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LASER TO FIBER COUPLER WITH RECEPTACLE (NON-CONTACT STYLE)

FEATURES:

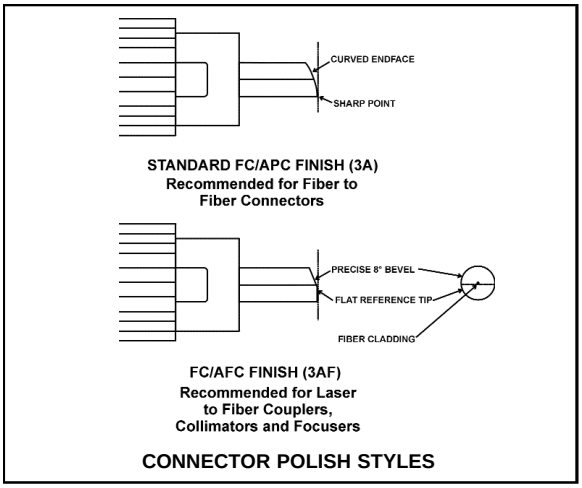
- Low Cost
- High Power Handling
- Wide Range of Lenses
- Excellent Polarization Maintaining Capabilities
- Different Connector Receptacle Versions
- Wide Wavelength Ranges

APPLICATIONS:

- Laser Shows/Entertainment
- Spectroscopy
- Interferometric Sensors
- Fluorescence Measurements
- Medical, Pharmaceutical, and Chemical Sensors
- OEM Laser Systems

SPECIFICATIONS:

• Coupling Efficiency:	Typically >60% into singlemode or polarization maintaining fibers, >80% for multimode fibers
• Backreflection Levels:	Typically -14dB with standard connectors Typically <-60dB with angled connectors
• Available Wavelengths:	180 - 2000nm
• Polarization Extinction Ratios:	Typically >20dB 25, 30dB versions are also available
• Power Handling:	>1 Watt CW for GRIN lenses, >10 Watt CW for aspheric lenses >5 Watts CW for achromats >100 Watts CW for fused silica or sapphire plano-convex and biconvex lenses



PRODUCT DESCRIPTION:

In non-contact style source couplers, an air gap exists between the fiber and the lens. This design is more flexible, allowing a wide range of lens types and focal lengths to be used. The distance between the fiber and the lens can be adjusted to compensate the changes in the source wavelengths or to intentionally defocus the laser beam to prevent arcing in high power laser to multimode fiber applications. Couplers using GRIN lenses, achromats, aspheres, fused silica, plano-convex, and bi-convex lenses have all been made utilizing this design.

Non-contact style couplers can handle input powers of up to 100W CW, and even higher energies from pulsed sources. They are best suited for applications where either the input energy is higher than 400mW, or when more than one wavelength is to be coupled into the fiber, or for input beams that have unusually large beam diameters or divergence angles. They also have superior polarization maintaining capabilities compared to physical contact style couplers. However because of the air gap between the fiber and the lens, the backreflection level for the endface of the fiber is about -14dB. This can be reduced to -40dB to -60dB by slant polishing both fiber ends to deflect the backreflected signal.

There is a significant variation in the endface geometries of angled PC (APC) connectors. This effects the spacing between the endface of the fiber and the lens. To minimize this variation, OZ Optics offers an angled flat (AFC) connector. This connector features a beveled endface where the fiber itself is angled but the ferrule tip is flat. This geometry provides optimum repeatability between connections.

ORDERING INFORMATION:

HPUC-2X-W-F-f-LH

Receptacle Code:
- 3 for FC, Super FC/PC, Ultra FC/PC
- 3A for Angled FC/PC
- 3AF for Flat Angled FC
- 5 for SMA 905
- 8 for AT&T-ST
- 8U for Ultra AT&T-ST
- SC for SC

See Table 6 of the Standard Tables for other connectors

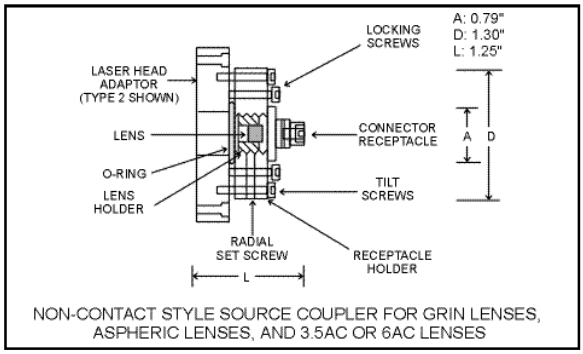
Wavelength: Specify in nanometers
(Example: 1550 for 1550nm)

