Fiber holders equipped with an adjustment mechanism for three axes including vertical, horizontal and focus direction. These holders can handle fibers with various connectors by replacing adapters.

- The large slit on the adapter cylinder enables connection of various fiber connectors inside the adapter cylinder.
- It is capable of rotating the polarizing axis of a polarization-preserving fiber for 360 degrees. (See Attention)
- The focus adjustment lever of the 3-axis holder can move the tip of a fiber in the optical axis direction.
- Each adjustment mechanism of the 3-axis holder has a clamp mechanism to fix adjustment positions.
- Adapters compatible with the FC, SMA, and ST connectors of various fibers are available.

Guide

- Fiber holders equipped with tilt and rotational adjustment mechanisms (FOP-2, FOP-2-SMA) are available.

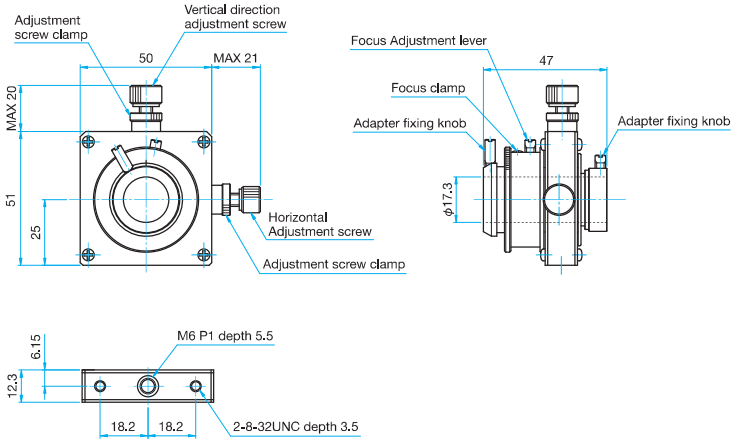
Attention

- Turning the adapter fitted in the 3-axis holder causes the eccentricity of the fiber core. When turning the adapter, please make sure to do the fine adjustment of the XY axes of the holder.
- Pulling a fiber cord hard may cause misalignment of the holder.
- Readjustment is necessary every time a fiber is taken out.
- This product does not come with a post. If a post is necessary, please purchase a post (PO) separately.

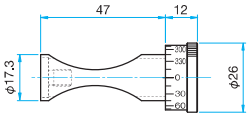
2D CAD 3D CAD

Outline Drawing

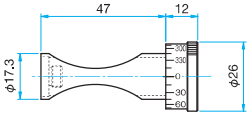
FOM-3 M6 P1



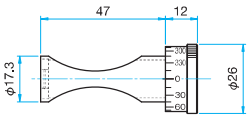
FOM-ADP-SMA



FOM-ADP-FC



FOM-ADP-ST



3-axis Holder

Primary material: Aluminum
Finish: Black Anodized

Part Number	Options specified*	Centering Adjustment Range [mm]	Centering Adjustment Resolution [mm/rotation]	Focus Adjustment Range [mm]	Weight [kg]
FOM-3	**UU**	□2	0.25	±3	0.14

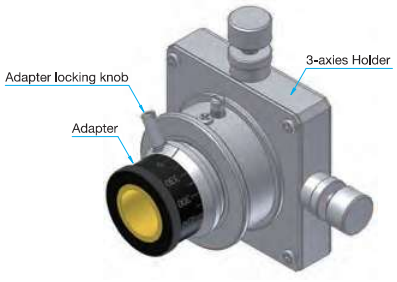
* For specifying options, please refer to "Conversion of Posts, Post Holders and Pedestal Bases of Holders". Reference C007

Adapter

Primary material: Brass
Finish: None

Part Number	Compatible Fiber Connecter	Weight [kg]
FOM-ADP-FC	FC	0.05
FOM-ADP-SMA	SMA	0.05
FOM-ADP-ST	ST	0.044

Attaching the adapter



- Please connect a fiber connector into the adapter cylinder.
- Please insert the adapter into the 3-axis holder, and secure it by using the adapter locking knobs located on both ends of the 3-axis holder.

