

ECSz5050/NUM

Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	linear
Size and Dimensions	
footprint; height	50x50; 32mm
max installation space	50x50; 40.5mm
weight (aluminium version)	161 g
Materials	
positioner body	Aluminum
actuator	PZT ceramics
connecting wires	copper, jacket: RT: Teflon/PTFE
bearings	stainless steel
Options	
environmental options	/RT
Load (@ ambient conditions)	
maximum load	8 N
maximum dynamic force along the axis	8 N
Coarse Positioning Mode	
travel range (step mode)	8 mm
maximum drive velocity @ 300 K	2 mm/s
typical minimum step size @ 300 K	30 nm
Fine Positioning Mode	
fine positioning resolution	sub-nm
fine linear positioning range @ 300 K	0.8 μm
input DC voltage range @ 300 K	0 - 60 V

repeatability of step sizes typically 5 % over full range typ. forward / backward step asymmetry 10 % Position Encoder readout mechanism optoelectronic sensor encoded travel range entire travel sensor power (when measuring) 300 mW wavelength of illumination 870 nm sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy < 0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K Connectors and Feedthroughs	Accuracy of Movement	
typ. forward / backward step asymmetry 10 % Position Encoder readout mechanism optoelectronic sensor encoded travel range entire travel sensor power (when measuring) 300 mW wavelength of illumination 870 nm sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy < 0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	repeatability of step sizes	typically 5 % over full range
readout mechanism optoelectronic sensor encoded travel range entire travel sensor power (when measuring) 300 mW wavelength of illumination 870 nm sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy <0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	typ. forward / backward step asymmetry	
encoded travel range entire travel sensor power (when measuring) 300 mW wavelength of illumination 870 nm sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy <0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	Position Encoder	
sensor power (when measuring) wavelength of illumination 870 nm sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy Vorking Conditions mounting orientation minimum pressure (/RT) temperature range (/RT) 273K 328K	readout mechanism	optoelectronic sensor
wavelength of illumination 870 nm sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy < 0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	encoded travel range	entire travel
sensor resolution 1 nm repeatability 100 nm (bidirectional) absolute accuracy < 0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K328K	sensor power (when measuring)	300 mW
repeatability 100 nm (bidirectional) absolute accuracy < 0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	wavelength of illumination	870 nm
absolute accuracy < 0.01% of travel range Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	sensor resolution	1 nm
Working Conditions mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	repeatability	100 nm (bidirectional)
mounting orientation arbitrary minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	absolute accuracy	< 0.01% of travel range
minimum pressure (/RT) ambient temperature range (/RT) 273K 328K	Working Conditions	
temperature range (/RT) 273K 328K	mounting orientation	arbitrary
	minimum pressure (/RT)	ambient
Connectors and Feedthroughs	temperature range (/RT)	273K 328K
	Connectors and Feedthroughs	
cable 50 cm cable with connector	cable	50 cm cable with connector
connector type 14-pole connector	connector type	14-pole connector
Versions	Versions	
/RT version 1012096	/RT version	1012096

Technical Drawings





