TRIOPTICS

TRIOPTICS GMBH · OPTICAL TEST EQUIPMENT

ImageMaster® VISION

Imaging Quality Evaluation of Eye Glasses

The ImageMaster® VISION evaluates the imaging quality of ophthalmic glasses in terms of Modulation Transfer Function (MTF). Besides the MTF further measurement capabilities of the ImageMaster® VISION are:

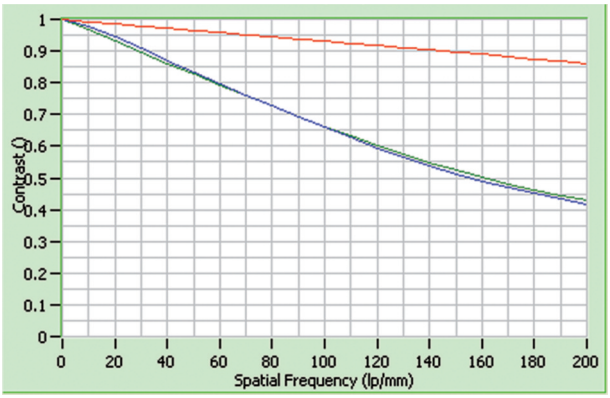
- Dioptric power
- Through focus MTF
- Line spread function
- Phase transfer function
- Astigmatism

ImageMaster® VISION features a very flexible design which enables for different measurement settings. The ±40° adjustable arms of ImageMaster® VISION allow on-axis and off-axis MTF measurement. Object distances between 30 cm and infinity conjugate are generated by a focusable collimator.

The accommodation and the adaption of the human eye can be simulated with the ImageMaster® VISION: The measuring head is focusable to simulate the accommodation of the eye in the range ±10 dpt and the aperture of the detector is exchangeable to simulate the adaption of the eye.

The user friendly software of the ImageMaster® VISION offers a variety of measurement and analyzing tools. The software directly compares real MTF values of the eye glass under test with simulated values from a design program.
The comparison of the imaging quality of the manufactured lenses with the design expectations is made easy in this way. The software of ImageMaster® VISION helps to analyze the measurement results of the eye glasses. The following output graphs are available:

- MTF vs. Spatial Frequency vs. Image Height
- MTF vs. Spatial Frequency
- MTF vs. Defocus



Modulation Transfer Function

The Modulation Transfer Function (MTF) is a parameter describing objectively the performance of optical imaging systems. By testing the ability of a lens under test to transfer the details of an object to the image, the contrast for different spatial frequencies is determined. It has the value 1 for a perfect contrast reproduction and the value 0 for a system being unable to produce any image contrast.

Technical Data of ImageMaster® VISION

Object distance	∞ to 30 cm
Max. refraction power of the sample	± 10 dpt
Max. resolution	60 cycles/°
Diameter of glasses	max. 80 mm

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TRIOPTICS GmbH · Optische Instrumente
Hafenstr. 35-39 · D-22880 Wedel / Germany
Phone: +49-4103 - 18006 - 0 · Fax: +49-4103 - 18006 - 20
E-mail: info@trioptics.com · http://www.trioptics.com