

ANPz51

Technical Specifications

Technology	
travel mechanism	inertial piezo drive
positioner type	linear
Size and Dimensions	
footprint; height	15x15; 13.5mm
max installation space	15x15; 16mm
weight	11 g
Materials	
positioner body	titanium (upgrade option: copper beryllium)
actuator	PZT ceramics
connecting wires	insulated twisted pair, copper
Options	
environmental options	/HV, /LT, /LT/HV, /LT/UHV, /RT, /UHV
Compatibility with Electronics	
ANC300 piezo positioning controller	ANM150, ANM300
Load (@ ambient conditions)	
maximum torque on the axis	10 Ncm
maximum load	0.5 N
maximum dynamic force along the axis	1 N
Coarse Positioning Mode	
input voltage range	0 - 60 V
typical actuator capacitance @ 300 K	1.11 μ F
typical actuator capacitance @ 4 K	0.15 μ F
travel range (step mode)	2.5 mm
typical minimum step size @ 300 K	50 nm
typical minimum step size @ 4 K	10 nm
maximum drive velocity @ 300 K	approx. 1 mm/s
Fine Positioning Mode	
fine positioning range @ 300 K	5 μ m
fine positioning range @ 4 K	0.8 μ m
fine positioning resolution	sub-nm
input DC voltage range @ 300 K	0 - 100 V
input DC voltage range @ 4 K	0 - 150 V

Accuracy of Movement	
repeatability of step sizes	typically 5 % over full range
forward / backward step asymmetry	typically 5 - 10 % depending on load
Mounting	
no. of threads at the bottom	2
type of screw at the bottom	M2 x 5 mm
no. of threads for load on top	4
type of screw for load on top	M1.6 x 2 mm
Working Conditions	
mounting orientation	axis vertical
magnetic field range	0 - 31 T
minimum pressure (/RT)	1E-4 mbar
minimum pressure (/HV)	1E-8 mbar
minimum pressure (/UHV)	5E-11 mbar
temperature range (/RT)	273K .. 373K
temperature range (/LT)	10mK .. 373K
Connectors and Feedthroughs	
cable	30 cm cable with connector
electrical feedthrough solution	VFT/LT
Versions	
/RT version	1002229
/HV version	1002225
/UHV version	1002230
/LT version	1007706
/LT/HV version	1002227
/LT/UHV version	1002228

Technical Drawings

