

Fast Steering Mirror

ASOM

Spectral Radar OCT

Swept Source OCT

Video-Rate Laser Scanning Microscope

Swept Source Lasers

OCT Components

Laser Microscopy Optics

Microscopy Tools

Fast Steering Mirror and Controller



Applications

- Laser Scanning
- Laser Beam Stabilization
- Image Stabilization
- Laser Tracking
- Laser Pointing
- Field Tested in Our ASOM Microscope (See Page 582)

Thorlabs' FSM3 Fast Steering Mirror offers a high precision, closed-loop solution for single and multi-axis optical applications. The FSM3 is ideally suited for general purpose beam steering, auto-alignment systems, remote beam control, and image capture applications. The Fast Steering Mirror is incorporated into Thorlabs' new Adaptive Scanning Optical Microscope (ASOM) System, which provides the ability to view large areas of a sample in a high resolution image without sacrificing image resolution.

The FSM3 incorporates four voice coils into a compact flexure bearing support frame for fast and stable positioning. The FSM3 mirror contains an internal continuous position sensitive photodetector (PSD) to provide accurate and repeatable positioning of the mirror.

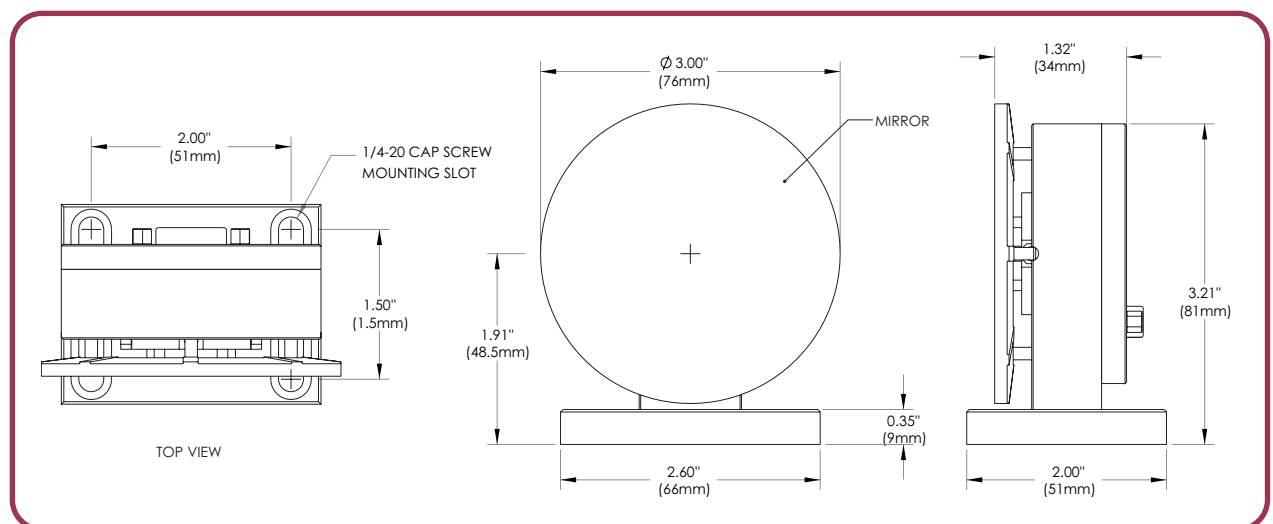
Features

- 3" Mirror Diameter
- $\pm 6^\circ$ Angular Adjustment Range
- 30ms Position Response (5mrad)
- 2-Axis X and Y Rotation
- 2 Driver Channels
- Flexure Bearing mirror suspension
- Automatic PID Feedback
- USB 2.0 Interface
- Remote or Local Control

The FSM3 controller allows the user to position the mirror locally using the front panel keypad, as well as remotely via an USB 2.0 interface. The front panel of the FSM3 controller also features an LED that reveals the Enable status of the voice coils as well as an interactive LCD display that provides access to the control parameters X and Y coordinates and local/remote mode. An internal closed-loop feedback is built into the FSM3 mirror head to provide precise and repeatable position sensing with reference to the default zero position.

When using the USB 2.0 interface of the FSM3, control is possible through the included FSM3 ActiveX™ Application Program or by using a simple command line interface from any terminal window.

When used with our PDQS1, four-channel quadrant detector system, the FSM3 can quickly auto-align and lock to the center of the detector for high-speed laser beam control and stabilization.



The Fast Steering Mirror Used in the ASOM System

ITEM#	\$	£	€	RMB	DESCRIPTION
FSM3	CALL	CALL	CALL	CALL	3" Fast Steering Mirror System