

Datasheet

Fiber delivery system - kineFLEX

The kineFLEX™ is a robust 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 65%.

Singlemode fiber enables the user to decouple the laser beam astigmatism and dynamic beam pointing instability from the measurement application. 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 laser to fiber coupler enables true 'Plug & Play' benefits for singlemode and polarization-preserving 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, extremely low wavefront and zero aberrations, as well as engineered spatial profiles and shapes. Singlemode fiber designs are also available for multi-wavelength, broadband transmission (>240nm), and Ultra-High Vacuum compatibility.

Some of the product features include:

- True modularity for instrument design
- High Repeatability
- High stability to opto-mechanical thermal effects with no hysteresis
- Truly co-linear beams for multiple laser lines
- Broadband version available at 400 - 640nm
- OEM versions available for custom beam conditioning

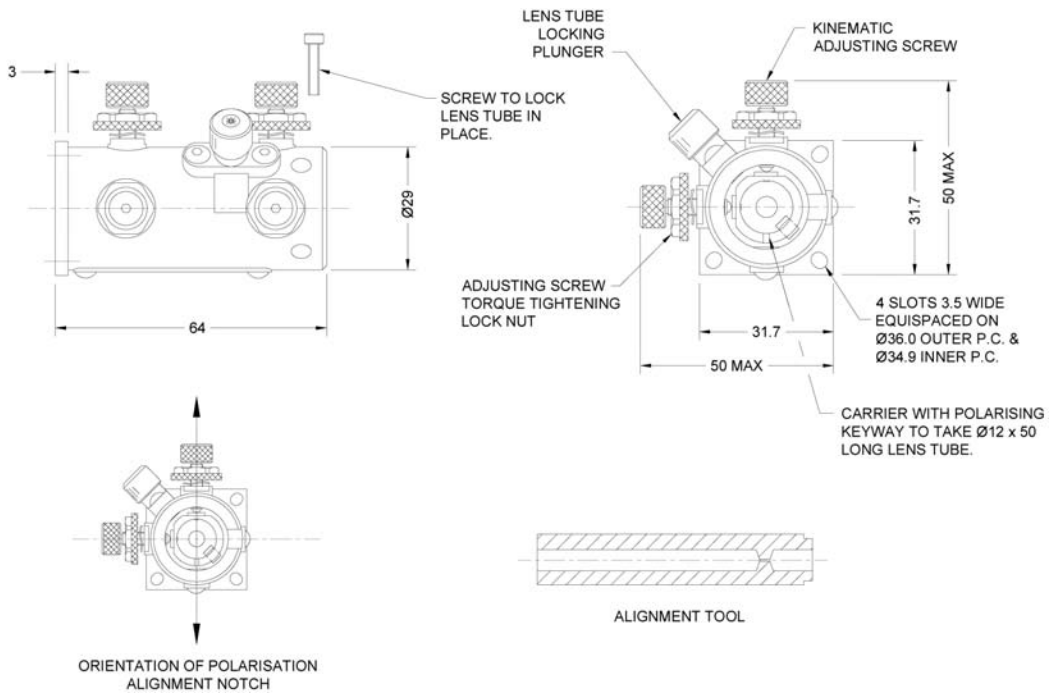
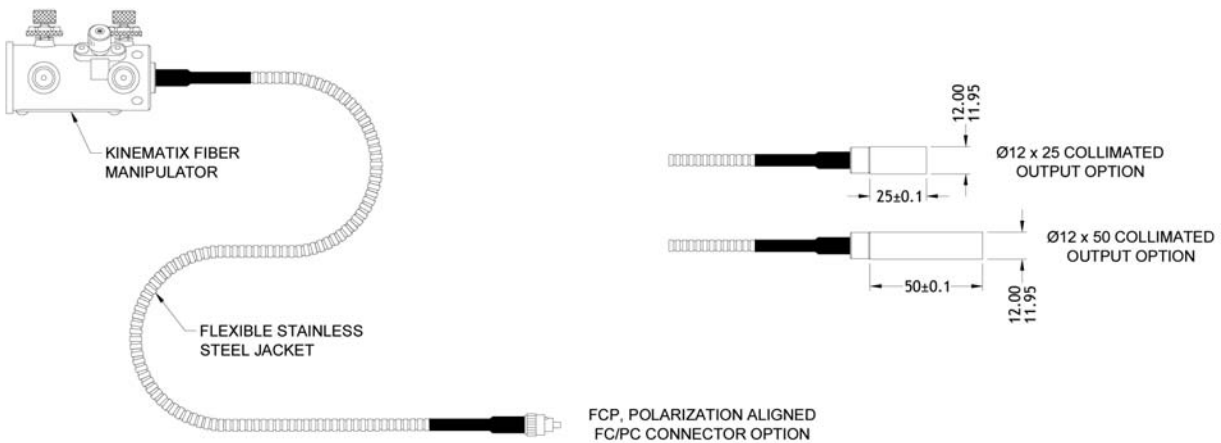
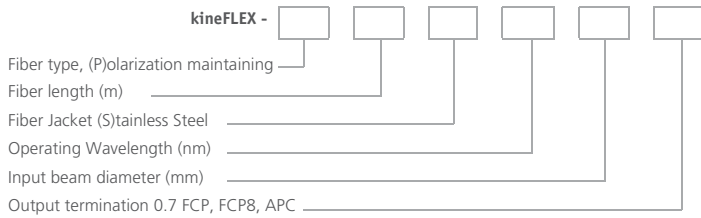


