

# Performance Test Protocol

## P-725.4CD - Linearity



File: 106022303\_linearity\_z.cal

Protocol No.: FM 7.5-16 A4

09:46 2017-04-21

### Order Info

Customer	US San Diego
Customer Ref No.	
PI Order No.	R1703-80

### System Setup

Stage	P-725.4CD
Ser. No.	106022303
Commanded Axis	Z
Measured Axis	Z
Feedback Sensor	CAP SENSOR
Sensor Bandwidth	
Design	Standard
Nominal Oper. Voltage	100V
Nominal Expansion	400um
Controller	E-665.CR SN 106017865
Calibration Type	Standard, via digital interface

### Measurement Setup

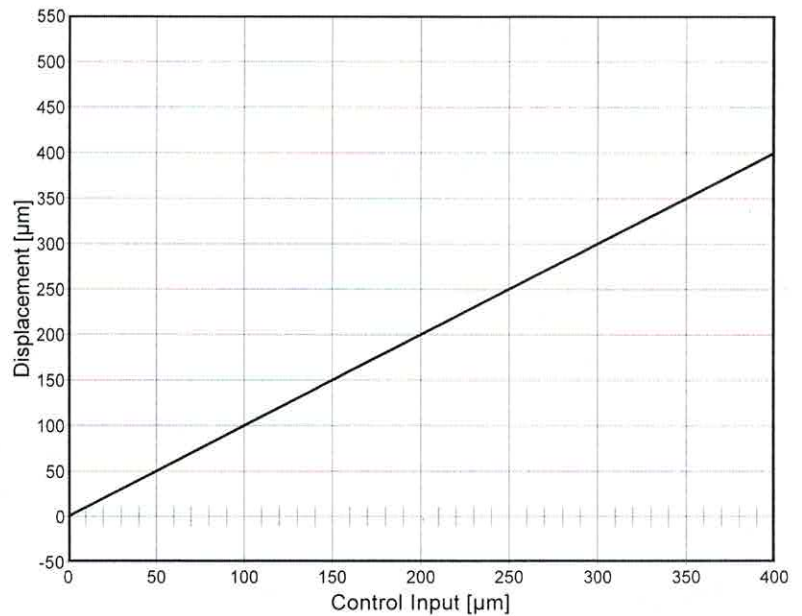
Measurement Device	Zygo ZMI 1000
Meas. Device Type	Laser Interferometer
Temperature	24.0 °C
Air Pressure	1016.0 mbar
Humidity	28.0 %
Measurement Date	15:38:58, 2017-04-20
Meas. Program	PZTCalib 7.6.0.1
Examiner	SV
Min. Ctrl Input	0.0 µm
Max. Ctrl Input	400.0 µm
Step Size	25.0 µm
Time Delay	0.5 s

### Measurement Results

Ctrl In [µm]	Output + [µm]	nonlin [µm]	nonlin [%]
0.0000	0.0000	0.0000	0.0000
25.0000	25.0079	0.0070	0.0018
50.0000	49.9704	-0.0313	-0.0078
75.0000	75.0338	0.0312	0.0078
100.0000	99.9361	-0.0674	-0.0168
125.0000	124.9561	-0.0483	-0.0121
150.0000	150.0200	0.0147	0.0037
175.0000	174.9188	-0.0873	-0.0218
200.0000	200.0125	0.0055	0.0014
225.0000	224.9193	-0.0886	-0.0221
250.0000	250.0362	0.0274	0.0069
275.0000	275.1170	0.1074	0.0268
300.0000	300.1012	0.0908	0.0227
325.0000	324.9491	-0.0623	-0.0156
350.0000	349.9438	-0.0684	-0.0171
375.0000	375.0705	0.0574	0.0143
400.0000	400.0140	0.0000	0.0000

Control Function:  
Expansion = 1.000035\*Ctrl\_In + 0.0000 µm

### Displacement Curves



### Linearity