Laser Head Adaptor
- 1 for 1"-32TPI Male Threaded Adapter
- 2 for Disk Adapter with 4 holes on 1" square
- 11 for Post Mount Adapter

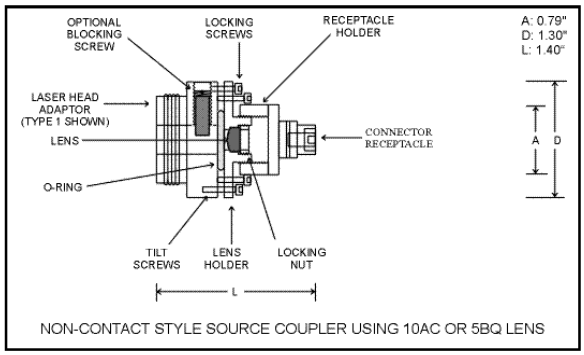
See Table 8 of the Standard Tables for other adapters

Lens ID: See Lens Selection Guide 3 for Non - Contact couplers with receptacles in the Laser to Fiber Coupler Application Notes

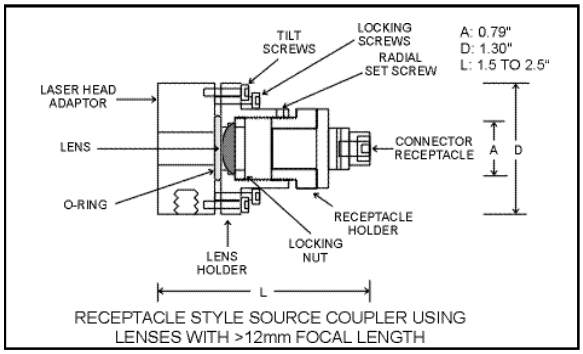
Fiber Type:
- M for Multimode
- S for Singlemode
- P for Polarization Maintaining



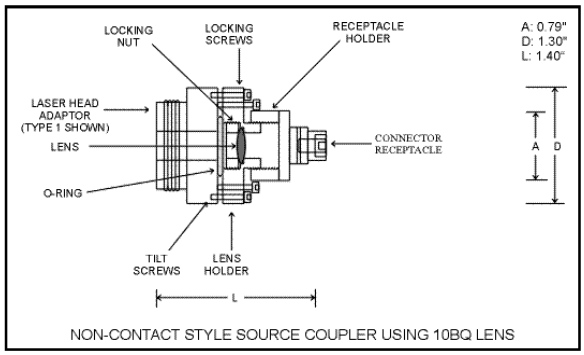
NON-CONTACT STYLE SOURCE COUPLER FOR GRIN LENSES, ASPHERIC LENSES, AND 3.5AC OR 6AC LENSES



NON-CONTACT STYLE SOURCE COUPLER USING 10AC OR 5BQ LENS



RECEPTACLE STYLE SOURCE COUPLER USING LENSES WITH >12mm FOCAL LENGTH



NON-CONTACT STYLE SOURCE COUPLER USING 10BQ LENS

STANDARD COUPLERS:

OZ OPTICS PART NUMBER	BAR CODE NUMBER	OZ OPTICS PART NUMBER	BAR CODE NUMBER
HPUC-23-400/700-S-3.5AC-1	3793	HPUC-23-400/700-S-3.5AC-2	3802
HPUC-23-400/700-S-6AC-1	3794	HPUC-23-400/700-S-6AC-2	3803
HPUC-23AF-400/700-S-10AC-1	3795	HPUC-23AF-400/700-S-10AC-2	3804
HPUC-23AF-400/700-S-3.5AC-1	3796	HPUC-23AF-400/700-S-3.5AC-2	3082
HPUC-23AF-400/700-S-6AC-1	3797	HPUC-23AF-400/700-S-6AC-2	3805
HPUC-23-400/700-S-10AC-1	3798	HPUC-23-400/700-S-10AC-2	3806
HPUC-23-325-S-5BQ-1	3799	HPUC-23-325-S-5BQ-2	3807
HPUC-23-325-S-10BQ-1	3800	HPUC-23-325-S-10BQ-2	3808

NOTE:

To determine the best laser to fiber source coupler for your application please complete a Laser to Fiber Delivery System Questionnaire. OZ Optics will then recommend a coupler based on your response.