Technical specification

Operating wavelengths									Units
Single laser wavelength fiber systems	405	445	488	514	532	561	633	640	nm
Multiple laser wavelength systems	488 - 640								nm
Broadband laser wavelength systems	405 - 640								nm
Operating performance									
Polarization ratio	≤ -20								dB
Throughput efficiency (assuming 0.7 input beam diameter)	≥ 65								%
Fiber parameters									
Fiber length	1 to 3								m
Fiber protective jacket	Stainless steel, 5mm OD								-
Collimated output beam									
Beam diameter	0.7								mm
M Squared	typ 1.1								-
Pointing stability	≤ 1								μrad/°C
Beam divergence	Diffraction Limited								-
Mechanical dimensions	Ø12 x 50								mm
Beam position	≤ ± 0.15								mm
Beam angle	≤ ± 0.5								mrad
Connectorized output beam									
Polarization maintaining fiber	FCP (polarization keyed) FCP8, APC (polarization keyed and 8 degree polished)								-
Environmental conditions									
Storage temperature	10 to 50								°C
Operating pressure	Atmospheric								-
Operating temperature	10 to 40								°C
Operating humidity	Non-condensing								-

Note: OEM versions available please call

Order code:



Fiber Optics



kineFLEX-HPV™ / kineFLEX-UV™

Robust high power laser beam delivery system for precision measurement applications

- Input power up to 500mW for 488nm or higher
- Input power up to 20mW for 375nm
- OEM multiple wavelength versions available



kineFLEX-DUO™

Robust laser beam delivery system for two laser sources at visible wavelengths

- Efficient and simple beam combination
- Visible wavelengths
- Rugged platform for industrial applications



laserPLATE™

Rapid and convenient mechanical mounting and packaging system for laser to fiber alignment

- Compatible and integrated laser to fiber coupling
- Combined laser chassis and heatsink
- Easy to integrate and align

Lasers



iFLEX2000™

Extremely reliable and robust fiber coupled laser designed for volume manufacturing

- UV, Visible and NIR Wavelengths
- Integrated drive and temperature control electronics
- Modular singlemode fiber delivery system



iFLEX-Mustang™

Fiber coupled solid state laser with on-board acousto-optic modulation

- DPSS lasers, 488, 532 and 561nm
- High long term stability and low noise
- 25mW of output power



iFLEX-Q3™

Compact laser diode system for precision optical instrumentation

- Exceptional brightness, stability and long-term reliability
- Highly polarized beam
- Versatile, small form laser head and remote electronics module

Multi-laser Engines



iFLEX-Adder™

5 into 1 fiber-coupled laser beam combination system

- True 'Plug & Play' capability enabling ultimate flexibility of laser suite
- Upgradeable from 2 to 5 wavelengths as required
- Compatible with kineFLEX™ and kineFLEX-HPV™



iFLEX-Viper™

The world's first integrated Multi-laser Engine

- Combines 5 wavelengths in one instrument
- Delivers wavelengths via a singlemode fiber optic cable
- On-board acousto-optic modulation up to 3MHz

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