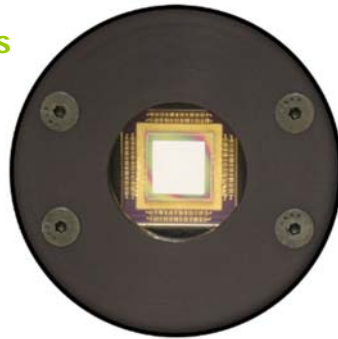


Low Actuator Count DMs

Low-actuator count DM systems are economic and versatile solutions for advanced wavefront control, coming in two types: the *Mini-DM* and the *Multi-DM*.



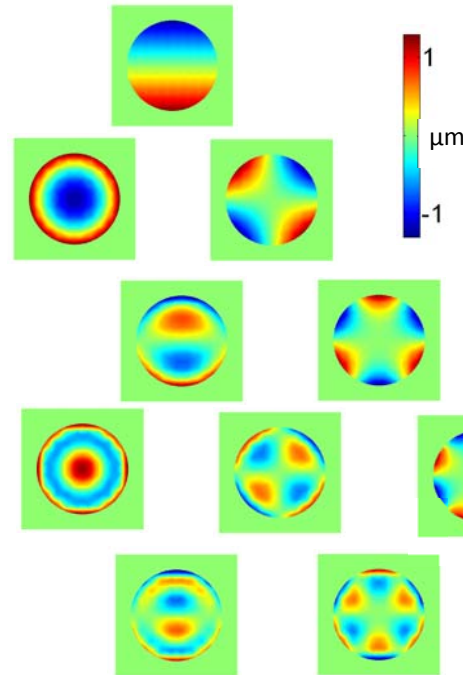
With up to 140 precisely controlled elements and low inter-actuator coupling, the *Multi-DM* system is ideal for a broad range of applications including microscopy, astronomy, retinal imaging, and laser beam shaping. This DM is available in both continuous and segmented surfaces for adaptive optics or spatial light modulator applications.

The *Mini-DM* is ideal for laboratory-scale adaptive optics and low order wavefront control. Its mirror surface is controlled by up to 32 electrostatic actuators which are individually commanded to achieve a desired shape. The DM is available with a continuous surface for adaptive optics applications.

The DMs are capable of up to 5.5 μm stroke, 8 kHz frame rate, have sub-nm step size, and no hysteresis.

High speed electronic upgrades are available for the Multi-DM systems, in the form of the X-driver.

Demonstrated High Order Aberration Correction



Measured Zernikes: >130 actuators with low interactuator coupling create high order Zernike modes

DM Properties

Mirror Coating:	Aluminum, Gold or Protected Silver
Window:	AR coatings available
Hysteresis:	None
Step size:	Sub-nm (average)
Surface Type:	Continuous (DM), Segmented (SLM)
Fill Factor:	>99%
Surface Figure:	<30nm RMS

Driver Specifications

Mini Driver	Multi Driver
Dimensions: 4" x 5.25" x 1.25"	Dimensions: 9" x 7" x 2.5"
Interface:	USB 2.0
Input Voltage:	100-240V AC
Resolution:	14 bit
Frame Rate:	8 kHz*



DM Specifications*	Total Actuator Count	Actuator Count Across Aperture	Stroke (μm)	Aperture (mm)	Pitch (μm)	Mechanical Response (10% - 90%)	Approximate Interactuator Coupling
Ultra-Compact Mini-1.5	25	5	1.5	1.2	300	<40 μs	15%
Mini-3.5	32	6	3.5	2.0	400	<75 μs	13%
Mini-5.5	32	6	5.5	2.25	450	<100 μs	22%
Multi-C-1.5	137	13	1.5	3.6	300	<40 μs	15%
Multi-3.5	140	12	3.5	4.4	400	<75 μs	13%
Multi-5.5	140	12	5.5	4.95	450	<100 μs	22%
Multi-SLM†	140	12	1.5	3.6	300	<35 μs	0%

†Segmented surface mirror. All other configurations have continuous surfaces.

*High speed driver options are available.

