



## LENS SELECTION GUIDE FOR LASER TO FIBER COUPLERS

The following set of tables list the standard lenses available from OZ Optics. The tables are broken up into two main categories - *Lenses for Pigtail Style Couplers* and *Lenses for Laser to Fiber Couplers with Receptacles (non-contact style) or Adjustable Focus Couplers*.

### SELECTION GUIDE 1: LENSES FOR PIGTAIL STYLE COUPLERS

**GRIN LENSES AND C-LENSES:** Select these lenses when cost is your main concern. Available wavelengths are 400 - 1600nm.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER		COUPLER TYPE
			SINGLEMODE	MULTIMODE	
1.81GR	1.8	1.8	0.3 - 0.45mm	0.3 - 1.0mm	LPSC-03
2.61CL	2.6	1.8	0.4 - 0.65mm	0.4 - 1.4mm	LPSC-03
3.2GR	3.2	3.0	0.5 - 0.8mm	0.5 - 1.8mm	LPSC-03
4.7GR	4.7	3.0	0.8 - 1.1mm	0.8 - 2.6mm	LPSC-03
6.6GR	6.6	4.0	1.1 - 1.6mm	1.1 - 3.5mm	LPSC-03

**ACHROMAT LENSES:** Select these lenses for visible applications when working with more than one wavelength.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER		AVAILABLE WAVELENGTH RANGE	COUPLER TYPE
			SINGLEMODE	MULTIMODE		
3.5AC	3.5	2.0	0.5 - 0.9mm	0.5 - 1.8mm	400 - 800nm	LPSC-03
6AC	6.0	3.0	0.9 - 1.5mm	0.9 - 2.7mm	400 - 800nm	LPSC-03
10AC	10.0	6.0	1.6 - 2.5mm	1.6 - 5.5mm	400 - 800nm or 780 - 1600nm	LPSC-03

**ASPHERIC LENSES:** Select these lenses for best performance in the infrared or applications requiring excellent polarization maintaining behaviour. Available wavelengths are 400 - 1600nm.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER		COUPLER TYPE
			SINGLEMODE	MULTIMODE	
2AS	2.0	2.0	0.3 - 0.5mm	0.3 - 1.1mm	LPSC-03
2.7AS	2.7	3.0	0.4 - 0.7mm	0.4 - 1.5mm	LPSC-03
3.9AS	3.9	4.3	0.6 - 1.0mm	0.6 - 2.2mm	LPSC-03
6.2AS	6.2	5.0	1.0 - 1.6mm	1.0 - 3.5mm	LPSC-03
11AS	11.0	5.5	1.6 - 2.7mm	1.6 - 5.5mm	LPSC-03

**FUSED SILICA PLANO CONVEX AND BI-CONVEX LENSES:** Select these lenses for very high power multimode delivery systems or for UV applications. Available wavelengths are 300 - 1600nm.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER		COUPLER TYPE
			SINGLEMODE	MULTIMODE	
5BQ	5	6	0.6 - 1.25mm	0.6 - 3.0mm	LPSC-03

## SELECTION GUIDE 2: LENSES FOR LASER TO FIBER COUPLER WITH RECEPTACLES (NON-CONTACT STYLE) AND ADJUSTABLE FOCUS COUPLERS

**ACHROMAT LENSES:** Select these lenses for visible applications when working with more than one wavelength.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER		AVAILABLE WAVELENGTH RANGE (nm)
			SINGLEMODE	MULTIMODE	
3.5AC	3.5	2.0	0.5 - 0.9mm	0.5 - 1.8mm	400 - 800
6AC	6.0	3.0	0.9 - 1.5mm	0.9 - 2.7mm	400 - 800
6AG†	6.0	3.0	0.9 - 1.5mm	0.9 - 2.7mm	300 - 400
6.3AG*	6.3	2.0	1.0 - 1.6mm	1.0 - 1.8mm	400 - 800
10AC	10.0	6.0	1.6 - 2.5mm	1.6 - 5.5mm	400 - 800 or 780 - 1600
16AC	16	8	2.5 - 4.0mm	2.5 - 7.0mm	400 - 800
20AC	20	10	3.2 - 5.0mm	3.2 - 9.0mm	400 - 800 or 780 - 1600
25AC	25	12.5	4.0 - 6.3mm	4.0 - 12mm	400 - 800 or 780 - 1600
30AC	30	12.5	4.8 - 7.5mm	4.8 - 12mm	400 - 800
35AC	35	12.5	5.6 - 8.8mm	5.6 - 12mm	400 - 800
44AC	44	14	7.0 - 11mm	7.0 - 13mm	400 - 800
50AC	50	20	8.0 - 12.5mm	8.0 - 19mm	400 - 800

\* The 6.3AG lens is an air-spaced achromat specifically designed for very high power coupling applications.

† The 6AG lens is a doublet lens but not a true achromat lens. It is optimized to correct for spherical aberration in the UV range, and not chromatic aberration.

**ASPHERIC LENSES:** Select these lenses for best performance in the infrared or applications requiring excellent polarization maintaining behaviour. Available wavelengths are 400 - 1600nm.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER	
			SINGLEMODE	MULTIMODE
2AS	2.0	2.0	0.3 - 0.5mm	0.3 - 1.1mm
2.7AS	2.7	3.0	0.5 - 0.8mm	0.5 - 1.5mm
3.9AS	3.9	4.3	0.8 - 1.0mm	0.8 - 2.2mm
6.2AS	6.2	5.0	1.0 - 1.6mm	1.0 - 3.5mm
11AS	11.0	5.5	1.6 - 2.7mm	1.6 - 5.5mm

**FUSED SILICA PLANO CONVEX AND BI-CONVEX LENSES:** Select these lenses for very high power multimode delivery systems or for UV applications. Available wavelengths are 300 - 1600nm.

LENS ID	FOCAL LENGTH (mm)	DIAMETER (mm)	OPTIMUM LASER BEAM DIAMETER	
			SINGLEMODE	MULTIMODE
5BQ	5	6	0.8 - 1.3mm	0.8 - 2.5mm
10BQ	10	10	1.6 - 2.5mm	1.6 - 5mm
25BQ	25	12.5	4 - 6.2mm	4 - 11mm