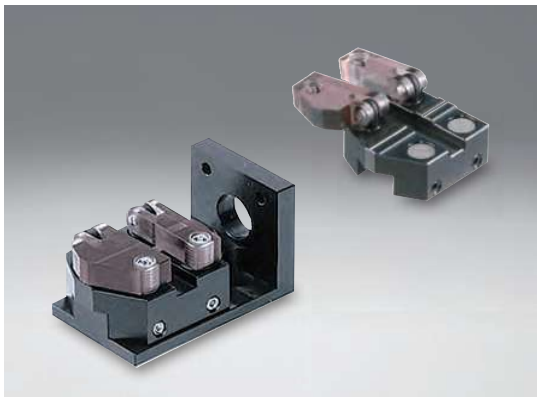
Mini-Fiber Optics Holders | MFH

RoHS

Catalog Code W4523
Catalog Code W4524

Holders used for holding optical fiber strands of various jacket diameters (coating diameters). By replacing the mounting adapters (MFH-ADP), these holders can mount on various stages in addition to two-axis pinholes/objective holders.

- Using the V groove and the resin clamps, these holders hold the tip of an optical fiber where the coating is removed for approximately 15mm. The V groove and the resin clamps also fix the 900µm jacket right next to the portion to immobilize the optical fiber.
- The resin clamps have built-in magnetizable set bolts, and gently fasten an optical fiber by the magnetic force of the magnets of these fiber holders.
- There is a keyway on the bottom of these holders. The keyway can be installed on the keys of various mounting adapters (MFH-ADP) to slide back and forth. The holders are securely fastened on the mounting adapters with set bolts.



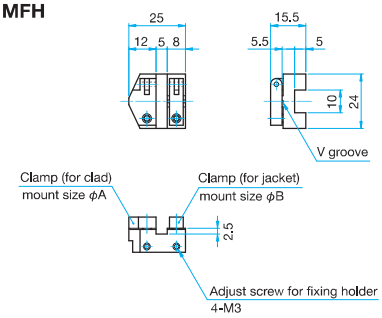
Attention

▶These holders cannot be installed in the fiber alignment systems (DAU). Please contact our International Sales Division for holders for the fiber alignment systems.

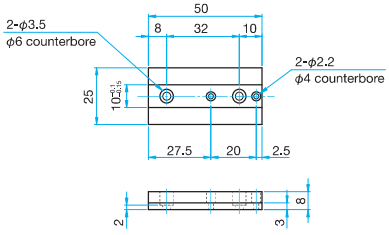
2D CAD 3D CAD

Outline Drawing

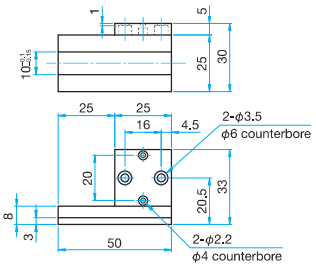
MFH



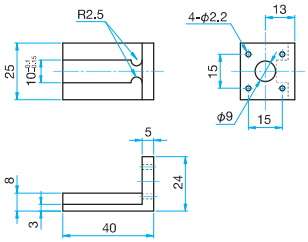
MFH-ADP-1 Pan head screw M2×6…2 screws, Pan head screw M3×6…2 screws



MFH-ADP-2 Pan head screw M2×6…2 screws, Pan head screw M3×6…2 screws



MFH-ADP-3 Pan head screw M2×8…4 screws



Holder			Primary material: Aluminum Finish: Black Anodized
Part Number	Jacket diameter ϕB [µm]	Cladding diameter ϕA [µm]	Weight [kg]
MFH-250	ϕ150 – ϕ250	ϕ60 – ϕ130	0.03
MFH-500	ϕ500	ϕ125 – ϕ250	0.03
MFH-900	ϕ900	ϕ125 – ϕ250	0.03

Adapter		Primary material: Aluminum Finish: Black Anodized
Part Number	Overview	Weight [kg]
MFH-ADP-1	For fixing flat surface (M2, M3 counterbored)	0.02
MFH-ADP-2	For fixing perpendicular (M2, M3 counterbored) to convert the 90 ° orientation	0.03
MFH-ADP-3	For fixing perpendicular (M2 counterbored)	0.03

Holders used for securing and adjusting optical fibers with ferrules (fibers before connectors are attached). When used in combination with the adapter for fiber optics holders (OFH-ADP), these holders can hold ϕ0.3mm to ϕ4mm ferrules.

