

2 Multi Degrees of Freedom

27-38

2.1



Free XD series

Multi Degrees of Freedom, Long Travel Range, Parallel Kinematic

27

2.1.1 Z Tx Ty
Free3D.ZTxTy

29

2.1.2 X Y Z · Tx Ty Rz
Free6D.3-2.150, Free6D.3-2.070

30

2.2



Carrier series

Carrier.L7550.XY, Carrier.L1010.XY

33

2.3



Piezo Motor Controller

MC-Newton.S

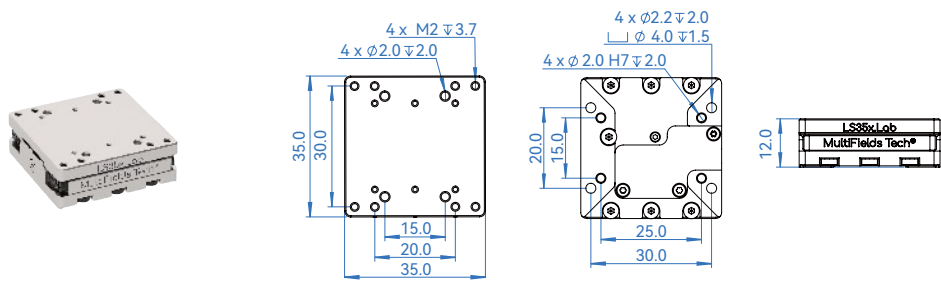
37

“Lab series” Linear Stage — LS35x.Lab

Balance of Speed, Travel Range and Resolution, Quiet Motion

- ➔ Feature
- Sub nanometer tuning resolution
 - UHV, Non-magnetic
 - Millions cycle life time
- Sub nanometer tuning resolution

➔ Photo & Drawing



➔ Specification		LS35x.Lab	LS35x.Lab.E
1	Optional	.HV, High Vacuum Version; .UHV, Ultra High Vacuum Version; .NM, Non-magnetic Version;	/
2	Footprint x Height	35 x 35 x 12 mm	
3	Material	Standard, .HV, .UHV Stainless Steel; NM, Ti	Stainless Steel
4	Mass	Standard, .HV, .UHV 85 g; NM, 50g	85 g
5	Travel Range	20 mm	
6	Driving Frequency	Max. 20 kHz	
7	Cable & Connector	Standard/HV, shield cable and D-Sub15 plug; UHV, Kapton, PEEK D-Sub15	
8	Max. Velocity	~ 20 mm/s*(Reduce to 10% in Vacuum)	
9	Minimum Incremental Motion(Close-loop)	10 nm (.adv 5 nm)	100 nm
10	Unidirection Repeatability	±100 nm	±300 nm
11	Max. Push Force	2 N (High Force version 4N)	2 N
12	Holding Force	5 N	
13	Max. Payload (horizontal mounting)	1kg	
14	Max. Payload (vertical mounting)	100 g (High Force version 250g)	
15	Sensor Type	Optical Sensor	
16	Sensor Resolution	Standard 2 nm; .adv 0.5 nm;	50 nm
17	Controller	MC-Newton.S series	

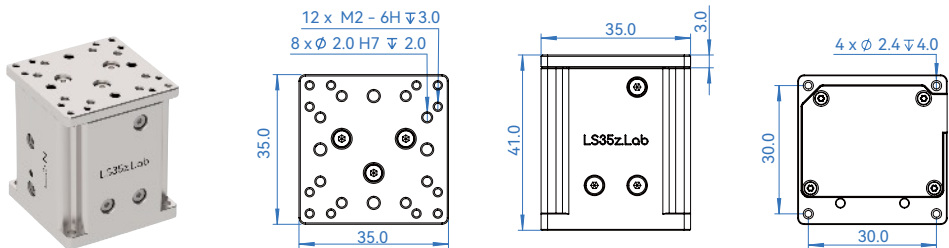
* For detail drawing and 3D model please contact us.

