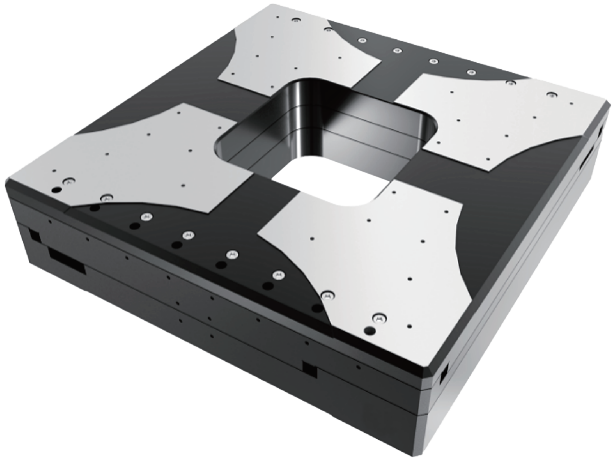
PLA90 Series

Flat XY stage with Aperture



Features

- Non-contact direct-drive linear motor drive for high dynamic response
- Optical linear encoder for high precision
- High stiffness anti-creep cross roller guide
- Excellent positioning accuracy and dynamic performance
- Large hollow aperture

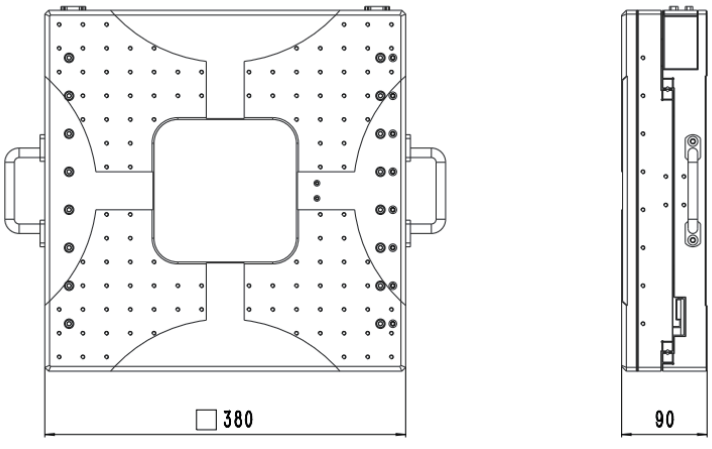
Description

The stage adopts XY unibody, orthogonality design with ultra-thin profile and large aperture size. High-precision, high-stiffness linear motion in horizontal X/Y axis with 2 degrees of freedom.

Applications

- Semiconductor
- Flat panel display
- Optical fiber alignment
- Biomedicine
- Double-sided processing
- Genetic detection

Interface Definition



*Interface dimensions from PLA90

Limotion Systems
라 이 모 션

Technical Specifications

	PLA90-100	PLA90-200	PLA90-300
Travel range	±50 mm	±100 mm	±150 mm
Max. velocity	1 m/s	1 m/s	1 m/s
Max. acceleration	1 g	1 g	1 g
Accuracy	±0.5 μm		
Bidirectional repeatability	±0.25 μm		
Straightness	±2 μm	± 2μm	±2 μm
Flatness	±2 μm	±2 μm	±2 μm
Pitch	40 urad (8.2 arcsec)	50 urad (10.3 arcsec)	60 urad (12.4 arcsec)
Roll	30 urad (6.2 arcsec)	40 urad (8.2 arcsec)	50 urad (10.3 arcsec)
Yaw	20 urad (4.1 arcsec)	30 urad (6.2 arcsec)	40 urad (8.2 arcsec)
Orthogonality	97 urad (20 arcsec)	97 urad (20 arcsec)	97 urad (20 arcsec)
Mechanical properties			
Moving mass_Upper axis	13.8 Kg	8.6 Kg	19.8 Kg
Moving mass_Lower axis	5.8 Kg	16.8 Kg	11.2 Kg
Max. load	20 Kg	25 Kg	45 Kg
Stage mass	11 Kg	21 Kg	34 Kg
Dimensions	380 mmX380 mmX90 mm	380 mmX380 mmX90 mm	410 mmX410 mmX90 mm
Material	Aviation aluminum,black anodized		

Customization Information

The series is configured with options that can be selected based on the user's actual application. Options include travel, encoder, and more.

Table 1 Travel Options

-100	100mm travel stroke platform with linear motors and limit
-200	200mm travel stroke platform with linear motors and limit
-300	300mm travel stroke platform with linear motors and limit

Table 2 Encoder Options

-S1	Incremental analog optical linear encoder, 1Vpp
-S2	Incremental digital optical linear encoder, RS422
-S3	Absolute optical linear encoder, BISS