OtO Photonics

Collimator Data Sheet

Collimator COL-1 & COL-2

COL-1 & COL-2 has a f/2 fused silica lens for 200-1000 nm or a K9 glass for 400-2500nm. When focused for collimation, beam divergence is 2° or less, depending on the fiber diameter. The COL can be adjusted for UV-VIS or VIS-NIR setups.

Model	COL-1-UV	COL-2-UV	COL-1-NIR
Connector	SMA 905, 3/8-24 external thread	SMA 905 Fiber Stub, 3/8-24 external thread	SMA 905, 3/8-24 external thread
Back Focal Length (mm)	10		
Clear Aperture (mm)	5		
Material	UV Grade Fused Silica		K9 glass
Range	200 nm~1000 nm		400-2500nm
Numerical Aperture (N.A)	0.2		0.2

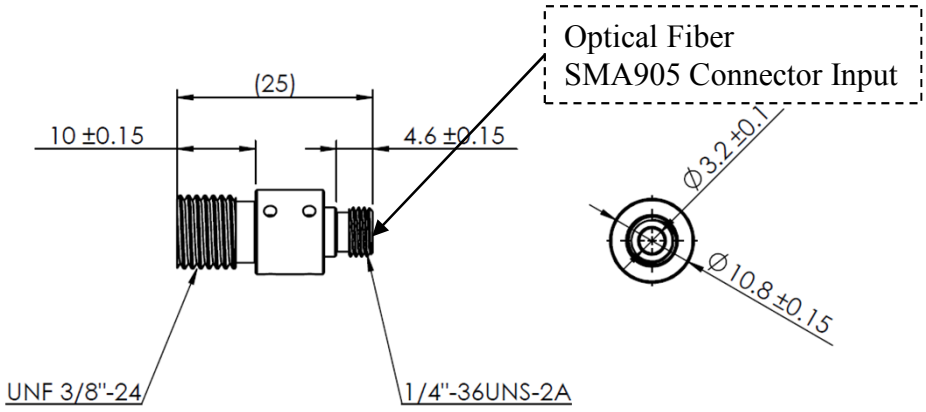

Fig.1 Mechanical Diagram of COL-1-UV & COL-1-NIR

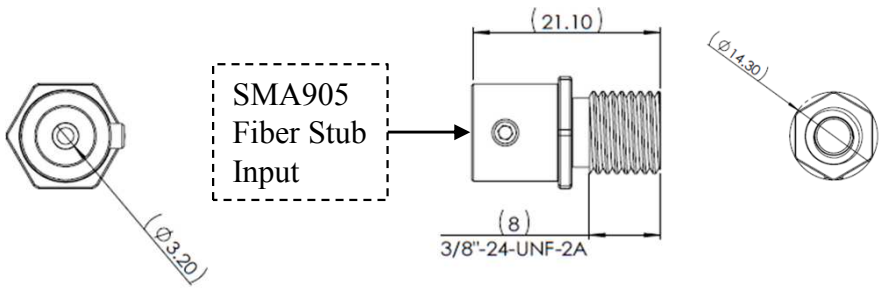

Fig.2 Mechanical Diagram of COL-2-UV

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Fiber Collimator

COL-OF-S series Fiber Collimator is Integrated Short Optical Fiber Collimator OF-S series into COL series. Also can be adjusted for UV-VIS or VIS-NIR setups

Model	COL-OF-S-UV	COL-OF-S-NIR
Connector	SMA 905	
Back Focal Length (mm)	10	
Clear Aperture (mm)	5	
Material	UV Grade Fused Silica	K9
Range	200 ~1000 nm	400-2500nm
Numerical Aperture (N.A)	0.22	

