

Piezo Tip / Tilt- Platform

HIGH- DYNAMICS FOR MIRRORS AND OPTICS WITH A DIAMETER OF UP TO 100 MM (4 INCH)



S-340

- + Resolution up to 20 nrad, excellent position stability
- + Optical beam deflection to 4 mrad
- + Parallel kinematics for enhanced dynamics and better multi- axis accuracy
- + Just one moving platform with fixed pivot point; prevents a change of the polarization direction
- + Sub- ms response time
- + For mirrors with a diameter up to 100 mm
- + Closed- loop versions for improved linearity
- + Excellent temperature stability

Specifications

	S-340.ASD / ASL	S-340.A0L	Unit	Tolerance
Active axes	θ_x, θ_y	θ_x, θ_y		
Motion and positioning				
Integrated sensor	SGS	-		
Open- loop tip / tilt angle in θ_x, θ_y , -20 to +120 V	2	2	mrad	min.
Closed- loop tip / tilt angle in θ_x, θ_y	2	-	mrad	
Open- loop tip / tilt angle resolution in θ_x, θ_y	0.02	0.02	μ rad	typ.
Closed- loop tip / tilt angle resolution in θ_x, θ_y	0.2	-	μ rad	typ.
Linearity error in θ_x, θ_y	0.1	-	%	typ.
Repeatability in θ_x, θ_y	0.15	-	μ rad	typ.
Mechanical properties				
Unloaded resonant frequency in θ_x, θ_y	1.4	1.4	kHz	± 20 %
Resonant frequency loaded in θ_x, θ_y (with glass mirror, diameter 50 mm, thickness 15 mm)	0.9	0.9	kHz	± 20 %
Resonant frequency loaded in θ_x, θ_y (with glass mirror, diameter 75 mm, thickness 22 mm)	0.4	0.4	kHz	± 20 %
Distance of pivot point to platform surface	7.5	7.5	mm	± 1 mm
Platform moment of inertia	18000	18000	$g \times mm^2$	± 20 %
Drive properties				
Ceramic type	PICMA®	PICMA®		
Electrical capacitance	6 / axis	6 / axis	μ F	± 20 %
Dynamic operating current coefficient	0.45 / axis	0.45 / axis	μ A/ (Hz $\times$ μ rad)	± 20 %
Miscellaneous				
Operating temperature range	-20 to 80	-20 to 80	°C	
Material case	Aluminum	Aluminum		
Material platform	Aluminum; or optionally Steel, Titanium or Invar	Aluminum; or optionally Steel, Titanium or Invar		
Mass	0.355	0.35	kg	± 5 %

Cable length	2	2	m	±10 mm
Sensor / voltage connection	Sub- D connector / LEMO	LEMO		

Recommended controller / amplifier

Closed- loop versions with Sub- D connectors: E-616 servo controller for tip/ tilt mirror systems; with LEMO connector: E-500 system.
Open- loop versions: E-500 System.

Order Information

S-340.A0L

Piezo Tip / Tilt Platform, 2 mrad, Open- Loop, LEMO Connector(s), Aluminum Top Plate

S-340.ASL

Piezo Tip / Tilt Platform, 2 mrad, SGS, LEMO Connector(s), Aluminum Top Plate

S-340.ASD

Piezo Tip / Tilt Platform, 2 mrad, SGS, Sub- D Connector(s), Aluminum Top Plate

Controllers / Drivers / Amplifiers

[E-616 Controller for Multi- Axis Piezo Tip / Tilt Mirrors and Platforms](#)

[E-500 • E-501 Modular Piezo Controller](#)

Accessories

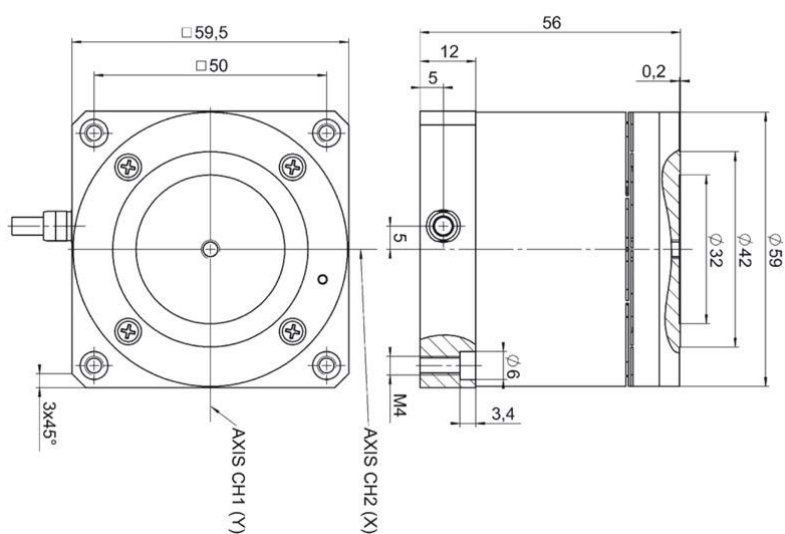
[S-330.DLS Adapter Cable, Sub- D 25 to LEMO Connector](#)

Related Products

[S-330 Piezo Tip / Tilt Platform](#)

[S-334 Piezo Tip/ Tilt Mirror](#)

Drawings / Images



S-340 dimensions in mm