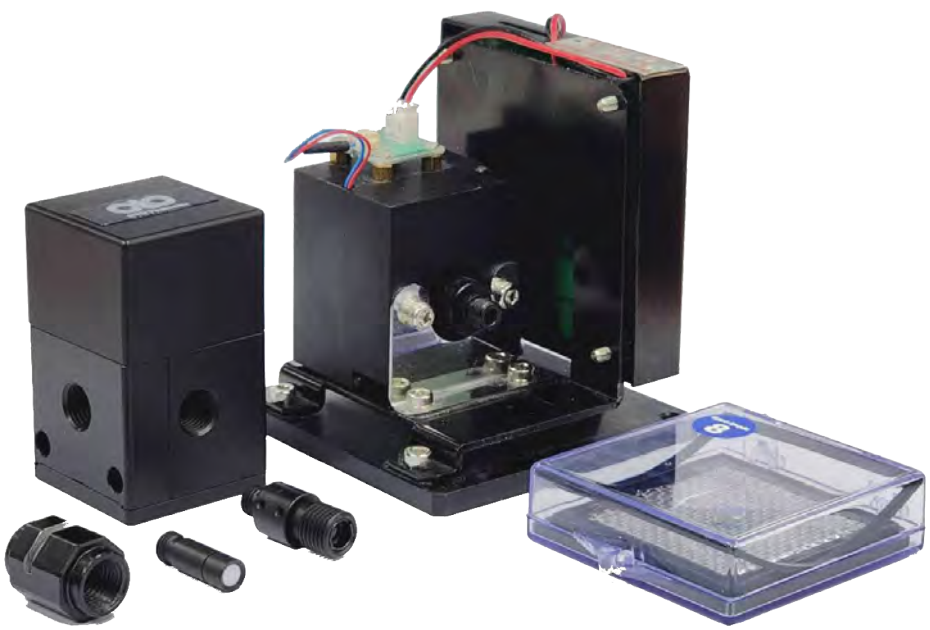
OtO Photonics

Accessories



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Collimator COL-1 & COL-2

Specification

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	10mm		
Clear Aperture	5mm		
Material	UV Grade Fused Silica		K9 glass
Range	200 nm~1000 nm		400-2500nm
Numerical Aperture (N.A)	0.2		0.2

