

ANSz100

large range z-scanner

Technology			
travel mechanism	piezo driven lever arm mechanism		
Size and Dimensions			
footprint; height	24 x 24; 10 mm		
Fine Positioning Mode			
scan range	24 µm @ 300 K, 15 µm @ 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	twisted pair, Cu wires		
weight	19 g		
Load			
maximum vertical load	100 g		
maximum torque on the axis	20 Ncm		
maximum bandwidth	100 Hz		
Mounting			
frontside mounting	two through holes for M2		
backside mounting	two threads M2.5 x 5 mm		
load mounting	four threads M2 x 3 mm		
Article Numbers			
/RT Version	1001360	/LT Version	1001359
/HV Version	1001361	/LT/HV Version	1001364
/UHV Version	1001362	/LT/UHV Version	1001363
Compatibility with Electronics			
ANC200 piezo scan controller	all versions		
ANC300 piezo positioning controller	all versions		
ANC350 piezo controller	all versions		

Working Conditions		
mounting orientation	scanner moving vertically	
magnetic field range	0 .. 31 T	
temperature range (/RT, /HV, /UHV)	0 .. 100 °C	
temperature range (/LT, /LT/HV, /LT/UHV)	1 K .. 300 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	2-pole pin plug, ø 0.5 mm, d = 2 mm,	two female conn., for pin ø 1 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 nF	200 nF
typical step size (min .. max)	---	---
fine positioning range	24 µm	15 µm
Accuracy of Movement		
repeatability	typically 0.1 %	
resonance frequency (typically higher than)	0	
creep	typically 0.5 - 0.8 % per decade of time	
linearity	typically 5 - 10 %	

