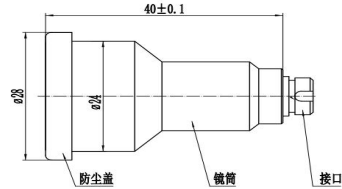


Large Beam Collimators By using an air gap bonded lens, it can provide better beam quality than aspherical lenses and achromatic lenses in terms of collimation performance. The design of a low aberration lens group can achieve a beam closer to a Gaussian beam, with smaller divergence angles and smaller wavefront errors.



SM Large Beam Collimators

| Wavelength | Bandwidth | Waist Beam | Divergence Angle | EFL | NA (Lens) | Package Dia. | Fiber Type | Connector | Transmittance |
|------------|-------------|------------|------------------|---------|-----------|--------------|------------|---------------------------|---------------|
| 405nm | ± 30 nm | 5.3 mm | 0.16mrad | 33.2 mm | 0.27 | $\Phi 24$ mm | 405HP | FC/PC FC/APC Sma905 | >92% |
| 450nm | ± 30 nm | 5.8 mm | 0.12mrad | 33.5 mm | 0.26 | $\Phi 24$ mm | 460HP | | |
| 525nm | ± 30 nm | 6.3 mm | 0.10mrad | 34.3 mm | 0.26 | $\Phi 24$ mm | 630HP | | |
| 635nm | ± 30 nm | 7.0 mm | 0.12mrad | 35.3 mm | 0.25 | $\Phi 24$ mm | 780HP | | |
| 780nm | ± 30 nm | 7.4 mm | 0.14mrad | 36.0 mm | 0.25 | $\Phi 24$ mm | | | |
| 850nm | ± 30 nm | 7.8 mm | 0.14mrad | 36.2 mm | 0.25 | $\Phi 24$ mm | | | |
| 905nm | ± 30 nm | 7.5mm | 0.15mrad | 36.3mm | 0.25 | $\Phi 24$ mm | 980HP | | |
| 980nm | ± 30 nm | 8.5 mm | 0.16mrad | 36.4 mm | 0.25 | $\Phi 24$ mm | | | |
| 1064nm | ± 30 nm | 7.9 mm | 0.17mrad | 36.6 mm | 0.25 | $\Phi 24$ mm | Smf-28e | | |
| 1310nm | ± 30 nm | 6.6 mm | 0.24mrad | 36.7 mm | 0.24 | $\Phi 24$ mm | | | |
| 1550nm | ± 30 nm | 6.9 mm | 0.28mrad | 37.1 mm | 0.24 | $\Phi 24$ mm | | | |
| 1654nm | ± 10 nm | 6.9 mm | 0.30mrad | 37.2mm | 0.24 | $\Phi 24$ mm | | | |

MM Large Beam Collimators

| Wavelength | Bandwidth | Waist Beam | Divergence Angle | EFL | NA (Lens) | Package Dia. | Fiber Type | connector | Transmittance |
|------------|-------------|------------|------------------|---------|-----------|--------------|------------|-----------------|---------------|
| 450nm | ± 30 nm | 18.0mm | 2.3mrad | 33.5 mm | 0.27 | $\Phi 24$ mm | 62.5/125 | FC/PC Sma905 | >92% |
| | ± 30 nm | 14.6mm | 6.5mrad | 33.5 mm | 0.27 | $\Phi 24$ mm | 200/220 | | |
| | ± 30 nm | 14.6mm | 12.5mrad | 33.5 mm | 0.27 | $\Phi 24$ mm | 400/440 | | |
| 485nm | ± 30 nm | 15.0mm | 4.0mrad | 34.1mm | 0.27 | $\Phi 24$ mm | 105/125 | | |
| | ± 30 nm | 15.0mm | 7.0mrad | 34.1mm | 0.27 | $\Phi 24$ mm | 200/220 | | |
| | ± 30 nm | 15.4mm | 12.8mrad | 34.1mm | 0.27 | $\Phi 24$ mm | 400/440 | | |
| 525nm | ± 30 nm | 18.2mm | 2.2mrad | 34.3 mm | 0.27 | $\Phi 24$ mm | 62.5/125 | | |
| | ± 30 nm | 14.9mm | 3.5mrad | 34.3 mm | 0.27 | $\Phi 24$ mm | 105/125 | | |
| | ± 30 nm | 14.9mm | 6.2mrad | 34.3 mm | 0.27 | $\Phi 24$ mm | 200/220 | | |
| | ± 30 nm | 15.2mm | 12.6mrad | 34.3 mm | 0.27 | $\Phi 24$ mm | 400/440 | | |