Mechanical Diagram

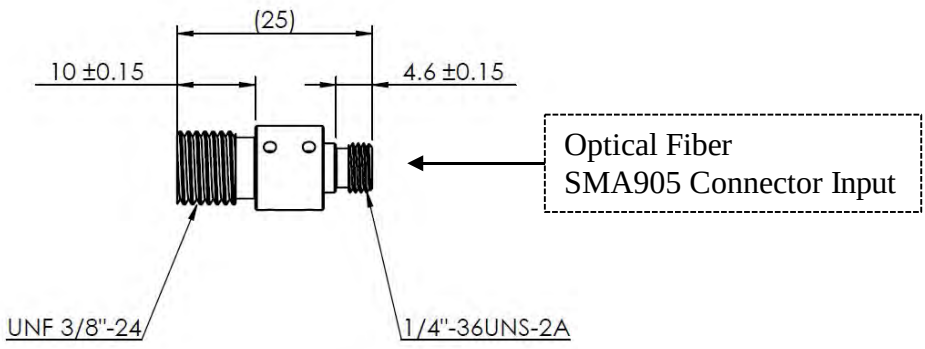

Fig.1 Mechanical Diagram : COL-1-UV & NIR

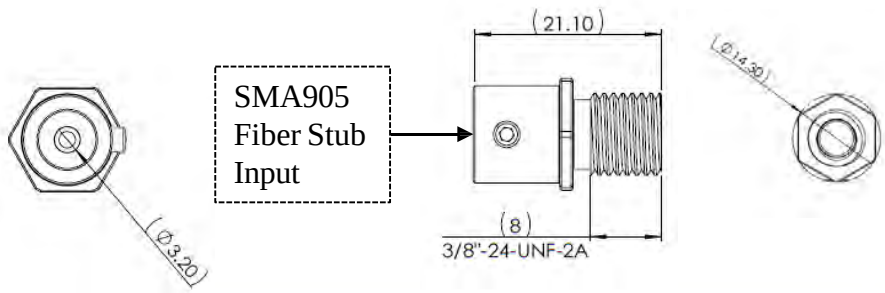

Fig.2 Mechanical Diagram : COL-2-UV

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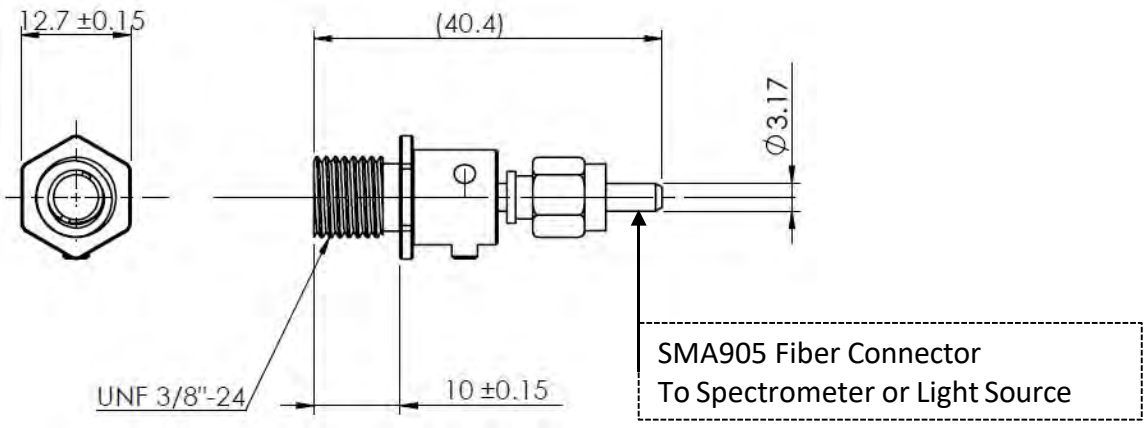
Fiber Collimator

■ Specification

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	10mm	
Clear Aperture	5mm	
Material	UV Grade Fused Silica	K9
Range	200 ~1000 nm	400-2500nm
Numerical Aperture (N.A)	0.22	

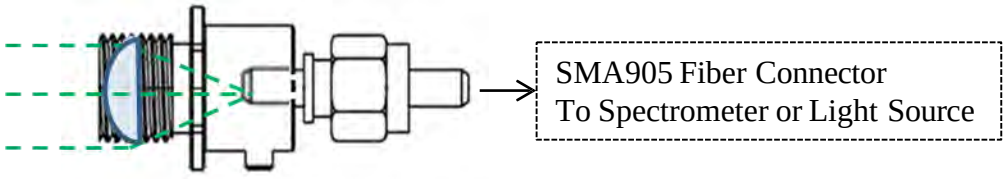
■ Mechanical Diagram



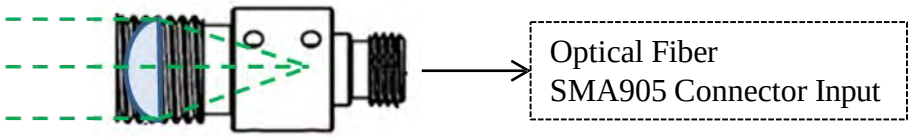
Collimator & Fiber Collimator

Brief description of Collimators

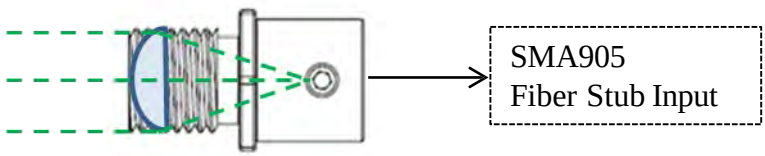
Collimator is a device for transform the diverging light or other diffused radiation from a point source into a parallel .We can use it to reduce the loss of light energy and increase the coupling efficiency.



