

ANSxy50

compact xy-scanner

Technology			
travel mechanism	piezo driven lever arm mechanism		
Size and Dimensions			
footprint; height	15 x 15; 7 mm		
Fine Positioning Mode			
scan range	30 x 30 μm^2 @ 300 K, 12 x 12 μm^2 @ 4 K		
scan resolution	sub-nm resolution		
Coarse Positioning Mode			
travel (step mode)	no coarse positioning capability		
Materials (non-magnetic)			
positioner body	Titanium (other materials on request)		
actuator	PZT ceramics		
connecting wires	2 twisted pairs, Cu wires		
weight	7 g		
Load			
maximum vertical load	50 g		
maximum torque on the axis	10 Ncm		
maximum bandwidth	100 Hz		
Mounting			
frontside mounting	two through holes for M1.6		
backside mounting	---		
load mounting	four threads M1.6		
Article Numbers			
/RT Version	1001091	/LT Version	1001026
/HV Version	1001090	/LT/HV Version	1001093
/UHV Version	1000543	/LT/UHV Version	1001089
Compatibility with Electronics			
ANC300 piezo positioning controller	all versions		
ANC350 piezo controller	all versions		

Working Conditions	
mounting orientation	scanner moving horizontally
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, Test @ 4.2 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	two 2-pole pin plugs, \varnothing 0.5 mm, d = 2 mm, two 2-pole pin plugs (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 .. +60 V 0 .. +150 V
typical actuator capacitance	1400, 1400 nF 200, 200 nF
typical step size (min .. max)	--- ---
fine positioning range	30 x 30 μm^2 12 x 12 μm^2
Accuracy of Movement	
repeatability	typically 0.1 %
resonance frequency (typically higher than)	---
creep	typically 0.5 - 0.8 % per decade of time
linearity	typically 5 - 10 %

