Fast Tip/Tilt Platform

Short Settling Time and High Dynamic Linearity

S-335

- Tip/tilt angle to 35 mrad, high optical deflection angle to 70 mrad (4°)
- High resonant frequencies for dynamic motion and fast step-and-settle
- Parallel-kinematic design: Two orthogonal tip/tilt axes with one common center of rotation
- Strain sensors for high linearity
- For mirrors to Ø 25.4 mm (1") (can be supplied with mirror on request)

Tip/tilt platform for applications with high demand on the dynamics
Two orthogonal tip/tilt axes with common center of rotation. Parallel kinematic design for identical performance characteristics of both axes. Flexure guides for friction-free motion and high stiffness. ID chip support for fast start-up and simple exchange of tip/tilt platforms and controllers.

PICMA® high-performance drives
Piezoceramic actuators with all-ceramic insulation. Longer lifetime, insensitive to humidity and high operating temperatures.

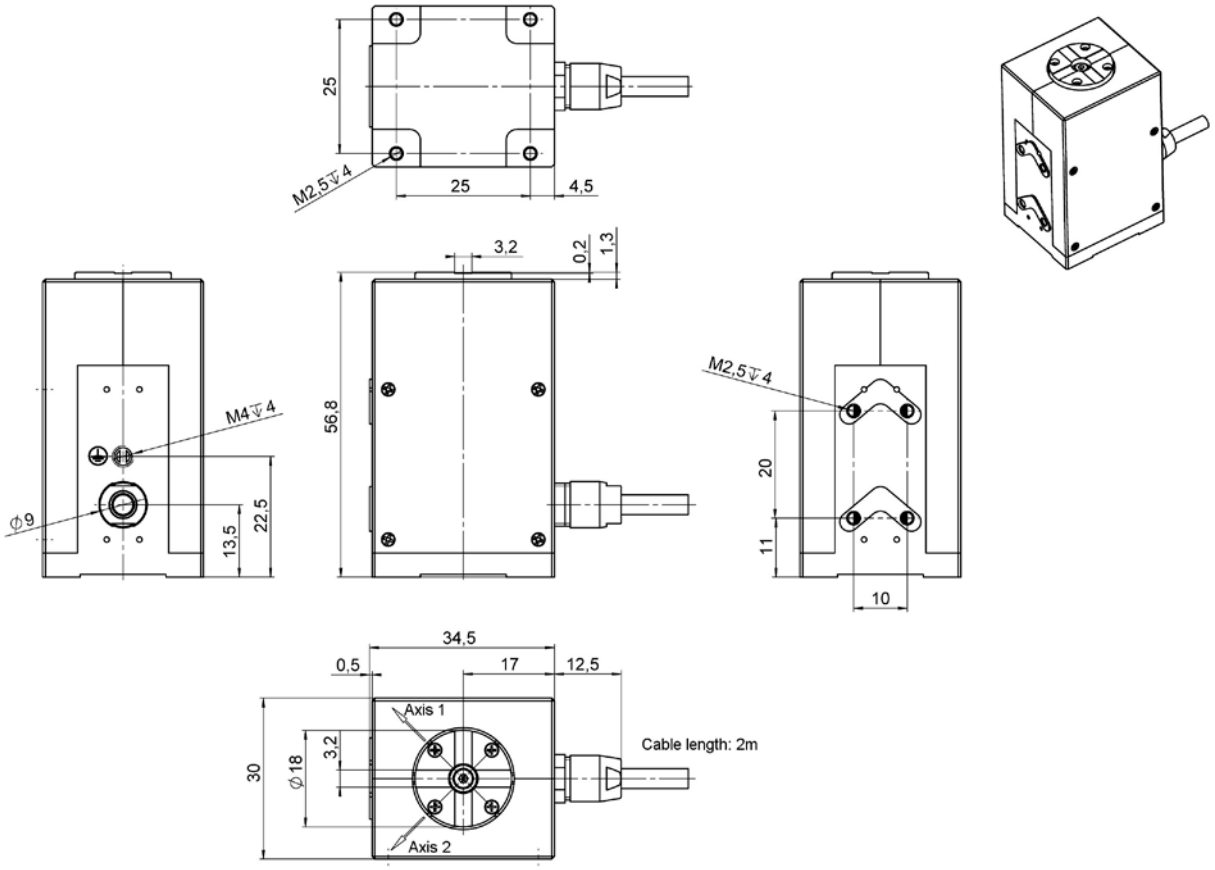
Fields of application
Image processing, image stabilization. Laser beam steering. Scanning microscopy. Materials processing, lithography. Optical filters, optical switches.

Specifications

	S-335.2SH	Unit	Tolerance
Active axes	θ_X, θ_Y		
Motion and positioning			
Integrated sensor	SGS		
Tip/tilt angle, closed loop (static motion at 0 to 120 V)	±17.5	mrad	
Open-loop resolution	0.1	µrad	typ.
Closed-loop resolution	1.0	µrad	typ.
Linearity	0.05 (unidirectional)	%	typ.
Repeatability	1 (bidirectional)	µrad	typ.
Mechanical properties			
Resonant frequency, no load	2	kHz	±20 %
Resonant frequency, under load (with Ø 12.7 mm × 3 mm Zerodur mirror)	1.7	kHz	±20 %
Resonant frequency, under load (with Ø 25.4 mm × 5 mm Zerodur mirror)	0.7	kHz	±20 %
Gap between the center of rotation and platform surface	3.3	mm	±0.25 mm
Drive properties			
Ceramic type	PICMA® P-885		
Electrical capacitance per axis	6.2	µF	±20 %
Miscellaneous			
ID chip functionality	Yes		
Operating temperature range*	-20 to 80	°C	
Material platform	Titanium		
Mass (with cable and connector)	280	g	±5 %
Cable length	2	m	+0.1 m
Sensor/voltage connection	Sub-D 37 connector (m)		

* The specifications apply to 21 °C ±10 °C, specifications may deviate outside of this range. If you have any questions, contact your PI representative.

Drawings



S-335.2SH; Dimensions in mm. Note that the decimal places are separated by a comma in the drawings.

Ordering Information

S-335.2SH
High-dynamics tip/tilt platform, 35 mrad, strain gauge sensors, sub-D connector

Versions with mirror and customs designs on request