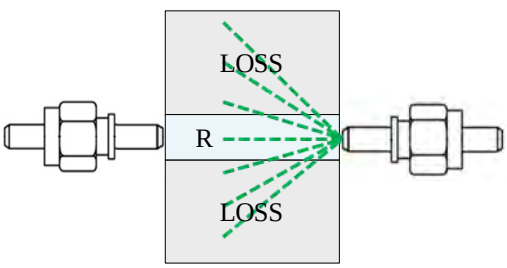
COL-OF-S Series



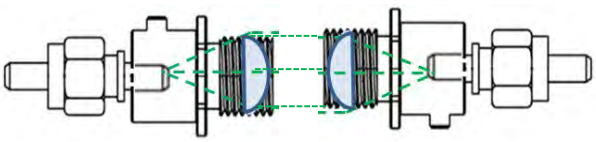
COL-1 Series



COL-2 Series



Without Collimator,
Coupling Efficiency <<50%



With Collimator,
Coupling Efficiency>95%

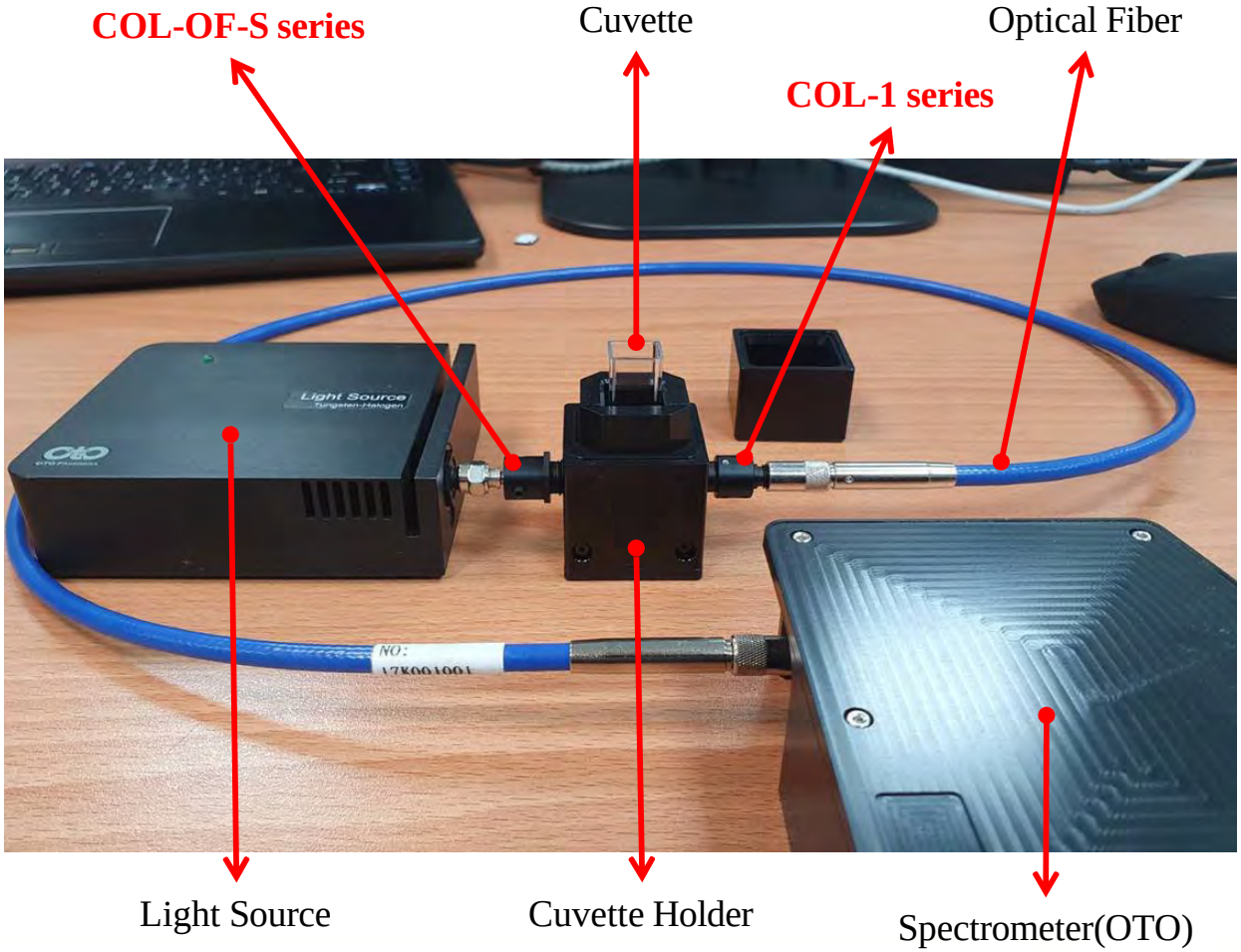
Collimator & Fiber Collimator

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.