Large Beam Collimators

| | | | | | | | | | |
|-------|--------|----------|----------|---------|------|-------|----------|--|--|
| 635nm | ± 30nm | 18.8mm | 2.8mrad | 35.3 mm | 0.26 | Φ24mm | 62.5/125 | | |
| | ± 30nm | 15.2mrad | 4.0mrad | 35.3 mm | 0.26 | Φ24mm | 105/125 | | |
| | ± 30nm | 15.3mm | 6.1mrad | 35.3 mm | 0.26 | Φ24mm | 200/220 | | |
| | ± 30nm | 15.4mm | 11.8mrad | 35.3 mm | 0.26 | Φ24mm | 400/440 | | |

| Wavelength | Bandwidth | Waist Beam | Divergence Angle | EFL | NA (Lens) | Package Dia. | Fiber Type | connector | Transmittance |
|------------|-----------|------------|------------------|---------|-----------|--------------|------------|-----------------|---------------|
| 780nm | ± 30nm | 19.0mm | 2.7mrad | 36.0 mm | 0.26 | Φ24mm | 62.5/125 | FC/PC Sma905 | >92% |
| | ± 30nm | 15.6mm | 3.1mrad | 36.0 mm | 0.26 | Φ24mm | 105/220 | | |
| | ± 30nm | 15.5mm | 5.9mrad | 36.0 mm | 0.26 | Φ24mm | 200/220 | | |
| | ± 30nm | 15.5mm | 11.6mrad | 36.0 mm | 0.26 | Φ24mm | 400/440 | | |
| 850nm | ± 30nm | 19.1mm | 2.7mrad | 36.2 mm | 0.26 | Φ24mm | 62.5/125 | | |
| | ± 30nm | 15.6mm | 3.2mrad | 36.2 mm | 0.26 | Φ24mm | 105/220 | | |
| | ± 30nm | 15.6mm | 5.8mrad | 36.2 mm | 0.26 | Φ24mm | 200/220 | | |
| | ± 30nm | 15.6mm | 11.4mrad | 36.2 mm | 0.26 | Φ24mm | 400/440 | | |
| 905nm | ± 30nm | 15.7mm | 3.3mrad | 36.3 mm | 0.26 | Φ24mm | 105/220 | | |
| | ± 30nm | 15.7mm | 5.9mrad | 36.3 mm | 0.26 | Φ24mm | 200/220 | | |
| 1064nm | ± 30nm | 19.4mm | 2.4mrad | 36.6 mm | 0.26 | Φ24mm | 62.5/125 | | |
| | ± 30nm | 15.8mm | 3.4mrad | 36.6 mm | 0.26 | Φ24mm | 105/125 | | |
| | ± 30nm | 16.0mm | 6.4mrad | 36.6 mm | 0.26 | Φ24mm | 200/220 | | |
| | ± 30nm | 16.0mm | 12.2mrad | 36.6 mm | 0.26 | Φ24mm | 400/440 | | |
| 1310nm | ± 30nm | 19.4mm | 2.3mrad | 36.7 mm | 0.25 | Φ24mm | 62.5/125 | | |
| | ± 30nm | 15.8mm | 3.5mrad | 36.7 mm | 0.25 | Φ24mm | 105/125 | | |
| | ± 30nm | 15.8mm | 6.1mrad | 36.7 mm | 0.25 | Φ24mm | 200/220 | | |
| | ± 30nm | 15.9mm | 11.6mrad | 36.7 mm | 0.25 | Φ24mm | 400/440 | | |
| 1550nm | ± 30nm | 19.4mm | 2.1mrad | 37.1 mm | 0.25 | Φ24mm | 62.5/125 | | |
| | ± 30nm | 15.9mm | 3.4mrad | 37.1 mm | 0.25 | Φ24mm | 105/125 | | |
| | ± 30nm | 15.9mm | 6.1mrad | 37.1 mm | 0.25 | Φ24mm | 200/220 | | |
| | ± 30nm | 16.0mm | 11.6mrad | 37.1 mm | 0.25 | Φ24mm | 400/440 | | |

* All testing data for beam size and divergence angle are obtained by connecting the standard jumpers from CNI.

* Also applicable for polarization maintaining fiber with corresponding wavelength.

* Waist beam diameter: Take the Gaussian beam at 1/e2 and use the theoretical calculated values for each wavelength using single-mode fibers.

* Beam far-field divergence angle: The input uses single-mode optical fibers with various wavelengths, calculated according to the Gaussian beam 1/e2 theory. Tolerance is +0.003° /0.0° .