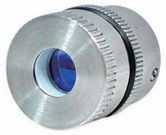
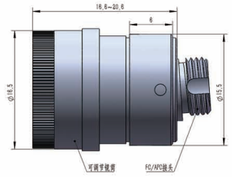
可调焦非球面光纤准直器
Adjustable Aspheric Collimators

该设计在机械件内部用采用弹簧装配适用的光学透镜，用于光纤光束的准直器输出，也可用于空间光耦合进入光纤。通过旋转准直器外部的套管可以使内部的光学透镜延光轴方向进行前后平移，从而调节透镜与光纤端面之间的距离，得到不同光斑尺寸。一旦达到所需位置，就可以将外壳滚花锁紧环将调节器锁定。

is engineered with a spring - fitted optical lens housed within its mechanical structure. It serves to collimate the fiber - emitted light beam and can also be utilized for coupling spatial light into the fiber. By rotating the outer sleeve of the collimator, the internal optical lens can be precisely translated along the vertical axis direction. This translation enables the adjustment of the distance between the lens and the fiber endface, thereby achieving different light spot sizes. Once the optimal position is attained, the housing knurled locking ring can be employed to fix the regulator firmly.





特征 Features：

- 接入光纤准直出射或将自由空间准直光耦合进光纤

Connecting fiber collimated output or coupling free space collimated light into fiber

- 三款焦距可选Three Focal Length Options、4.5 mm、7.5 mm、11mm
- 调节时对准误差adjustment alignment error < 15 mrad
- 接头类型可选Three Connector Options：FC/PC、FC/APC、SMA905
- 非球面透镜镀三种增透膜可选 Threee AR-Coated Aspheric Lens Options、400-700nm、650-1050nm、1050-1650nm
- 与远讯的标准跳线配合使用可提高耦合效率和良好的重复性

When used in combination with Ysenser's standard jumpers, it can improve coupling efficiency and ensure good repeatability.v

参数表 Parameter

EFL	NA（Lens）	Waist Beam	AR Coating	Far-field divergence angle	Input Fiber MFD	Length Between Fiber and Lens	Transmittance
4.5mm	0.54	0.86mm	400~700nm R<0.5%	0.05°+0.01°	3.5um	2.4 - 4.9 mm	>90%
	0.54	0.98mm	600~1050nm R<0.5%	0.06°+0.01°	5um	2.4 - 4.9 mm	
	0.54	0.87mm	1050~1700nm R<0.5%	0.13°+0.01°	10.4um	2.4 - 4.9 mm	
7.5mm	0.3	1.35mm	400~700nm R<0.5%	0.03°+0.01°	3.5um	4.2- 6.8 mm	>90%
	0.3	1.6mm	600~1050nm R<0.5%	0.04°+0.01°	5um	4.2- 6.8 mm	
	0.3	1.44mm	1050~1700nm R<0.5%	0.08°+0.01°	10.4um	4.2- 6.8 mm	
11 mm	0.3	1.96mm	400~700nm R<0.5%	0.02°+0.01°	3.5um	8.6 - 10.9 mm	>90%
	0.3	2.35mm	600~1050nm R<0.5%	0.03°+0.01°	5um	8.6 - 10.9 mm	
	0.3	2.1mm	1050~1700nm R<0.5%	0.06°+0.01°	10.4um	8.6 - 10.9 mm	

*所有光斑、发散角的测试数据均由远讯标准跳线接入测试

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

*束腰光斑直径：取高斯光束1/e2处，选用各波长单模光纤理论计算值。

Waist beam diameter: Take the Gaussian beam at $1/e^2$ and use the theoretical calculated values for each wavelength using single-mode fibers.

*光束远场发散角：输入选用各波长单模光纤，按高斯光束$1/e^2$理论计算值。公差+0.003°/0.0°

Beam far-field divergence angle: The input uses single-mode optical fibers with various wavelengths, calculated according to the Gaussian beam $1/e^2$ theory. Tolerance is +0.003°/0.0°.

*理论计算匹配的波长和光纤

Theoretical Calculation of Wavelength - Fiber Matching、450 nm-460HP、850 nm-780HP、1550 -SMF-28e.