Cosine Corrector

Specification

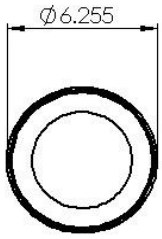
Model	Diffuser Diameter(mm)	Field of View	Range
COS-1	Ø 4.1	+/- 82 degrees	200-2500nm
COS-2	Ø 5.75	+/- 85 degrees	200-2500nm

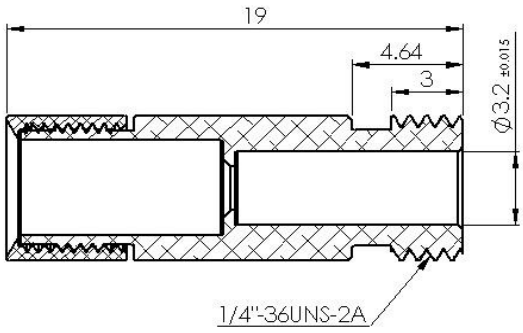
COS-1

COS-2

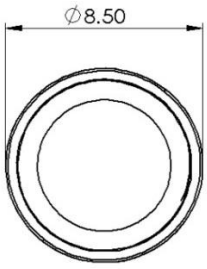
Mechanical Diagram

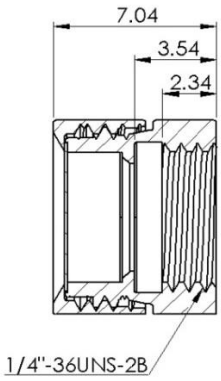
- COS-1





- COS-2





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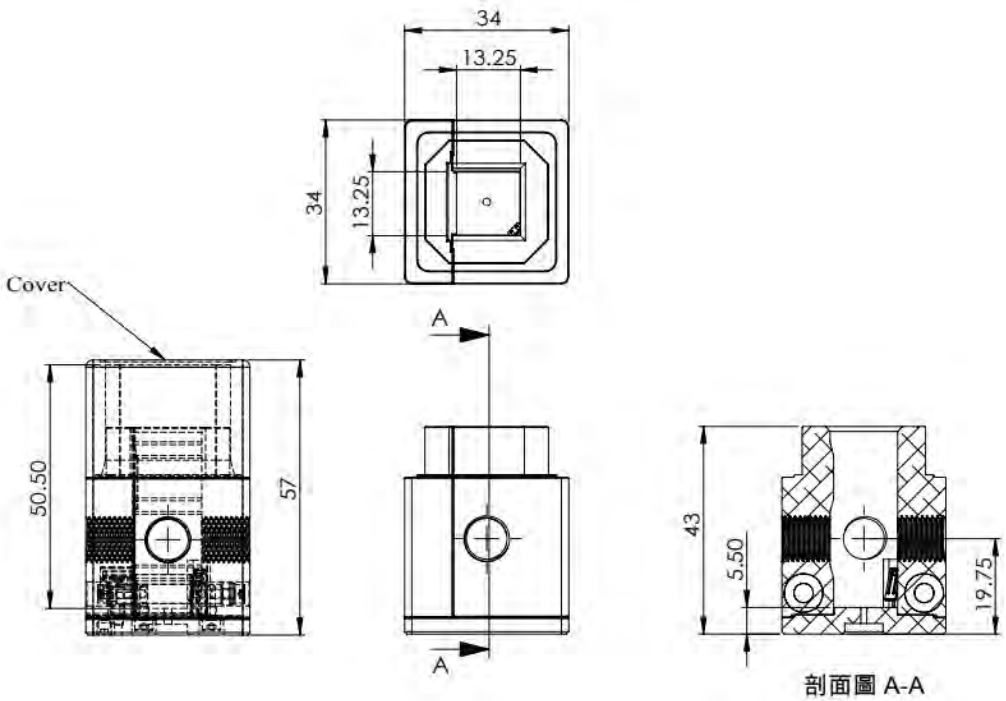
4-way Cuvette Holder_CH-4W