- Turning the longitudinal direction adjustment knob moves the tip of an optical fiber back and forth, and enables collimation adjustment in combination with the lens.
- There are two types, one type which enables only positioning of optical fibers (OFH-1), and the other type which is also capable of adjusting tilt of optical fibers (OFH-2). There is also the type which is capable of fine adjustment in addition to the forementioned two types of positioning (DM).
- The ferrule of an optical fiber is inserted in the adapter with a slit (OFH-ADP), and then the optical fiber with the adapter is put through these fiber optics holders. Tightening the two set bolts located on the edges of these holders secures the adapter and optical fiber together.

Guide

- Fiber optics holders for FC connectors (FOP) and for SMA connectors (FOP-SMA) are also available. Reference C074
- We can change the post length. Please specify the post length when you place an order, then we will deliver the product after replacing the post with one with your specified length. Because those fiber optics holders use a special post, replacement of the post is at your expense.

Attention

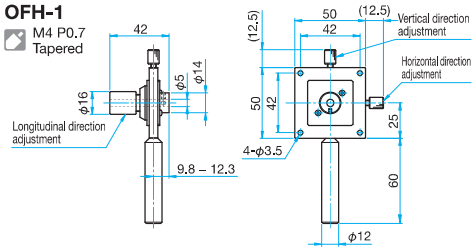
- To transmit light into a single-mode fiber, a minute and fine adjustment mechanism is required. Please contact our International Sales Division for more information.
- We keep these holders in stock, however the adapter for fiber optics holders is produced by order. If you will order the adapter, please check the delivery date of the adapter.
- These holders cannot be used with optical fiber strands without ferrules. Please use the mini-fiber optics holders (MFH). Reference C072

