

# ECGp5050

nanoprecise open loop stepper goniometer providing  $\Phi$ -positioning

## Technical Specifications

<b>Technology</b>		<b>Compatibility with Electronics</b>	
travel mechanism	inertial piezo drive	ECC100 piezo positioning controller	all versions
<b>Size and Dimensions</b>		<b>Working Conditions</b>	
footprint; height	50 x 55.4; 17 mm	mounting orientation	arbitrary
maximum size	50 x 61.1; 19.4 mm	temperature range (/RT, /HV, /UHV)	0 .. 100 °C
distance center of rotation to bottom	94 mm	max. bake out temperature (/UHV)	150 °C
weight (aluminum/stainless steel)	137 / 247 g	minimum pressure (/RT)	1E-4 mbar
<b>Coarse Positioning Mode</b>		minimum pressure (/HV)	1E-8 mbar
input voltage range	0 .. 60 V	minimum pressure (/UHV)	5E-11 mbar
typical actuator capacitance	1.05 $\mu$ F	<b>Accuracy of Movement</b>	
travel range (step mode)	10°	repeatability of step sizes	typically 5 % over full range
typical minimum step size	0.1 m°	forward / backward step asymmetry	10%
maximum drive velocity (@ 45 V)	3 °/s	<b>Position Encoder</b>	
<b>Fine Positioning Mode</b>		encoder options	-
input voltage range	0 .. 100 V	<b>Connectors and Feedthroughs</b>	
fine positioning range	0 .. 1.1 m°	<b>/RT Versions</b>	<b>all /HV, /UHV Versions</b>
fine positioning resolution	$\mu$ °	connector type	14-pole connector
<b>Materials</b>		electrical feedthrough solution	50 cm cable with connector
positioner body (/RT)	aluminum		15-pin D-Sub connector
positioner body (/HV, /UHV)	stainless steel		50 cm cable with connector
actuator	PZT ceramics		VFT/HV, VFT/UHV
connecting wires	insulated twisted pair, copper		
bearings	stainless steel		
<b>Load (@ ambient conditions)</b>		<b>mounting orientation: axis horizontal</b>	
maximum load	10 N (1 kg)		
maximum dynamic force along the axis	1 N		
<b>Mounting</b>			
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	12 threads M2 x 2.3 mm		
load at the front	L-bracket		
<b>Article Numbers</b>			
/RT Version Aluminum	1006222		
/RT Version Stainless Steel	1006224		
/HV Version Stainless Steel	1006226		
/UHV Version Stainless Steel	1006228		

## Technical Drawings