Specification

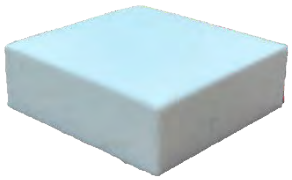
Model	CH-4W
Pathlength	1 mm
Filter Slot	up to 6 mm, screw clamp, 1 slot
Fiber Termination	SMA 905
Adapters	AD-S9 x 3 pcs for SMA905 Optical Fiber
	AD-B x 2 pcs for Blocking Light

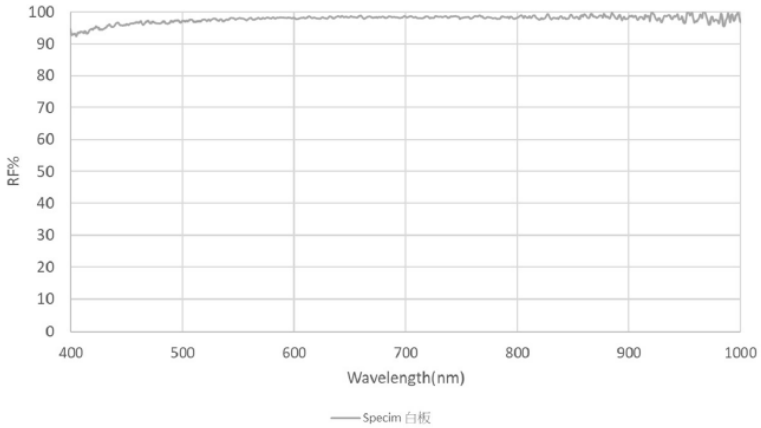


Diffuse Reflectance Standard

The Diffuse standard whiteboard is made of PTFE and is primarily used for optical measurement calibration, such as for standardizing the reflection measurement of object surfaces or calibrating light sources, color, and spectral analysis before measurement. This standard whiteboard provides a reflectance of over 97% in the 400-1000 nm wavelength range, making it an essential accessory for reflection-related measurements.

Dimension (cm)	3 x 3 x 1 (±2.5 mm)
Material	Optical Grade PTFE
Reflectivity	±2%





(nm)	Reflecti -vity	(nm)	Reflectiv -ity	(nm)	Reflectiv -ity	(nm)	Reflectiv -ity	(nm)	Reflectiv -ity	(nm)	Reflect -ivity
400	94.8	500	97.2	600	98.2	700	98.6	800	98.2	900	98.2
410	93.8	510	97.0	610	98.0	710	98.2	810	98.2	910	98.4
420	94.5	520	97.6	620	98.1	720	98.6	820	97.6	920	99.1
430	94.7	530	97.9	630	97.9	730	98.5	830	98.0	930	97.1
440	96.2	540	97.7	640	98.7	740	98.5	840	98.6	940	98.4
450	96.4	550	97.9	650	98.3	750	98.1	850	98.4	950	96.6
460	96.8	560	97.9	660	98.9	760	98.1	860	99.3	960	97.1
470	97.2	570	97.8	670	98.3	770	98.2	870	98.6	970	98.4
480	96.5	580	98.0	680	98.6	780	98.1	880	98.4	980	97.2
490	97.2	590	98.3	690	98.5	790	98.4	890	97.8	990	98.6
										1000	97.0

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Filter Holder

The holder allows users to place various types of filters with a thickness of 2mm. When using this holder with a spectrometer or light source, it needs to be connected through collimator, optical fiber, or fiber-collimator produced by OTO.