Outline Drawing

2D CAD 3D CAD

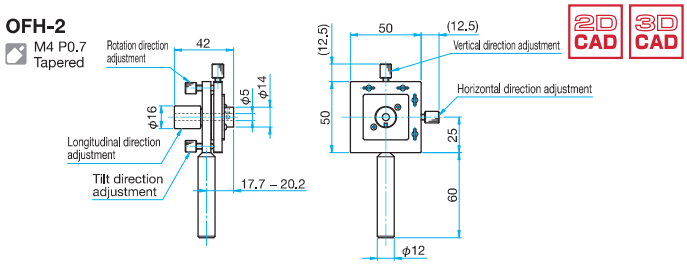
OFH-1

M4 P0.7 Tapered



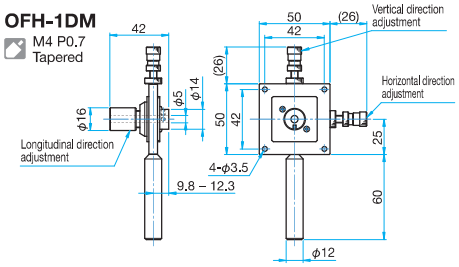
OFH-2

M4 P0.7 Tapered



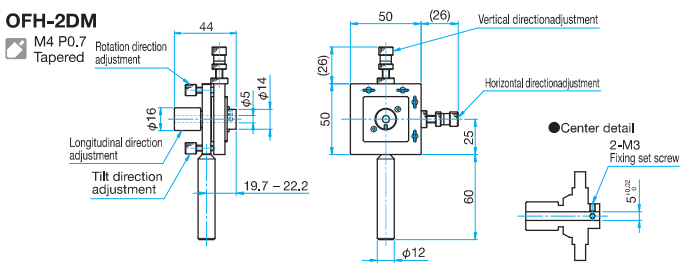
OFH-1DM

M4 P0.7 Tapered



OFH-2DM

M4 P0.7 Tapered



Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Centering Adjustment Range [mm]	Adjustment Range Tilt [°]	Adjustment Range Rotation [°]	Focus Adjustment Range [mm]	Centering Adjustment Resolution [mm]	Centering Fine Adjustment Resolution [mm]	Adjustment Resolution Tilt [°/rotation]	Adjustment Resolution Rotation [°/rotation]	Weight [kg]
OFH-1	±1.25	–	–	±1.25	0.5	–	–	–	0.12
OFH-2	±1.25	±2	±2	±1.25	0.5	–	about 0.7	about 0.7	0.15
OFH-1DM	±1.25	–	–	±1.25	0.5	0.05	–	–	0.14
OFH-2DM	±1.25	±2	±2	±1.25	0.5	0.05	about 0.7	about 0.7	0.17

Adpter for Fiber Optics Holders | OFH-ADP

Catalog Code W4527

We will manufacturer this adapter according to the ferrule diameter of your optical fiber. We can provide this adapter with inner diameter between ϕ0.3 and ϕ4.0 by 0.1mm increments.

Attention

- This adapter is not a slit sleeve for ferrules.

Specifications

Primary material: Delrin
Finish: None

Part Number	Outer Diameter [mm]	Inner Diameter [mm]	Inner Diameter MIN unit [mm]
OFH-ADP	ϕ5	ϕ0.3 – ϕ4.0	0.1

FC Type Fiber Optics Holders | FOP/FOP-DM

RoHS Catalog Code W4521

Two-axis pinholes/objective holders for optical fibers with FC connector. These holders are used for collimating light from a fiber.

- There are two types; the screw type (FOP) which is capable of simple adjustment, and the coarse/fine screw type (FOP-DM) which is capable of fine adjustment.
- There are FOP-1 which only has a two-axis adjustment mechanism and FOP-2 which can minutely adjust the center of the luminance distribution of the collimated beam using a fiber tilt adjustment mechanism.
- The FC receptacles of FC type fiber optics holders can be replaced with the receptacles for SMA type fiber holders (FOP-ADP-SMA) or mini-fiber optics holders (MFH-ADP-3). Reference C072

Guide

- Two-axis pinholes/objective holders for SMA connectors (FOP–SMA) are also available.
- We can change the post length. Please specify the post length when you place an order, then we will deliver the product after replacing the post with one with your specified length. Because those fiber optics holders use a special post, replacement of the post is at your expense.
- These holders will be delivered attached with dummy FC connector. This connector cannot be used for an optical fiber.

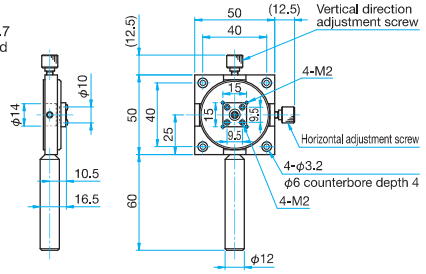
Attention

- Because the end of an FC connector comes up against the receptacle, it is 1.5mm recessed from the end face. When it is necessary to align the end of the FC connector with the end face of the holder, please use the connectors for FC type fiber optics (FLAD).
- If the optical fiber is connected or disconnected once, there is a possibility that the adjustment of the holder will be misadjusted. When an optical fiber is reinserted, the adjustment mechanism of the holder needs to be readjusted.

