customer Supplied Material:** Express shippers help make it easy and typically assist in completing the correct documentation for straightforward shipment to Optikos from outside the US. Customer Supplied Materials (CSM) tracking of your product within our facility ensures that your product is identifiable, traceable and stored separately.



**Optikos®**  
The Optical  
Engineering Experts®

## Get Started with Optikos

Optikos offers metrology products and services for measuring lenses and camera systems, as well as engineering design and manufacturing for optically-based product development. Our standard products are suitable for any industry or application, and we will design a custom product for your specific needs. Learn more at [optikos.com](http://optikos.com).

Optikos Corporation  
107 Audubon Road, Bldg. 3  
Wakefield, MA 01880 USA

+1 617.354.7557  
[sales@optikos.com](mailto:sales@optikos.com)

## TYPICAL MEASUREMENTS

Our standard measurement offerings can be combined into a customized test plan that best suits your requirements. Below are examples of typical image quality measurements and characterization that we offer:

LENS	
<p><b>VIS, NIR, SWIR, MWIR, LWIR</b></p> <ul style="list-style-type: none"> <li>• On- and Off-Axis Modulation Transfer Function (MTF)</li> <li>• On- and Off-Axis Through Focus MTF</li> <li>• Effective Focal Length (EFL)</li> <li>• Back/Flange Focal Length</li> <li>• Field of View</li> <li>• Distortion</li> <li>• Field Curvature and Field Tilt</li> <li>• Astigmatism</li> <li>• Relative Illumination</li> <li>• Encircled/Ensquared Energy</li> </ul>	<p><b>VIS Only</b></p> <ul style="list-style-type: none"> <li>• Entrance/Exit Pupil Diameters</li> <li>• F-number</li> <li>• Spectral Transmission</li> <li>• Total Power Transmission</li> <li>• Veiling Glare Index (VGI)</li> <li>• Glare Spread Function (GSF)</li> <li>• <b>New!</b> Select measurements can be performed over temperature</li> </ul>
VISIBLE CAMERA	
<ul style="list-style-type: none"> <li>• On- and Off-Axis (MTF)</li> <li>• On- and Off-Axis Through Focus MTF</li> <li>• Distortion</li> </ul>	<ul style="list-style-type: none"> <li>• Veiling Glare Index (VGI)</li> <li>• Glare Spread Function (GSF)</li> </ul>
THERMAL CAMERA	
<ul style="list-style-type: none"> <li>• Contact us to discuss your thermal camera testing needs</li> </ul>	
OTHER METROLOGY CAPABILITIES	
<ul style="list-style-type: none"> <li>• Radius of Curvature</li> <li>• Center Thickness</li> <li>• Diameter</li> <li>• Surface Irregularity</li> <li>• Edge Thickness Difference</li> </ul>	<ul style="list-style-type: none"> <li>• Wedge</li> <li>• Transmitted Wavefront</li> <li>• Spectral Transmission</li> <li>• Radiometric/Photometric Parameters</li> <li>• Source Characterization</li> </ul>

## APPLICATIONS

Optikos is a recognized leader in the field of optical metrology, and we have developed our in-house measurement capabilities over 35+ years of experience with lens and camera testing. Our measurement results are used to solve a broad range of metrology problems within industries and applications that include:

BROAD RANGE OF APPLICATIONS	
<ul style="list-style-type: none"> <li>• Aerial Photography Systems</li> <li>• Automotive Lenses and Camera Systems</li> <li>• Autonomous Vehicle Awareness Systems</li> <li>• Binoculars</li> <li>• Catadioptric Systems</li> <li>• Cellphone Cameras</li> <li>• Custom, One-of-a-kind, Imaging Systems</li> <li>• Endoscope lenses and camera systems</li> <li>• Fresnel Lenses</li> <li>• GRIN Lenses</li> <li>• Illumination systems</li> <li>• Image Intensifiers</li> <li>• Intraocular Lenses (IOLs)</li> </ul>	<ul style="list-style-type: none"> <li>• Machine Vision Imaging Systems</li> <li>• Microscope Objective Lenses</li> <li>• NIR and Night Vision Optics</li> <li>• Optical bandpass filters</li> <li>• Optical Displays</li> <li>• Optical Windows</li> <li>• Plastic Optics</li> <li>• Prototype (Proof-of-Concept) Lenses and Camera Systems</li> <li>• Riflescopes</li> <li>• Telescopes</li> <li>• Thermal IR Lenses</li> <li>• Webcam Lenses and Camera Systems</li> </ul>

