

ECR5050

nanoprecise open loop stepper rotator for endless rotation in both directions

Technical Specifications

Technology		Compatibility with Electronics	
travel mechanism	inertial piezo drive	ECC100 piezo positioning controller	all versions
Size and Dimensions		Working Conditions	
footprint; height	50 x 50; 13.5 mm	mounting orientation	arbitrary
maximum size	50 x 50; 13.5 mm	temperature range (/RT, /HV, /UHV)	0 .. 100 °C
weight (aluminum/stainless steel)	100/215 g	max. bake out temperature (/UHV)	150 °C
Coarse Positioning Mode		minimum pressure (/RT)	1E-4 mbar
input voltage range	0 .. 100 V	minimum pressure (/HV)	1E-8 mbar
typical actuator capacitance	1.05 µF	minimum pressure (/UHV)	5E-11 mbar
travel range (step mode)	360 ° endless	Accuracy of Movement	
typical minimum step size	0.2 m°	repeatability of step sizes	typically 5 % over full range
maximum drive velocity (@ 45 V)	10 °/s	forward / backward step asymmetry	10%
Fine Positioning Mode		wobble	6 mrad
input voltage range	0 .. 60 V	Position Encoder	
fine positioning range	0 .. 6 m°	encoder options	-
fine positioning resolution	µ°	Connectors and Feedthroughs	
Materials		/RT Versions	all /HV, /UHV Versions
positioner body (/RT)	aluminum	connector type	14-pole connector
positioner body (/HV, /UHV)	stainless steel		50 cm cable with connector
actuator	PZT ceramics	electrical feedthrough solution	---
connecting wires	insulated twisted pair, copper		15-pin D-Sub connector
bearings	stainless steel		50 cm cable with connector
Load (@ ambient conditions)			VFT/HV, VFT/UHV
	mounting orientation: axis vertical		
maximum load	20 N (2 kg)		
maximum dynamic torque around axis	4 Ncm		
Mounting			
from the top	4 through holes dia 2.2 mm, cntrbr. f. M2		
from the bottom	4 threads for M2.5 x 2 mm		
load on top	8 threads M2 x 2.3 mm		
load at the front	L-bracket		
Article Numbers			
/RT Version Aluminum	1008467		
/HV Version Stainless Steel	1008468		
/UHV Version Stainless Steel	1008469		

Technical Drawings

