

# Datasheet

## Compact Fiber Delivery System - picoFLEX™

The picoFLEX™ is a robust and very compact laser beam delivery system for precision measurement applications. Designed around pre-focussed and integrated optical assemblies, the fiber is automatically mode-matched to your laser parameters to achieve transmission efficiencies greater than 60%.

Single-mode fiber enables the user to decouple the laser beam astigmatism and dynamic beam pointing instability from the measurement application. It provides integrated spatial filtering for excellent beam quality. Fiber also provides a convenient packaging solution by relocating sources of heat and by removing bulk components thereby reducing the number of optical surfaces from the beam alignment scheme.

The kinematic design of the kineMATIX® coupler enables easy alignment and true 'Plug & Play' benefits for single mode and polarization-maintaining fiber designs. Sub-micron repeatability and sub-microradian stability mean systems can be aligned once only and are stable for multiple remove and insert operations, thus providing true modularity for instrument designs.

Qioptiq fiber systems can be customized for exacting OEM specifications. Outputs can be configured to produce pure Gaussian profiles with extremely low wavefront error ( $M^2 \leq 1.1$ ), as well as engineered spatial profiles and shapes.

In the same way, the kineMATIX manipulator mount and fiber output mechanics can be customized to better suit the application. Contact us to discuss your requirements.

### Product feature highlights:

- TEM<sub>00</sub> output - diffraction limited, spatially filtered excellent Gaussian output beam ( $M^2$  typical 1.1)
- Extremely stable output beam, with world's smallest beam wander at  $\leq 1 \mu\text{rad}/^\circ\text{C}$
- True modularity for instrument design: "Plug & Play"
- Highly repeatable performance
- Excellent stability to opto-mechanical thermal effects with no hysteresis
- Truly co-linear beams for multiple laser lines
- Options available for various wavelength ranges and wavelength combinations
- picoFLEX is only available for OEM customers