# Image Quality Assurance and Optical Performance Validation for All Your Testing Needs

Optikos® *IQ Lab*™ Services are provided through our optical metrology lab and offer the most comprehensive modulation transfer function (MTF) lens and camera assembly testing available in one location. Our extensive lab is available for contract metrology work on assemblies ranging from optical components to complete imaging systems, and our measurement data is reviewed and analyzed by our expert staff of optical engineers and technicians to help provide you with the metrology answers you need.

## COMPREHENSIVE RANGE OF TESTING

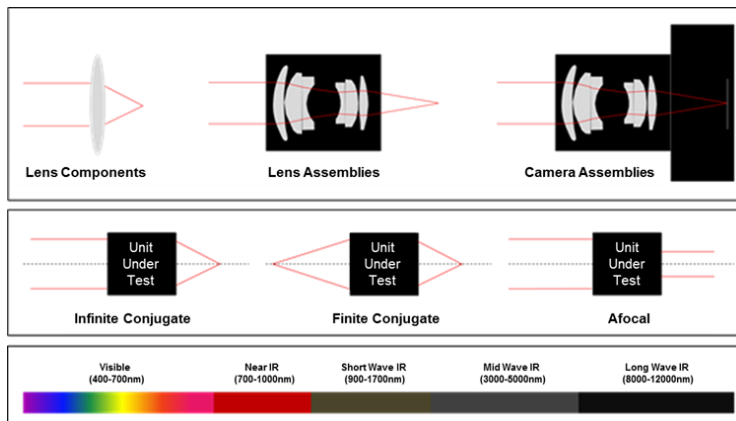
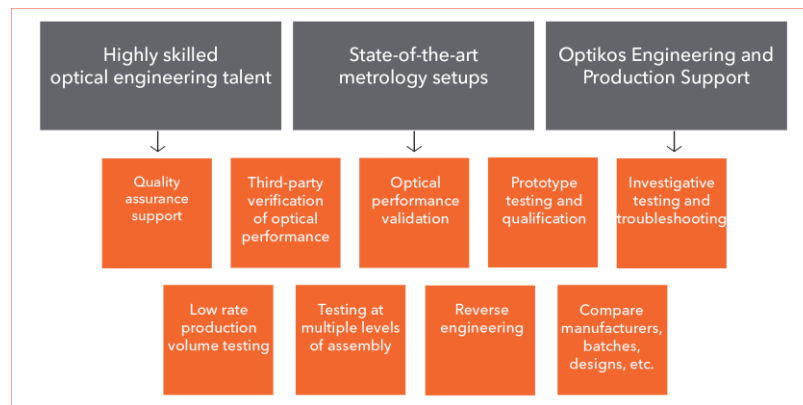


Image quality testing is offered for lenses, cameras, optical and electro-optical components and systems; and measurements can be performed for test spectrums ranging from visible to Long Wave Infrared (LWIR), and for infinite conjugate, finite conjugate and afocal systems. To complement our image quality metrology capabilities, additional measurements offered by Optikos *IQ Lab* Services include radiometric and photometric characterization, optical element inspection, and interferometric testing.

## FULL SERVICE LAB ADDRESSES YOUR SPECIFIC NEEDS



Testing is available for any application: from in-line manufacturing and robotics to medical devices and consumer products; for small startups to Fortune 500 companies—if you have doubts about your image quality, we're fully equipped to help. You'll receive a complete report of results and recommendations that will help you make an informed assessment of your situation.

We understand that optical metrology is not “one-size-fits-all,” and that your testing needs must be specific to your optical system, application, or your client's requirements. Every *IQ Lab* testing project begins with a unique test plan that is developed according to each customer's metrology needs.

## MAKE IQ LAB SERVICES PART OF YOUR QUALITY ASSURANCE MODEL

When developing a complex optical system, the success of the final assembly is ensured when quality objectives are met at all levels of the assembly; however, many companies do not have the resources needed to confirm the quality of their imaging system, and call upon Optikos *IQ Lab* Services to be a quality assurance partner, and to provide testing services where needed at any level of the assembly process.