



Multi-Axis Photonics Alignment Solutions



Nanopositioning for Precision Photonics Alignment

Our photonics alignment systems provide three to six degree-of-freedom nanometer precision alignment. Test and assembly applications can easily be accomplished with our advanced Automation1 control platform.

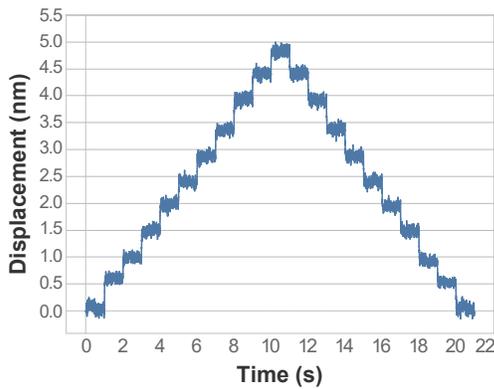
Our ANT-series nanopositioning stages are the building blocks for high performance photonics alignment applications where low insertion loss is a key requirement. Available in a variety of configurations, they are best-in-class in combining resolution, accuracy, repeatability, and production-level reliability.

Accelerating Your Lab to Fab Journey

We're a full automation partner, offering products, subsystems, full systems and engineering services to help meet your application needs. We provide lab-grade precision at production-level speed and reliability allowing you to scale faster and meet your production goals.

Key Features:

- ◆ Delivers **INDUSTRY-LEADING MINIMUM INCREMENTAL MOTION** of 0.5 nm in XYZ & 0.02 arc sec in $\theta_x\theta_y\theta_z$
- ◆ Available with **FULLY AUTOMATED ROUTINES** able to handle complex single & dual fiber alignment
- ◆ Integrates **HIGH RESOLUTION ANALOG INPUT** for optical power meter directly into the alignment process
- ◆ Makes motion at the probe tip **EASY TO CONTROL & PROGRAM** with virtual pivot point
- ◆ **COORDINATES MOTION EASILY ACROSS YOUR COMPLETE SYSTEM** of wafer, electrical probe, microscope & assembly tooling positioners



Industry-leading performance

Our second-generation ANT-series nanopositioning stages expand our high-performance leadership in the photonics industry, joining our photonics alignment and FiberMaxHP systems. With 0.5 nm minimum step, <0.5 nm in-position stability and high-resolution closed loop 20 kHz servo control, ANT nanopositioners are unmatched in terms of performance and reliability.

User-friendly precision motion control

Our Automation1 platform is the most user-friendly interface available for precision motion control. Tools like our Machine Setup wizard take the complexity out of the precision servo tuning required in photonics for high precision and stability in alignment processes.



Accelerate your lab to fab journey

Complete your photonics automation system with additional motion solutions for wafer and die positioning as well as microscope and process tooling automation. Aerotech solutions have the flexibility and performance of lab-based systems with 24/7 production reliability.

ANT-SERIES SPECIFICATIONS

Mechanical Specifications	ANT-SERIES NANOPositionING STAGES					
	X	Y	Z	A (θ_x)	B (θ_y)	C (θ_z)
Travel	25-210 mm	25-210 mm	25-160 mm	20 deg	20 deg	20 deg
Resolution (Minimum Incremental Motion)	0.5 nm	0.5 nm	0.5 nm	0.02 arc sec	0.02 arc sec	0.02 arc sec
Bidirectional Repeatability, pk-pk	± 75 nm	± 75 nm	± 75 nm	± 3 arc sec	± 3 arc sec	± 3 arc sec
Maximum Speed	500 mm/s	500 mm/s	200 mm/s	150 deg/s	150 deg/s	150 deg/s



Reference our ANT nanopositioning stages and FiberMAX series data sheets for full specifications by using the QR code or visiting us at:

AEROTECH.COM