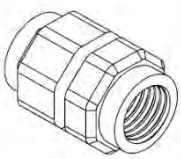
Specification

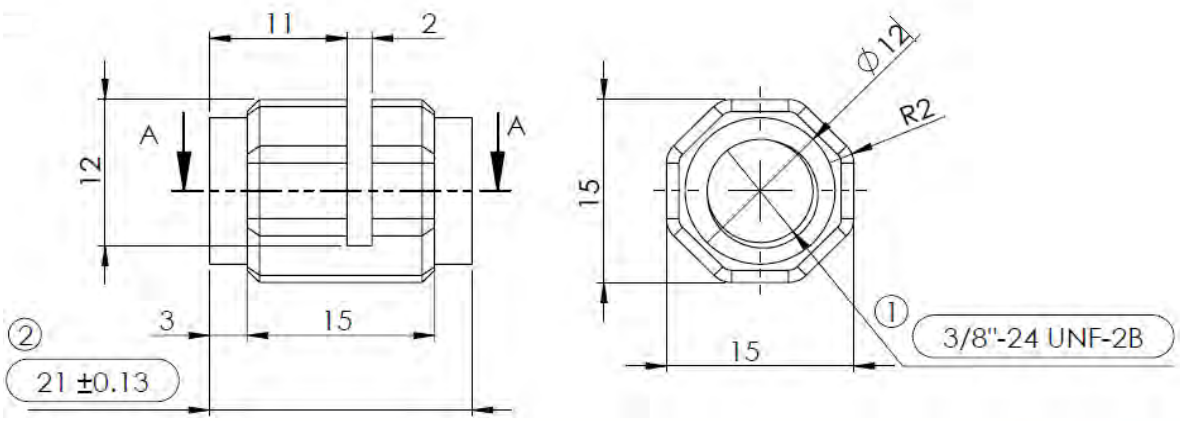
Filter thickness(mm)	2
Dimension(mm)	21 x 15 x 15
Surface treatment	Anodizing Black
Weight(g)	5.18

Filter holder

Filter Holder
connect with collimator

Mechanical Diagram





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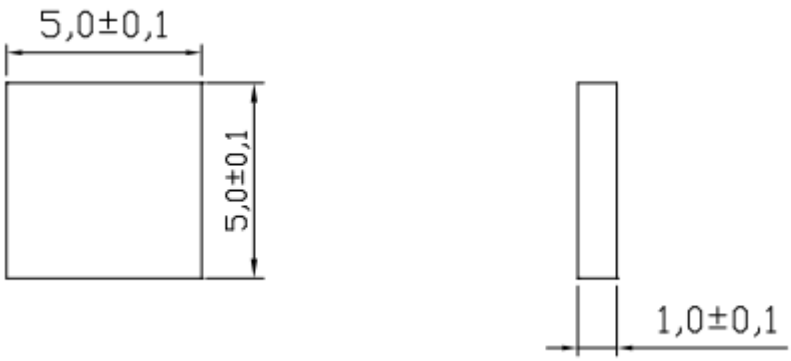
785nm Notch Filter

785nm Notch Filter are key components for highly sensitive Raman spectroscopy. The filter performance is realized by all-dielectric hard coatings deposited onto a single substrate. Low loss, flat transmittance range, and Long-term shift-free spectral performance.

Specification

- Size : 5*5*1mm(±0.1)
- Transition width OD6 50 %T < 160 cm^{-1}
- High transmission T_{abs} > 90% @800-1200nm
  T_{avg}> 90% @800-1500nm
- Blocking wavelength 740nm-785nm T<0.0001%
- Substrate : Fused Slica



Sample Stage DR-M01TR

The Sample Stage is specially designed for optical measurements. There are two kinds of arms, which can respectively support liquid transmission measurement and solid reflection measurement. It is convenient, fast and stable to use. Users can place test tubes or filters and other lenses for measurement, which can be easily meet customer's measurement needs.

Specification

Model	DR-M01TR
Holder Aperture	Φ6.4mm, can hold 6.35mm (1/4 inch) fiber probe, used with immersion Y-fiber optic
Arm length	86.6mm
Collimator arm length	120mm
Pillar height	152mm
Mounting pillar	152mm
Base diameter	Φ155mm

Setup example; It can be customized and set up to meet various measurement requirements of users.

Sample Stage DR-M01TR

DR-M01TR Mechanical Diagram