



# TRIOPTICS

See the Difference.

## ImageMaster® HR UltraPrecision

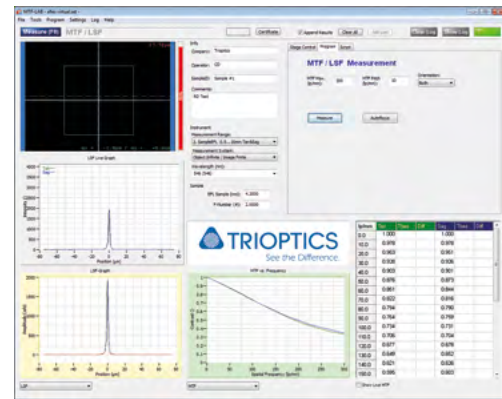
Image Quality Test Station



For ultra-precise measurement of MTF and other optical parameters TRIOPTICS has developed the new ImageMaster® HR UP. It completes the proven ImageMaster® HR product line – the preferred MTF Test Station worldwide. A high-precision air bearing sample holder leads to an increased mechanical stability of the ImageMaster® HR UP. Therefore, an enhanced measurement reproducibility is achieved.

### Key Features

- Accuracy traceable to international standards
- Fully or semi-automated, ultra-accurate, multi-functional MTF test station
- R&D MTF test station for medium sized samples
- MTF measurement at finite and infinite conjugates
- Instrument available for NUV/VIS/NIR
- Vertical set up for most convenient and easy lens positioning
- Optimal design prevents vignetting



MTF-Lab Software with intuitive user interface and time saving lens testing routines

### Measurement Parameters

The ImageMaster® HR UP test station measures the following parameters:

- MTF in infinity conjugate configuration
- MTF on-axis and off-axis (angle up to  $\pm 70^\circ$ )
- Effective Focal Length (EFL)
- Flange Focal Length (FFL) relative
- Distortion
- Astigmatism
- Field curvature
- Chromatic aberrations
- Chief Ray Angle

### Technical Data

Parameter	ImageMaster® HR UP
Azimuth range	360°
Max. image height	$\pm 23$ mm
Clear aperture	up to 100 mm
Collimator range	50– 1000 mm
EFL range of the sample	1–200 mm*
Spatial frequency (in specification) Max. spatial frequency	0 ... 500 lp/mm 1000 lp/mm (depending on sample)
Accuracy (MTF on-axis and off-axis)	$\pm 0.02$ MTF
Repeatability (MTF on-axis and off-axis)	$\pm 0.005$ MTF

\* Depends on mirror collimator