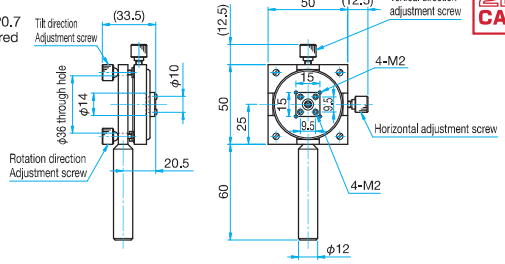
Outline Drawing

2D CAD 3D CAD

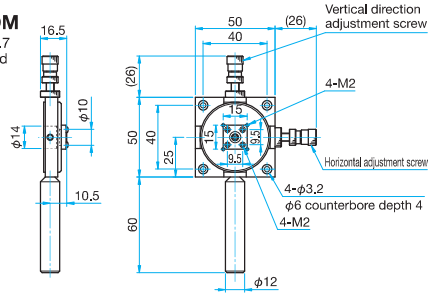
FOP-1
M4 P0.7 Tapered



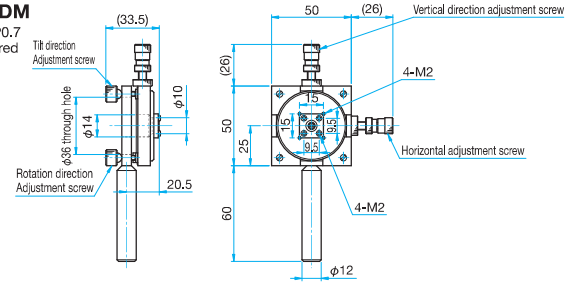
FOP-2
M4 P0.7 Tapered



FOP-1DM
M4 P0.7 Tapered



FOP-2DM
M4 P0.7 Tapered



Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Centering Adjustment Range [mm]	Adjustment Range Tilt Rotation [°]	Centering Adjustment Resolution [mm/rotation]	Centering Fine Adjustment Resolution [mm/rotation]	Micro Indicator Conversion [mm/DIV]	Adjustment Resolution Tilt/Rotation [°/rotation]	Weight [kg]
FOP-1	±1	–	0.5	–	–	–	0.14
FOP-2	±1	±2	0.5	–	–	about 0.7	0.22
FOP-1DM	±1	–	0.5	0.05	0.0025	–	0.15
FOP-2DM	±1	±2	0.5	0.05	0.0025	about 0.7	0.24

Adapters for Ferrule | FOP-ADP/FLAD

Catalog Code W4528

Receptacle for FC connector used for FOP.
It comes with a connector, but requests a professional to connect the connector to a fiber.

Adapter for fixing a fiber with ferrule, the end of FC connector, or various small diameter cylindrical devices, and mounting them on two-axis pinholes/objective holders.

- Tightening the set bolt located on the top of the adapter fastens the ferrule from the side.
- When using this adapter for a nonstandard ferrule or for something other than a ferrule, please make sure that the compatible diameter of the adapter is appropriate for the target diameter.

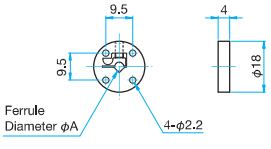
Specifications

Primary material: Aluminum (FLAD)
Finish: Black Anodized (FLAD)

Part Number	Ferrule Diameter φA [mm]	Weight [kg]
FOP-ADP	–	–
FLAD-2.5	φ2.5	0.003
FLAD-3.05	φ3.05	0.003

Outline Drawing

FLAD
hexagon socket head cap screw M2×6…4 screws



SMA Type Fiber Optics Holders | FOP-SMA/FOP-DM-SMA

RoHS Catalog Code W4522

Two-axis pinholes/objective holders for optical fibers with SMA connector. These holders are used for collimating the light from a fiber or for introducing light into a fiber (MMF) such as a small spectroscope.

- There are two types; the screw type (FOP-SMA) which is capable of simple adjustment, and the coarse/fine screw type (FOP-DM-SMA) which is capable of fine adjustment.
- There are FOP-1-SMA which only has a two-axis adjustment mechanism and FOP-2-SMA which can minutely adjust the center of the luminance distribution of the collimated beam using a fiber tilt adjustment mechanism.
- The SMA receptacles of SMA type fiber optics holders can be replaced with the adapters for mini-fiber optics holders (MFH-ADP-3). Reference C072

Guide

- Two-axis pinholes/objective holders for FC connectors (FOP)are also available.
- We can change the post length. Please specify the post length when you place an order, then we will deliver the product after replacing the post with one with your specified length. Because those fiber optics holders use a special post, replacement of the post is at your expense.

