Mini-Cass™

Mini-Cass™ is a modified Cassegrain telescope with an integrated, specialized deformable mirror for use in applications requiring laser wavefront control, free-space optical communications, and compensated imaging.

Mini-Cass™ is a convenient and rugged product suitable for wavefront compensation, beam focusing and active beam steering.

Light can be coupled directly from a laser or fiber optic cable into the rear of the Mini-Cass™. The Mini-Cass™ can also be used as a receiver to optimally concentrate light onto the tip of a fiber or a detector.

A standard 16mm membrane has been modified to allow a beam to pass through the center of the DM. The deformable mirror's main function is to produce phase adjustments to an input beam with an aberrated phase front.

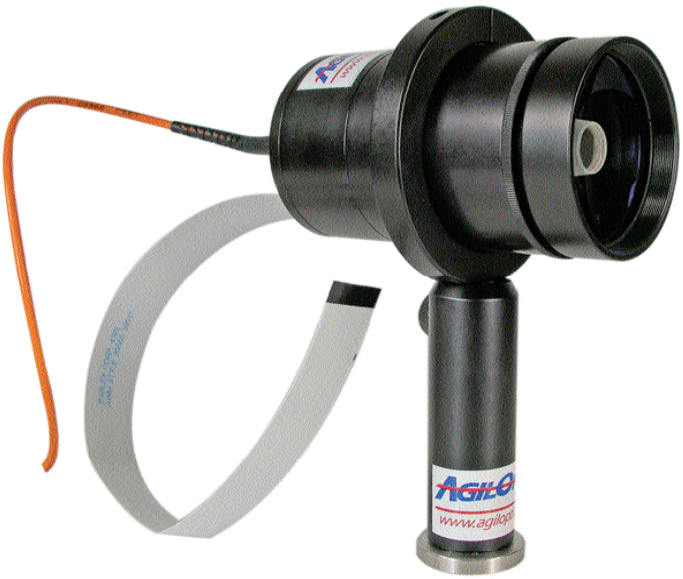
Applications

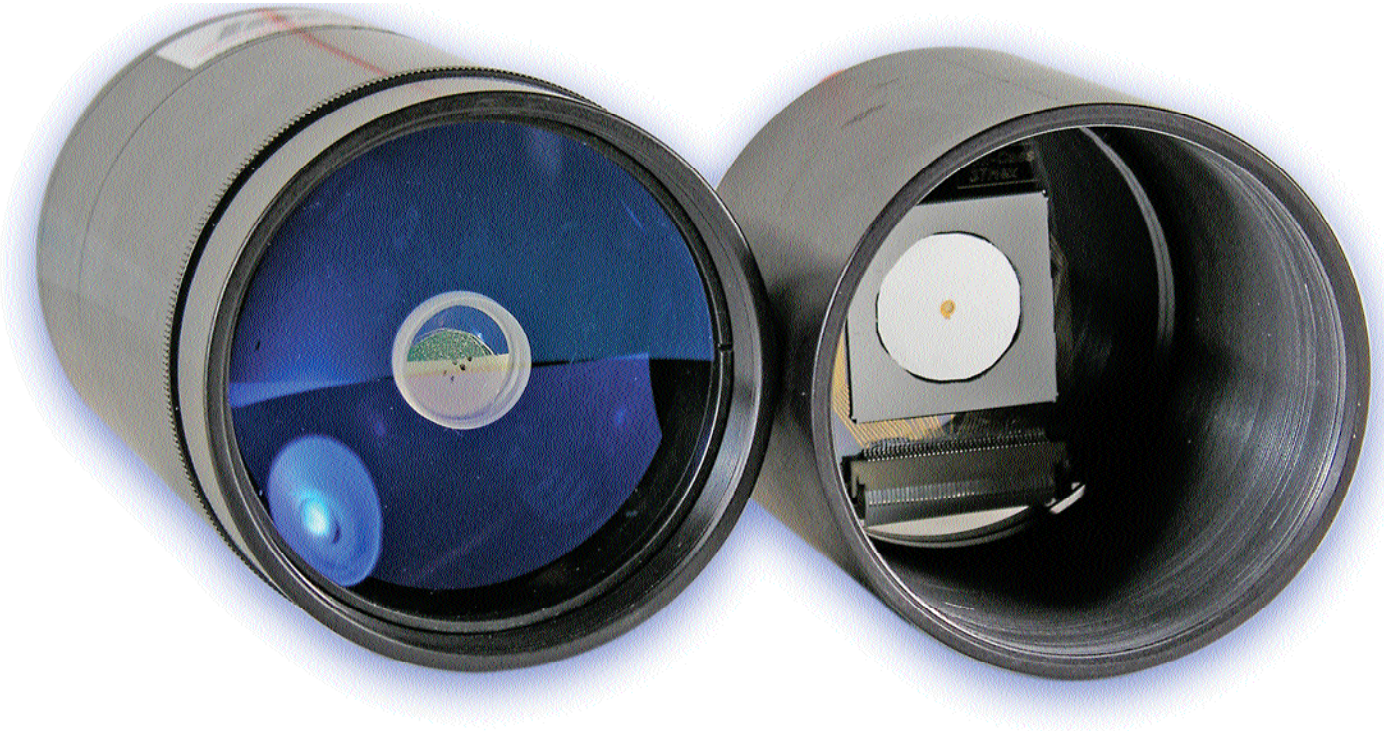
· Michelson interferometer
· Beam Steering
· Optic Fiber Coupling
· Compensated Imaging

Telescope Beam Expander With Deformable Mirror

Features

· Fits into standard 2" optical mounts
· Monolithic Construction for Ease of Integration
· Controllable with most AgilOptics' high voltage drivers
· Compact & Lightweight
· Sturdy, Closed Package





Mini-Cass™

Telescope Beam Expander With Deformable Mirror

What Mini-Cass™ Can Do For You:

- *Facilitate set-up of optical laser-communication*
- *Optimize brightness at each end of communication link*
- *Stabilize tip/tilt and focus of transmitted beams*

Ordering Information

MC – HR1064

Series Name C D

Series Name: Mini-Cass

C: Coating Type
- · HR – High Reflectivity
- · AR – Anti-Reflective

D: Wavelength
Standard Wavelengths

Multi-Wavelength Coatings
- · Vis – Broad-band visible spectrum
- · Al – Standard
- · AgProt – Protected Silver

Single Wavelength Coatings
- · 1550nm
- · 1315nm
- · 1064nm
- · 800nm
- · 633nm
- · 349nm
- · 266nm

Custom coatings can be applied to any mirror. Contact AgilOptics for availability and pricing.

***Note:** Currently, Mini-Cass™ is only available with a 16mm diameter mirror.

Specifications

Parameter	Test Conditions	Min	Typ	Max	Units
Electrical					
Actuator Capacitance			100	200	pF
Applied Voltage			100	200	V
Power Consumption (per actuator)	1kHz; 200V; 1nF		2		mW
Mechanical					
Edge Actuator Throw		4	6	8	µm
Actuator Spacing			0.6		mm
Actuator Area			6		mm^2
Resonance Frequency		>1			kHz
Optical					
Surface Roughness (rms)	Profilometer		5		Nm
Surface Flatness (PV)	Interferometer		400		Nm
Surface Flatness (rms)			60		Nm
Natural Surface Shape			Astigmatism		
Strehl Ratio	Central 80% Illuminated, Actively Flattened		36	W	
Beam Steering				350	µrad

AGILOPTICS®

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