



Representative Mirror Shapes for Open-Loop Positioning a PTT111L DM

ADAPTIVE OPTICS MADE EASY

The PTT111L 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.

HIGH-QUALITY OPTICAL DEVICE

The large-format PTT111L design uses robust single-crystal-silicon mirror segments that remain flat over large temperature ranges and incident power of 100W/cm² 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 PTT111L DM can meet your imaging, microscopy, beam shaping, academic, or industrial needs.



Iris AO, Inc.

PTT111L (LARGE FORMAT) DM SYSTEM SPECIFICATIONS

- ✓ Precision Linear Open-Loop Positioning
- ✓ DM Type: Large format 111 actuator, 37 piston-tip-tilt (PTT) segments
- ✓ Segment Pitch: 1.212 mm
- ✓ Segment Size: 1.4 mm
- ✓ Stroke: 5 or 7 μm
- ✓ Tilt Angle: ±2 or ±3.2 mrad
- ✓ Optical Coating: protected Silver, Gold, protected Aluminum
- ✓ Open-Loop-Flat Surface Figure: < 30 nm rms
- ✓ Inscribed Aperture: 7.0 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



PTT111L DM SYSTEM CONTENTS

- ✓ Factory calibrated PTT111L-5 DM
- ✓ Smart Driver II-128 USB drive electronics
- ✓ Compact enclosure
- ✓ Mechanical mounting block & interface cables
- ✓ DM Controller GUI and software libraries

PTT111L DM OPTIONS

- ✓ High-stroke: 7 μm
- ✓ High-speed computer interface supporting >6.5 kHz update rates
- ✓ 16-bit resolution electronics
- ✓ Geometrically matched hexagonal Shack-Hartmann lenslet array

Contact Iris AO for additional options or DM customization.