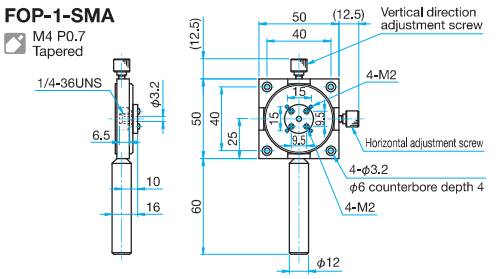
Attention

- If the optical fiber is connected or disconnected once, there is a possibility that the adjustment of the holder will be misadjusted.
- When an optical fiber is reinserted, the adjustment mechanism of the holder needs to be readjusted.
- Because SMA connectors have short nuts, it is hard to tighten them completely with the finger.
- To tighten them securely or to remove them, please use radio pliers or other tools with a thin tip.

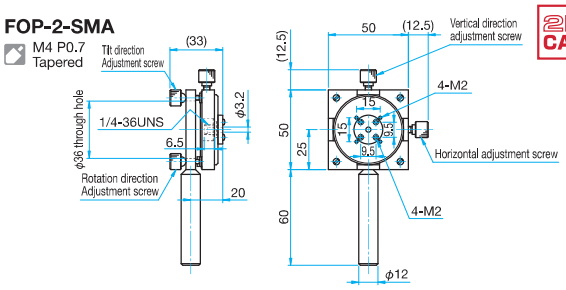
Outline Drawing

2D CAD 3D CAD

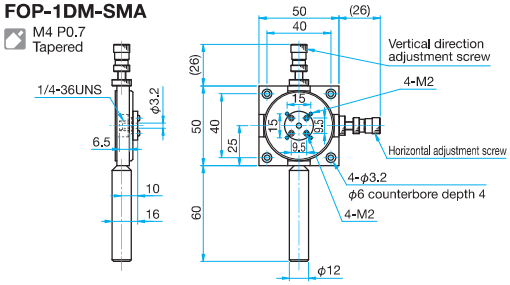
FOP-1-SMA



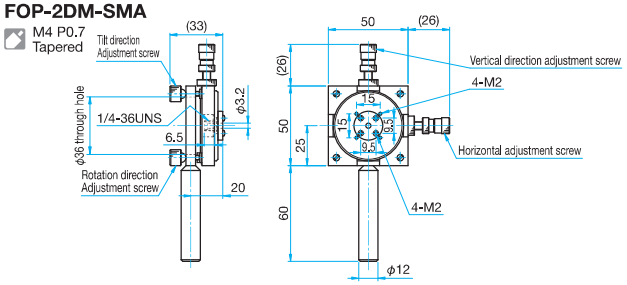
FOP-2-SMA



FOP-1DM-SMA



FOP-2DM-SMA



Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Centering Adjustment Range [mm]	Adjustment Range Tilt Rotation [°]	Centering Adjustment Resolution [mm/rotation]	Centering Fine Adjustment Resolution [mm/rotation]	Micro Indicator Conversion [mm/DIV]	Adjustment Resolution Tilt/Rotation [°/rotation]	Weight [kg]
FOP-1-SMA	±1	–	0.5	–	–	–	0.14
FOP-2-SMA	±1	±2	0.5	–	–	about 0.7	0.22
FOP-1DM-SMA	±1	–	0.5	0.05	0.0025	–	0.15
FOP-2DM-SMA	±1	±2	0.5	0.05	0.0025	about 0.7	0.24

Receptacle for SMA Type Fiber Holder | FOP-ADP-SMA

Catalog Code W4529

Adapter for changing the two-axis pinholes/objective holders for FOP or MFH-FOP to the two-axis pinholes/objective holders for SMA.

