

4 Optics Automation 65-72

4.1



Fast Steering Mirror

67

- 4.1.1 Z motion
Mirrors.Z12 67
- 4.1.2 Tx Ty
Mirrors.TxTy.1010, Mirrors.TxTy.0303 68
- 4.1.3 Z Tx Ty
Mirrors.Z12TxTy0101. 69

4.2



Piezo Motorized Mirror Mount and Autoscrew Actuator

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- 4.2.1 Long Stroke Actuator
AutoScrew.LR 70
- 4.2.2 Dynamic Actuator
AutoScrew.Nano 71

4.3



Piezo Mirror Mount Controller

72

Mirrors Series

Fast Steering Mirror

Dynamic, Robust, Compact

Short Range

1 Axis



Mirrors.Z12

12 μm

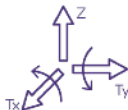
2 Axes

Tx Ty

Mirrors.TxTy0303

± 1.5 mrad, ± 1.5 mrad

3 Axes



Mirrors.Z12TxTy0101

12 μm , 1 mrad, 1 mrad

* Non-magnetic, Ultra High Vacuum Versions available

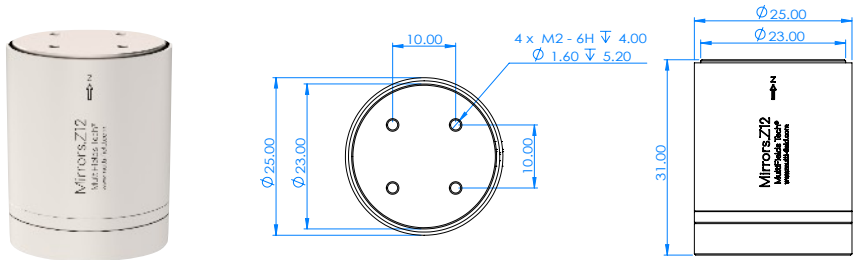


Piezo FSM — Mirrors.Z12

High Dynamic Motion for Beam Steering, Phase Turning

- ➔ Feature
- Piezo Stack Driving
 - Sub-nanometer Resolution
 - Flexure Guiding
 - ms Response Time
 - SGS sensor, Close-loop

➔ Photo & Drawing



➔ Specification

Mirrors.Z12

1	Optional	.NM, Non-magnetic; .HV, High Vacuum Version; .UHV, Ultra High Vacuum Version;
2	Motion Direction	Z
3	Footprint × Height	Φ25 × 31 mm
4	Material	Stainless Steel
5	Travel Range(Open-loop)	15 μm
6	Travel Range(Close-loop)	12 μm
7	Resolution (Close-loop)	0.2 nm
8	Linearity	0.1%
9	Stiffness	40 N/μm
10	Resonant Frequency	4 kHz
11	Max. Payload	200 g
12	Sensor Type	SGS
13	Driving Voltage	Max. 150 V
14	Working Temperature	15 ~ 40 °C
15	Cable	D-Sub 3W3
16	Mass	40 g
17	Controller	MC-Archimedes.N

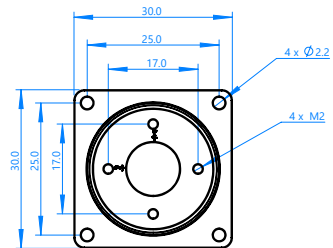
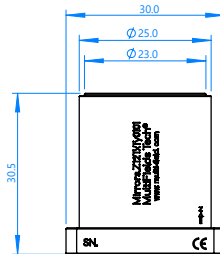
* For detail drawing and 3D model please contact us.

Piezo FSM — Mirrors.Z12TxTy0101

High Dynamic Motion for Beam Steering, Z, Tip and Tilt

- ➔ Feature
- Piezo Stack Driving
 - Clear Aperture
 - ms Response Time
 - Flexure Guiding
 - Sub-nanometer Resolution
 - SGS sensor, Close-loop
 - Tripod Structure

➔ Photo & Drawing



➔ Specification

Mirrors.Z12TxTy0101

1	Optional	.NM, Non-magnetic; .HV, High Vacuum Version; .UHV, Ultra High Vacuum Version;
2	Motion Direction	Z, Tx & Ty
3	Footprint × Height	30 × 30 mm
4	Material	Aluminum, Stainless Steel
5	Travel Range (Close-loop Z / Tx / Ty)	12 μm / 1 mrad / 1mrad
6	Resolution (Open-loop Z / Tx / Ty)	0.2 nm / 0.05 μrad / 0.05 μrad
7	Resolution (Close-loop Z / Tx / Ty)	0.4 nm / 0.1 μrad / 0.1 μrad
8	Linearity(Z / Tx /Ty)	0.2%
9	Resonant Frequency	5.5 kHz
10	Stiffness	10 N/μm
11	Sensor Type	SGS
12	Driving Voltage	Max. 150 V
13	Working Temperature	– 20 ~ 80 °C
14	Cable	D-Sub 3W3
15	Controller	MC-Archimedes.N

* For detail drawing and 3D model please contact us.