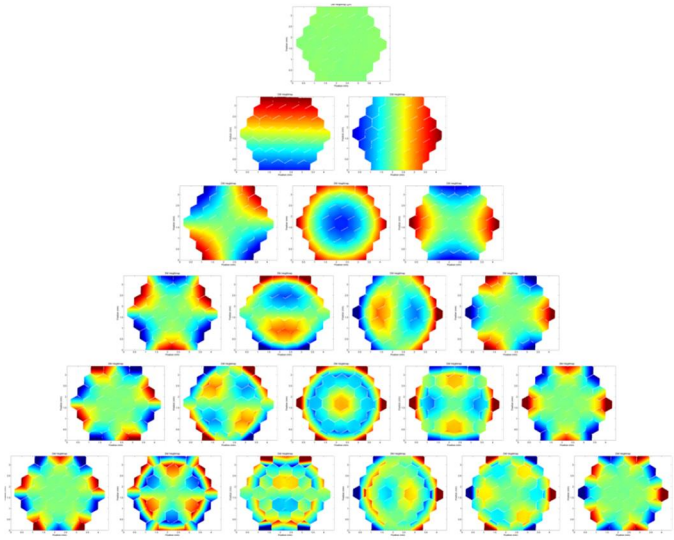
PTT111 Deformable Mirror System



Measured Mirror Shape for Open-Loop Positioning a PTT111 DM

Iris AO, Inc.

PTT111 DM SYSTEM SPECIFICATIONS

- ✓ Precision Linear Open-Loop Positioning
- ✓ DM Type: 111 actuator, 37 piston-tip-tilt (PTT) segments
- ✓ Segment Pitch: 0.606 mm
- ✓ Segment Size: 0.7 mm
- ✓ Stroke: 5 or 7 µm
- ✓ Tilt Angle: ±4 or ±5.6 mrad
- ✓ Optical Coating: protected Silver, Gold, protected Aluminum, dielectric
- ✓ Open-Loop-Flat Surface Figure: < 20 nm *rms*
- ✓ Inscribed Aperture: 3.5 mm
- ✓ Maximum Operating Temperature: 50°C
- ✓ Drive Electronics: Low noise, 14-bit resolution, update rate >2 kHz with USB Interface
- ✓ .NET, C/C++ & Matlab
- ✓ Windows OS & Linux compatible

ADAPTIVE OPTICS MADE EASY

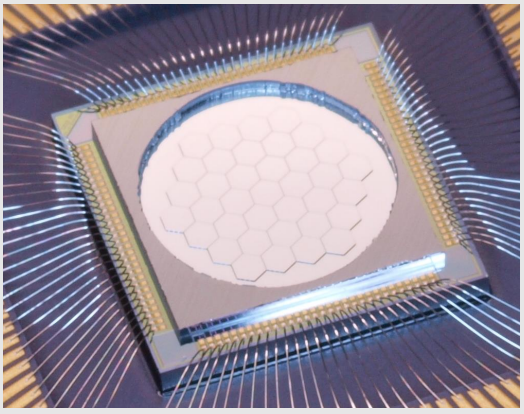
The PTT111 DM system is a high-performance, factory-calibrated deformable mirror with precision, low-noise drive electronics. Intuitive mirror positioning commands use piston-tip-tilt (PTT) values or Zernike coefficients. The USB interface makes setting up the system very easy. Stable DM calibration enables years of reliable wavefront control.

HIGH-QUALITY OPTICAL DEVICE

The unique PTT111 design uses robust single-crystal-silicon mirror segments that remain flat over large temperature ranges and incident power of 100W/cm^2 and higher. Precision linear open-loop piston-tip-tilt positioning enables high-performance adaptive-optics corrections using Zernike modes. Fully independent segment positioning enables creating smooth wavefronts as well as discontinuous ones such as phased arrays and optical vortices.

PROVEN PERFORMANCE

Iris AO DMs are in continual use in applications that range from state-of-the-art microscopy and laser-beam correction to high-contrast imaging systems developed by NASA for planet detection. Experience how the PTT111 DM can meet your imaging, microscopy, beam shaping, academic, or industrial needs.



PTT111 DM SYSTEM CONTENTS

- ✓ Factory calibrated PTT111-5 DM
- ✓ Smart Driver II-128 USB drive electronics
- ✓ Compact enclosure
- ✓ Mechanical mounting block & interface cables
- ✓ DM Controller GUI and software libraries

PTT111 DM OPTIONS

- ✓ High-stroke: 7 µm
- ✓ High-speed computer interface supporting >6.5 kHz update rates
- ✓ 16-bit resolution electronics
- ✓ Dielectric coatings from 193-1550 nm
- ✓ Water-cooling system for high-power lasers
- ✓ Geometrically matched hexagonal Shack-Hartmann lenslet array

Contact Iris AO for additional options or DM customization.

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