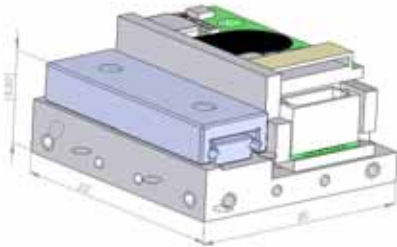


Linear Piezo Stage → preliminary data sheet

LPS-20x

- PiezoMotor driven system
- Travel range 8
- Bidirectional repeatability down to 20nm
- Maximum operation speed 10mm/sec
- Mounted *zero drift encoder* with 10 nm resolution
- Force: 10N
- simple but and robust design
- High stiffness and fast response.
- Material: Stainless steel,
- Vacuum compatible,
- most efficient



The LPS-20x is a low profile linear stage with a mounted customized PiezoMotor and linear encoder systems developed by NANOS Instruments. The stiff and robust design with ball roller bearings in steel guarantee a smooth and highly accurate movement in the range of sub nanometers. This stage is high precision and strong system. The magnetic sensor only generates 90mW (15mW as zerodrift) in the stage. This results in practically zero drift with acceptable resolution from the first minute. This stage is available in several dimensions. It fits together with the other stages like the LPS30

Specifications

LPS_20x with the dimension 20x Lx14mm					
Lenth L (mm)	22	30			
Travel range (mm)	8	12			
Force (N)	10	10			
Open loop stiffness (N/μm)	3	3			
Max operation speed (mm/s)	10	10			
fast movement** (mm/s)	50	50			
Hybrid encoder V2 (nm) with ABZ, 18mA @ 5V ***	61 (10)	61(10)			
Hybrid encoder V3 (nm) with ABZLL, 18mA @ 5V ***	61 (10)	61(10)			
Hybrid encoder V4 (nm) with ABZ, 3mA @ 5V ****	10	10			
Bidirectional Repeatability (Encodercounts)	2	2			

** Fast movement is possible for a short time with the LEGS-Drive®-Ultra Controller
note the maximum Encoder sending frequency at highest resolution