

Representative Mirror Shapes for Open-Loop Positioning a PTT111L DM

ADAPTIVE OPTICS MADE EASY

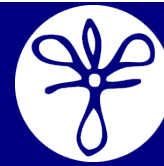
The PTT111L DM system is a high-performance, factory calibrated deformable mirror and precision, low-noise drive electronics. Intuitive mirror positioning commands use piston/tip/tilt values or Zernike coefficients. The USB interface makes setting the system very easy.

HIGH-QUALITY OPTICAL DEVICE

The unique 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. Fully independent segment positioning enables the ability to implement adaptive optics, phased arrays, beam shaping, fiber coupling, and many other applications.

PROVEN PERFORMANCE

Iris AO DM technology is in use in applications that range from state-of-the-art retinal imaging to high-contrast imaging systems developed by NASA for planet detection. Experience how the PTT111L DM can meet your imaging, microscopy, 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 segments
- ✓ Segment Pitch: 1.212 mm
- ✓ Stroke: 5 or 8 μ m
- ✓ Tilt Angle: ± 2 or ± 3.2 mrad
- ✓ Optical Coating: Gold, protected-aluminum, protected-silver
- ✓ Open-Loop Flat Surface Figure: < 30 nm rms
- ✓ Inscribed Aperture: 7.0 mm
- ✓ Mechanical Response: $f_{-3dB} = 2.3$ kHz
- ✓ Maximum Operating Temperature: 80°C
- ✓ Drive Electronics: Low noise, 14-bit resolution, update rate > 2kHz with USB Interface
- ✓ .NET API C/C++ & Matlab Interface Libraries
- ✓ Windows OS & Linux Compatible



PTT111L DM SYSTEM CONTENTS

- ✓ Factory calibrated PTT111L-5 DM
- ✓ High Speed Smart Driver II drive electronics
- ✓ Printed-circuit interface board
- ✓ Mechanical mounting block & interface cables
- ✓ Controller GUI and .NET API library

PTT111L DM OPTIONS

- ✓ High-stroke: 7 μ m
- ✓ High-speed computer interface supporting >6.5 kHz update rates
- ✓ Geometrically matched hexagonal Shack-Hartmann lenslet array

Contact Iris AO for additional options, higher-performance devices, or DM customization. Drive electronics with 128-512 channels sold separately.