



# OZ OPTICS LTD.

219 WESTBROOK RD, CARP, ON, CANADA, K0A 1L0 TEL:(613) 831-0981 FAX:(613) 836-5089 E-MAIL: sales@ozoptics.com WEB SITE: www.ozoptics.com

## PIGTAIL STYLE LASER TO FIBER COUPLERS

### FEATURES:

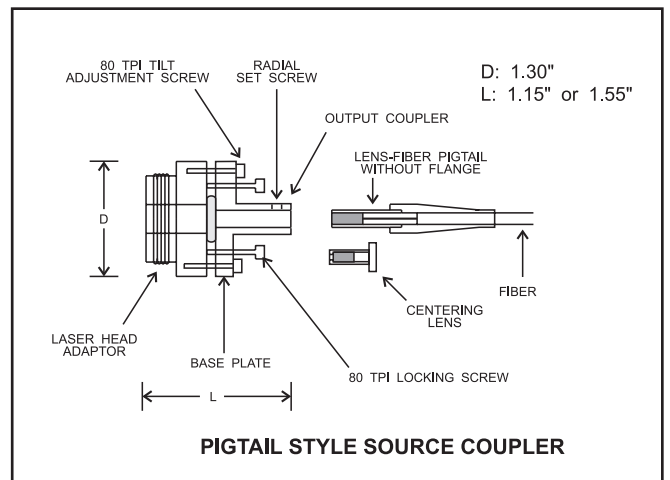
- Rugged, Compact, Stable Design
- Low Backreflection
- Low Cost
- Environmentally Stable
- Excellent Coupling Efficiency
- Excellent Polarization Maintaining Capabilities
- Wide Wavelength Ranges
- Adjustable Output Power

### APPLICATIONS:

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

### SPECIFICATIONS:

- Coupling Efficiency: Typically >60% into Singlemode or Polarization Maintaining fibers, >80% for Multimode fibers
- Backreflection Levels: Typically -25dB for Physical Contact style, -40dB for Non-Contact style. -60dB versions are also available
- Polarization Extinction Ratios: >20dB  
25dB and 30dB versions are also available
- Available Wavelengths: 180 - 2000nm
- Power Handling: >1 Watt CW for GRIN lenses, >10 Watts CW for aspheric lenses >5 Watts CW for achromats >100 Watts CW for fused silica or sapphire plano-convex and biconvex lenses



### PRODUCT DESCRIPTION:

Pigtail style source couplers are recommended for permanent or semi-permanent situations, where optimum coupling efficiency, output stability, and minimum backreflection are desired. In these couplers the fibers are permanently glued to the focusing lens. The fiber-lens assembly is then inserted into the tilt adjustment flange, and held in place with two radial set screws.

Because the fiber is permanently attached to the lens, the fiber cannot be replaced without also replacing the coupling lens.

Pigtail style couplers are manufactured in both contact (LPSC-01) model and non-contact (LPSC-03) model versions. For contact style pigtailed couplers, the backreflection level is typically -25dB. In the case of non-contact style couplers, the internal endface of the fiber is polished at an angle to reduce backreflection. Non-contact pigtail style couplers are available with up to -40dB or -60dB backreflection levels.

## ORDERING INFORMATION:

### LPSC-0A-W-a/b-F-f-LH-LB-X-JD-L

Coupler Type: 1 for Contact Style  
3 for Non-Contact Style

Wavelength: Specify in nanometers  
(Example: 633 for 633nm)

Fiber Core/Cladding Sizes, in microns  
9/125 for 1300/1550nm SM fiber  
See Tables 1 to 5 of the Standard Tables for other standard fiber sizes

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

Lens Type: See the Lens Selection Guide 1 for Pigtail Style Source Couplers in the Laser to Fiber Coupler Application Notes

Laser Head Adaptor  
1 for 1"-32TPI Male Threaded Adaptor  
2 for Disk Adapter with 4 holes on 1" square  
11 Post Mount Adapter  
See Table 8 of the Standard Tables for other adapters

Fiber Length in meters

Fiber Jacket Type: 1=900 micron OD hytel jacket  
3=3mm OD Kevlar reinforced PVC cable

See Table 7 of the Standard Tables for other jacket sizes

Connector Code: 3S = Super NTT-FC/PC  
3U = Ultra NTT-FC/PC  
3A = Angled NTT-FC/PC  
8 = AT&T-ST  
8S = Super AT&T-ST  
SC = SC  
SCA = Angled SC

See Table 6 of the Standard Tables for other connectors

Backreflection: 40, 50, or 60dB

60dB versions standard only for 1300 and 1550nm wavelengths. Contact OZ before specifying other wavelengths.

**Note:** Add “-ER=30” or “-ER=25” to the part number for 30dB or 25dB extinction ratios (For 1300nm and 1550nm only).  
Add “-BL” to the part number if a manually adjustable attenuator is to be added.

### 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.

Unit prices range from \$250USD to \$400USD for typical applications with delivery being from stock to within 2 weeks of receiving your order. Quantity discounting and blanket orders can be arranged. Contact OZ for more information.