The Optikos LensCheck™ LWIR lens measurement instrument is a unique, cost-effective solution to your infrared production and prototype lens qualification needs. Optikos, the leader in image quality test equipment, is pleased to expand the product line with this compact, efficient, easy-to-use quality control tool.

Based on over thirty years experience in optical product development and featuring the Optikos patented VideoMTF® image analysis software, the LensCheck™ LWIR features real-time Infrared MTF testing and analysis enabling manufacturers to qualify incoming products quickly and reliably, thereby minimizing the risks of sub-standard complete assemblies.

**Features**
- Patented VideoMTF® technology enables real time MTF measurements
- Flexible platform allows a wide range of measurements (e.g. MTF, EFL, distortion)
- Industry leading measurement accuracy and repeatability
- Configurable automated measurement routines
- Easily switch between wavebands (VIS/NIR, SWIR, or LWIR)
- Installed in production and R&D facilities around the world

**Measure**
- MTF – on/off axis
- EFL
- Astigmatism
- Field Curvature
- Distortion
- Line of Sight (optional)

## System Specifications

### Performance

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>MTF accuracy*</td>
<td>+/- 3 % to 30 lp/mm</td>
</tr>
<tr>
<td>MTF repeatability*</td>
<td>+/- 2 % to 30 lp/mm</td>
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</table>

### Key Attributes

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refractive Collimator</td>
<td>360mm EFL, &gt;50mm clear aperture</td>
</tr>
<tr>
<td>Source Module</td>
<td>Broadband Infrared Emitter: 7.5 – 15 microns, 12-position high-speed motorized target wheel, Target set: slits, pinholes, alignment target, 8 – 12 micron bandpass filter</td>
</tr>
<tr>
<td>LWIR Image Analyzer</td>
<td>Uncooled Microbolometer, 320 x 240 pixel array, Spectral sensitivity 7.5 – 15 microns, Calibrated 7.5X 0.70NA Relay Lens</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Image Analyzer Mount</td>
<td>Motorized Z-axis: 25 mm travel 0.1 micron resolution, Motorized X-axis: 25 mm travel with 0.05 micron resolution glass scale encoder, Manual Y-axis: 12.5 mm travel</td>
</tr>
<tr>
<td>Motorized Lens Platform</td>
<td>+/- 100 degree off-axis rotation, 0.0001° resolution glass scale encoder, 0.5 m optical rail, Integrated self-centering lens mount</td>
</tr>
</tbody>
</table>

### Computer System

<table>
<thead>
<tr>
<th>Component</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patented OpTest™ Software</td>
<td>Footprint: 43.5&quot; x 17.8&quot; (110.5 x 45 cm)</td>
</tr>
<tr>
<td>Windows™ XP Computer</td>
<td>Weight: Approximately 50 lbs (22.7 kg)</td>
</tr>
</tbody>
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*MTF accuracy and repeatability is dependent on the type of lens under test. All specifications are subject to change without notice. Contact Optikos Corporation to discuss your application.

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### Options

- **LensCheck™ LWIR Audit Lens**
  - Diffraction-limited lens used to verify MTF and EFL measurements

- **Prealigned Interchangeable Target Wheels**
  - Pinholes, slits, and other custom targets available

- **Reflective Collimator**
  - Off-axis parabolic mirror suitable for broadband lens measurements from the visible to LWIR

- **Motorized Rotary Lens Mount**
  - Low-wobble rotary lens mount used for MTF measurements in multiple directions and quantifying mechanical to optical axis error

- **General-purpose Lens Mounts**
  - Opti-claw™, mini opti-claw™, C-mount, M12x0.5mm, DIN, Nikon, Olympus, and many others

- **Optical Rail**
  - Other lengths available

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**Also Available:**

- LensCheck™ VIS
- LensCheck™ VIS Finite Conjugate
- LensCheck™ SWIR