

# ANGp50

compact goniometer for  $\Phi$ -positioning

Technology			
travel mechanism	inertial piezo drive		
Size and Dimensions			
footprint; height	15 x 15; 10 mm		
maximum size	19.6 x 15; 10.4 mm		
distance center of rotation to bottom	50 mm (above center)		
Coarse Positioning Mode			
travel (step mode)	5.8°		
typical minimum step size	0.1 m° @ 300 K, 0.02 m° @ 4 K		
maximum speed (@ 300 K, no load)	approx. 1 °/s		
Fine Positioning Mode			
scan range	no fine positioning capability		
Materials (non-magnetic)			
positioner body	Titanium (other materials on request)		
actuator	PZT ceramics		
connecting wires	insulated twisted pair, Cu		
weight	7 g		
Load			
maximum vertical load	25 g		
maximum static forces along the axis	1.5 N		
maximum dynamic force along the axis	1 N		
maximum torque on the axis	3 Ncm		
Mounting			
frontside mounting	two through holes for M1.6		
backside mounting	two threads M2 x 2.5 mm		
load mounting	four threads M1.6 x 2.5 mm		
Article Numbers			
/RT Version	1002593	/LT Version	1002403
/HV Version	1002591	/LT/HV Version	1002594
/UHV Version	1002592	/LT/UHV Version	1002595
Compatibility with Electronics			
ANC106 piezo step controller	/RT version only		
ANC300 piezo positioning controller	all versions		

Working Conditions	
mounting orientation	axis perpendicular to gravity
magnetic field range	0 .. 31 T
temperature range (/RT, /HV, /UHV)	0 .. 100 °C
temperature range (/LT, /LT/HV, /LT/UHV)	10 mK .. 373 K
max. bake out temperature (/UHV, /LT/UHV)	150 °C
minimum pressure (/RT, /LT)	1E-4 mbar
minimum pressure (/HV, /LT/HV)	1E-8 mbar
minimum pressure (/UHV, /LT/UHV)	5E-11 mbar

Connectors and Feedthroughs	/RT, /LT Versions	all /HV, /UHV Versions
connector type	2-pole pin plug, $\varnothing$ 0.5 mm, d = 2 mm,	2-pole pin plug (PEEK), $\varnothing$ 0.5 mm, d = 2 mm,
connector type	30 cm cable with connector	30 cm cable with connector
electrical feedthrough solution	COC230/LT	COC230/HV, COC230/UHV

Temperature Dependent Data	@ 300K	@ 4K (only /LT versions)
input voltage range	0 .. +100 V	0 .. +100 V
typical actuator capacitance	525 nF	75 nF
typical step size (min .. max)	0.1 .. 3 m°	0.02 .. 0.5 m°
fine positioning range	---	---

Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
forward / backward step asymmetry	typically 5 %

Position Encoder	
encoder options	---

