

FBS100100

Linear Stage



Mechanical Design Characteristics

MODEL	FBS100100
Stage Plate Material	Aluminum — Black Anodized
Motor	HR8 Piezo, ultrasonic standing wave
Bearing Type	Precision crossed rollers with anti-migration device
Encoder	Linear optical encoder with gold tape scale
Cable Lengths (m)	3m
MTBF (hours)	30,000
Stage Mass (g)	1811g
Carriage Moving Mass (g)	710g
RoSH	Compliant
Vacuum Compatible Options	High Vacuum (to 10^{-7} Torr) / UHV (to 10^{-10} Torr) available

Performance Specifications

MODEL	FBS100100
Travel Range (mm)	100mm
Encoder Resolution	Standard 100nm Optional 10nm
Bi-directional Repeatability	Standard 1 μ m Optional 100nm
Absolute Accuracy	Standard 10 μ m (Error mapping available) Optional 7 μ m
Minimum Incremental	AC Mode 100nm
Move Convergence	UHR Mode 5nm DC Mode <1nm
Maximum Velocity	250mm/sec
Straightness & Flatness	$\pm 4\mu$ mm
Pitch & Yaw	$\pm 50\mu$ rad
Load Capacity - Horizontal	2.7kg
Load Capacity - Vertical	0.4kg
Dynamic Stall Force	32N
Motor Stiffness	3N/ μ
Holding Force without Power	28N