Attention

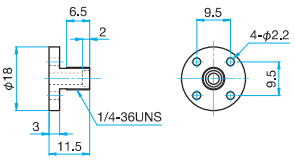
- The position of the tip of an optical fiber differs depending on the type of SMA connector. Please check the specifications of SMA connectors.

Specifications

Part Number	Weight [kg]
FOP-ADP-SMA	<0.003

Outline Drawing

FOP-ADP-SMA — hexagon socket head cap screw M2×6…4 screws



Laser Forcasing Holder | FOPT

RoHS Catalog Code W4526

These holders convert the diverging ray from an optical fiber with FC or SMA type connector to a collimated beam using an objective lens.
These holders can adjust the divergence, outgoing direction, and center position of the luminance distribution (fiber rotation and tilt) of a beam.

- The objective lenses used in these holders have short focal length (OBL-10) so that collimated light with small beam diameter can be obtained.
- The objective lenses used in these holders are for microscope so that high transmittance and high performance (spherical aberration) can be obtained in the visible light range.
- When used with a single-mode fiber, these holders can gain a collimated beam with Gaussian distribution.

Guide

- We can change the post length. Please specify the post length when you place an order, then we will deliver the product after replacing the post with one with your specified length. Replacement of the post is free of charge, but we may charge the difference in price depending on the length. Please contact our International Sales Division for more information.
- These holders will be delivered attached with dummy FC connector. This connector cannot be used for an optical fiber.

Attention

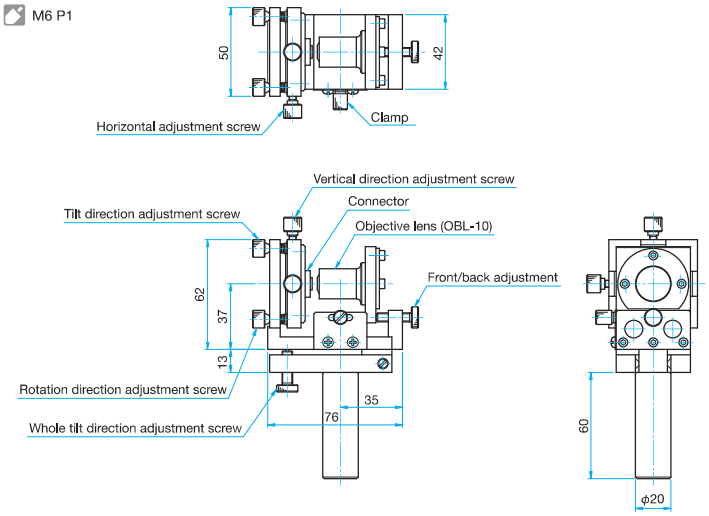
- To transmit light into a single-mode fiber, a precise adjustment mechanism is required. Please contact our International Sales Division for more information.
- Some types of connectors are difficult to mount on the receptacles of two-axis pinholes/objective holders.
- The collimated beam diameter changes depending on the NA of the fiber. Generally, beam diameter D is found with the following formula.
  D = 2 × NA × f
  f: Focal length of objective lens, NA: Numerical aperture of fiber

2D CAD 3D CAD

Outline Drawing

FOPT

M6 P1



Specifications

Primary material: Aluminum
Finish: Black Anodized

Part Number	Compatible Connector	Focal length Objectives Lens [mm]	Centering Adjustment Range [mm]	Focus Adjustment Range [mm]	Fiber Adjustment Range Tilt/Rotation [°]	Holder Adjustment Range Tilt [°]	Centering Adjustment Resolution [mm/rotation]	Fiber Adjustment Resolution Tilt [°/rotation]	Fiber Adjustment Resolution Rotation [°/rotation]	Holder Adjustment Resolution Tilt [°/rotation]	Weight [kg]
FOPT-FC	FC	16.6	±1	±5	±2	±2.5	0.5	about 0.7	about 0.7	about 0.53	0.55
FOPT-SMA	SMA	16.6	±1	±5	±2	±2.5	0.5	about 0.7	about 0.7	about 0.53	0.55