

# ECSx5050/StSt/HL/NUM/UHV

1013900

## Technical Specifications

<b>Size and Dimensions</b>	
footprint; height	50 mm x 50 mm; 9.5 mm
maximum installation space	50 mm x 81.6 mm; 9.5 mm
weight (stainless steel version)	149 g
height	9.5 mm
<b>Materials</b>	
positioner body	stainless steel
actuator	PZT ceramics
connecting wires	copper, jacket: RT: PTFE, HV/UHV: fiberglass
<b>Coarse Positioning Mode</b>	
travel range (step mode)	30 mm
maximum drive velocity @ 300 K	4.5 mm/s
input voltage range	0 - 45 V
<b>Fine Positioning Mode</b>	
fine linear positioning range @ 300 K	1.6 µm
fine positioning resolution	sub-nm
input DC voltage range	0 - 45 V
<b>Position Encoder</b>	
readout mechanism	optoelectronic sensor
encoded travel range	
sensor resolution	1 nm
sensor power (when measuring)	300 mW
repeatability	50 nm (bidirectional)
<b>Load (@ ambient conditions)</b>	
maximum load	2 kg
maximum dynamic force along the axis	5 N
<b>Error Motion</b>	
roll E_AX	specified* 1.25 mrad (expected** <0.25 mrad)
pitch E_BX	specified* 1.75 mrad (expected** <1 mrad)
yaw E_CX	specified* 1.25 mrad (expected** <0.35 mrad)
y-Straightness E_YX	specified* 5 µm (expected** <2 µm)
z-Straightness E_ZX	specified* 9 µm (expected** <5 µm)
*	specified: guaranteed for every positioner
**	expected: typically met by most positioners
<b>General Specifications</b>	
environment	ultra-high vacuum