“Lab series” Elevation Stage — LS35z.Lab

Balance of Speed, Travel Range and Resolution, Quiet Motion

- ➔ Feature

 - Quiet Motion
 - Self-lock
- ➔ Photo & Drawing
- Optical Sensor Inside
 - Stackable with other Lab series stage
- Nanometer Resolution



➔ Specification

		LS35z.Lab
1	Optional	.HV, High Vacuum Version; .UHV, Ultra High Vacuum Version; .NM, Non-magnetic Version;
2	Footprint x Height	35 x 35 x 41 mm
3	Material	Standard .HV, .UHV Stainless Steel; .NM, Ti
4	Mass	200 g
5	Travel Range	10 mm
6	Driving Frequency	Max. 20 kHz
7	Cable & Connector	Standard/HV, shield cable and D-Sub15 plug; UHV, Kapton, PEEK D-Sub15
8	Max. Velocity	~ 10 mm/s*(Reduce to 10% in Vacuum)
9	Minimum Incremental Motion(Close-loop)	10 nm (.adv 5 nm)
10	Unidirection Repeatability	±150nm
11	Max. Payload	500 g
12	Pitch/Yaw	0.3 mrad
13	Sensor Type	Optical Sensor
14	Sensor Resolution	Standard 2 nm; .adv 0.5 nm;
15	Controller	MC-Newton.S series

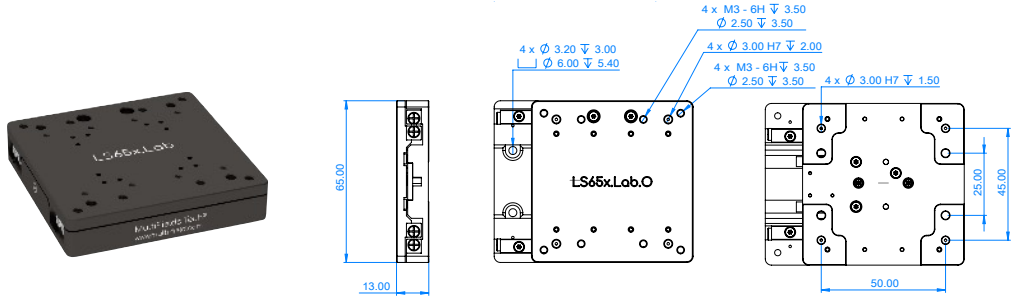
For detail drawing and 3D model please contact us.

“Lab series” Linear Stage — LS65x.Lab

Balance of Speed, Travel Range and Resolution, Quiet Motion

- ➔ Feature
- UHV, Non-magnetic
 - Nanometer resolution
 - Millions cycle life time

➔ Photo & Drawing



➔ Specification		LS65x.Lab	LS65x.Lab.E
1	Optional	.HV, High Vacuum Version; .UHV, Ultra High Vacuum Version; .NM, Non-magnetic Version;	/
2	Footprint x Height	65 × 65 × 13 mm	
3	Material	Standard, .NM Aluminum; .HV .UHV Ti	Aluminum
4	Mass	160 g	
5	Travel Range	30 mm	
6	Driving Frequency	Max. 20 kHz	
7	Cable & Connector	Standard/HV, shield cable and D-Sub15 plug; UHV, Kapton, PEEK D-Sub15	
8	Max. Velocity	~ 20 mm/s*(Reduce to 10% in Vacuum)	
9	Minimum Incremental Motion(Close-loop)	10 nm (.adv 5 nm)	100 nm
10	Unidirection Repeatability	±100 nm	±300 nm
11	Max. Push Force	2 N (4N optional)	2 N
12	Holding Force	5 N	
13	Pitch/Yaw	0.3 mrad	
14	Max. Payload (horizontal mounting)	2 kg	
15	Max. Payload (vertical mounting)	100 g (higher force up to 250 g optional)	
16	Sensor Type	Optical Sensor	
17	Sensor Resolution	Default 2 nm; .adv 0.5 nm;	50 nm
18	Controller	MC-Newton.S series	

* For detail drawing and 3D model please contact us.