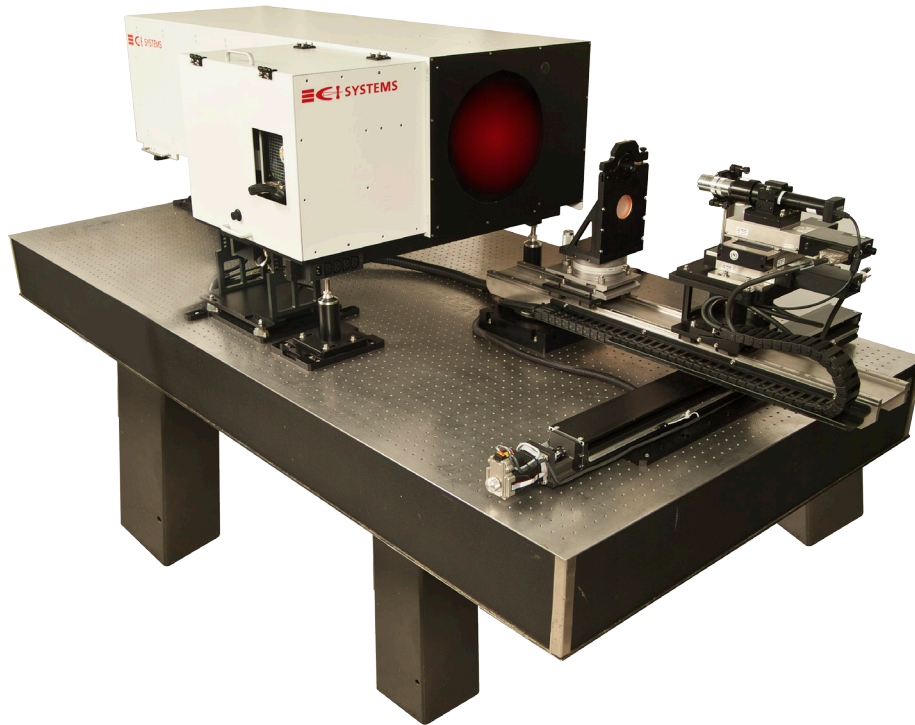


» OPTISHOP

MTF Station



CI Systems offers a cost effective and modular optical test bench to measure the Modulation Transfer Function (MTF) and transmission of optical components in the visible, SWIR, MWIR and LWIR spectral ranges. The OptiShop allows for video and slit scanning MTF tests.

» VIDEO CAPTURE MTF

Video capture MTF allows for real-time measurement of optical components as well as systems. It is used when high throughput test rate is required. CI Systems has developed diffraction limited, chromatic corrected, optical relay (objective) for the SWIR, MWIR and LWIR MTF tests. It enables adequate sampling and low aliasing. Therefore, OPTISHOP is not limited to high resolution sensors but can be used to test a wide range of FLIR systems.

A few of the OPTISHOP advantages with the Video MTF configuration are:

- Simultaneously tangential & sagittal MTF measurement.
- Measuring a system with a short and negative back focal length
- Real-time alignment of zoom optics.
- MTF measurement of low resolution systems.

» SUPPORTED TESTS

Lens Measurements

- ▶ MTF , Through Focus MTF
- ▶ EFL
- ▶ BFL
- ▶ Relative Distortion
- ▶ Astigmatism
- ▶ Depth of Focus
- ▶ Field curvature
- ▶ LOS (Zoom Lenses)
- ▶ Mechanical Bore sight
- ▶ Distortion

FLIR camera measurements

- ▶ MRTD (objective & Subjective)
- ▶ NETD
- ▶ MTF
- ▶ SiTF
- ▶ Uniformity

(*) other tests are possible upon request

» SPECIFICATIONS

Collimator

Model	CI Systems "METS"
Focal length	70" (up to 220" upon request)
Clear aperture	12" (larger upon request)

Off axis bench

Type	Motorized
Angular range	±35°

Measurements parameters

MTF measurement accuracy	<2.5%
MTF measurement repeatability	<1.5%
Transmission measurement accuracy	<2%
Lens under test aperture range	1" to 10" (and larger)
Lens under test f/#	f/1-for 8 to 12µm; f/1.3-for 3 to 5µm

	SLIT MTF	Video MTF
Spectral range (µm)	0.8-2.2 µm	0.4-0.7
	3-5 µm	1.3-2.2
	8-12 µm	3-5 µm
Working Distance	>4.6mm	8-12 µm
		MWIR > -20mm LWIR > -7mm