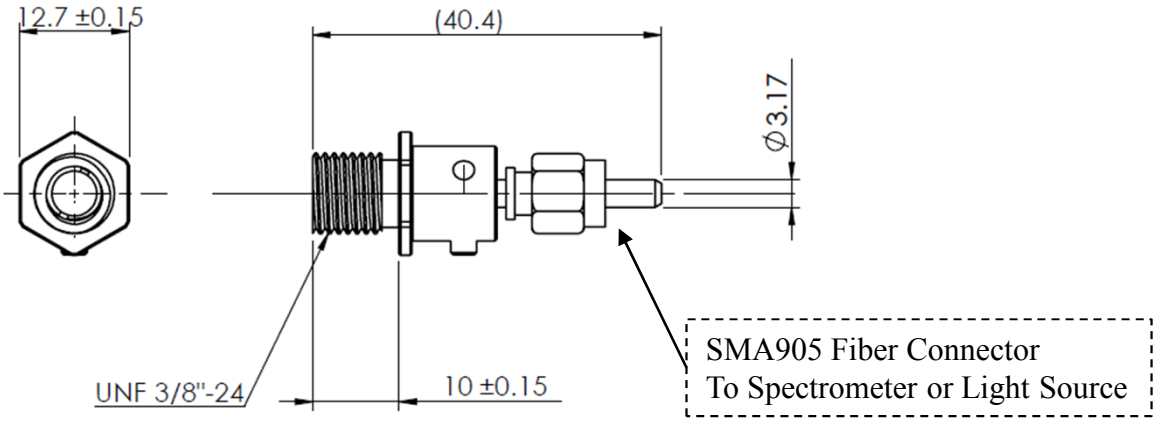

Fig.3 Mechanical Diagram of COL-OF-S-UV & COL-OF-S-NIR

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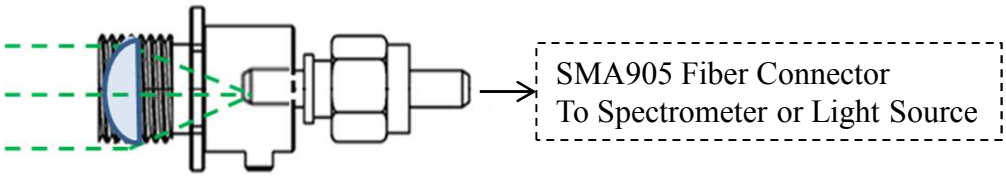
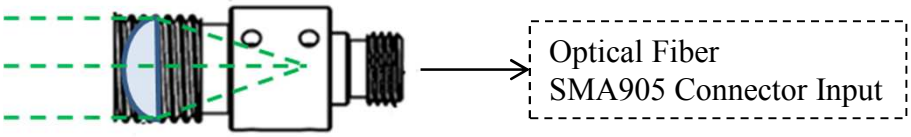
Brief description of Collimators

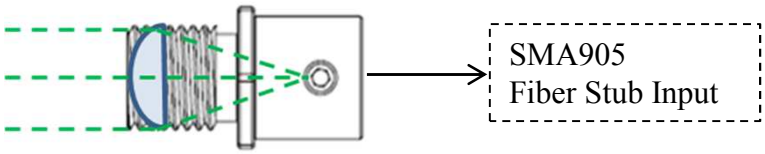
Collimator is a device for transform the diverging light or other diffused radiation from a point source into a parallel .We can use it to reduce the loss of light energy and increase the coupling efficiency.



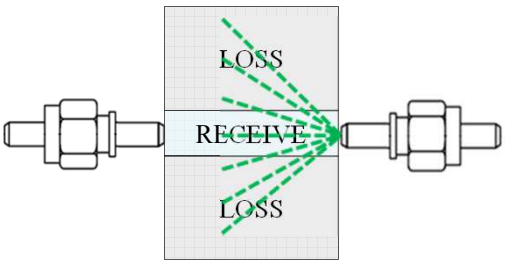
COL-OF-S Series



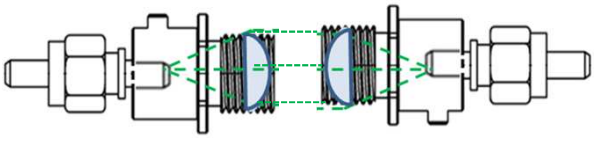
COL-1 Series



COL-2 Series



Without Collimator,
Coupling Efficiency <<50%



With Collimator,
Coupling Efficiency>95%

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Application example

- The picture below is a set up Transmittance Test Environment construction by COL-OF-S-UV, COL-1-UV, Light Source, Spectrometer, Cuvette, Cuvette Holder, and Optical Fiber.

- COL-1 & Optical Fiber can be replace with COL-OF-S.

- 3/8-24 external thread(3/8 inch, 24 thread/inch) Connector is a common connector spec. for Optical Collimation application. It's also suitable for OTO's Cuvette Holder.