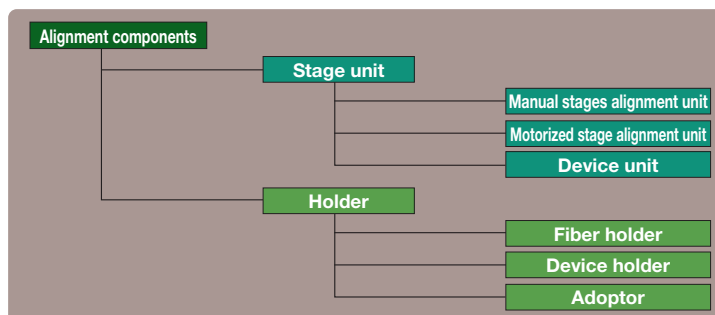


Alignment Components

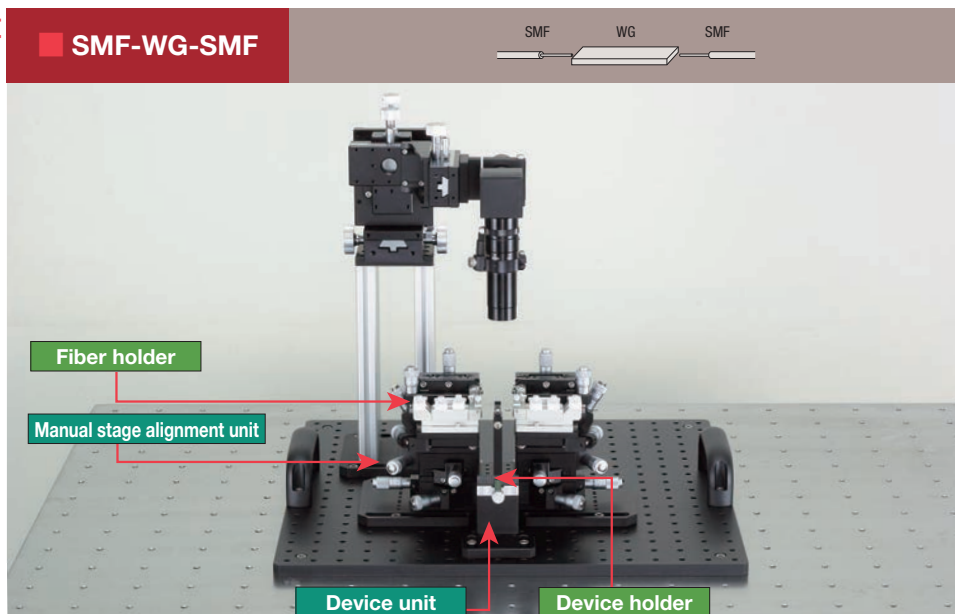


Introduces core components that required alignment such as stage unit and holders to use in WG and LD/PD alignment.

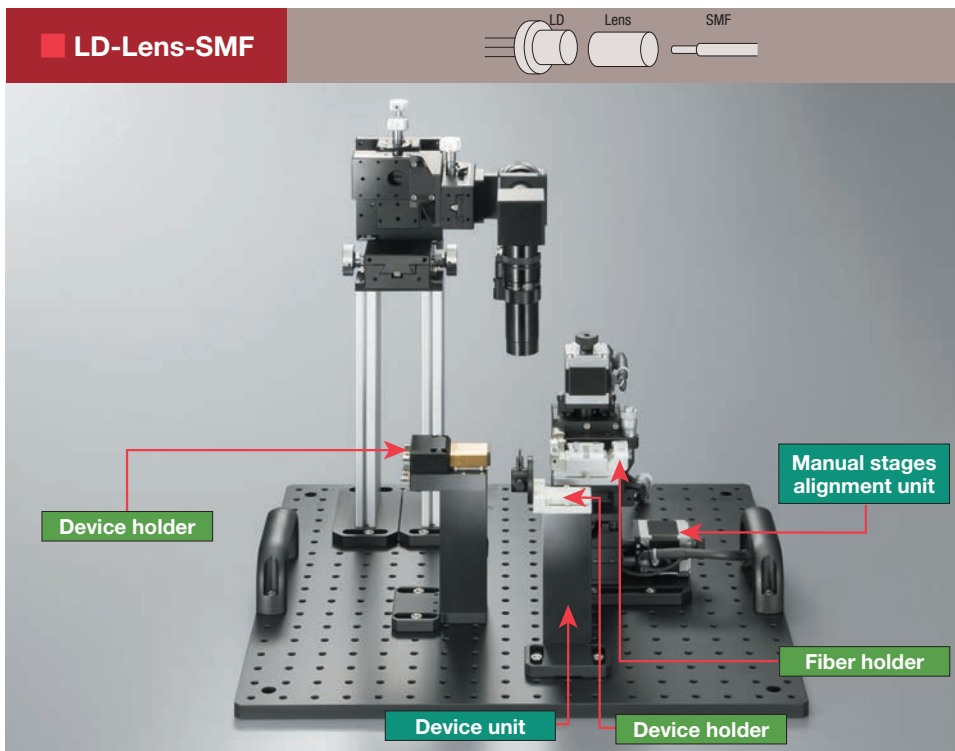


Component Cases:

■ SMF-WG-SMF









■ LD-Lens-SMF





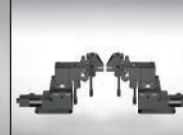









▶ Guidance for stage unit···P.4-011







▶ Guidance for holder······P.4-013







Alignment Components Lineup


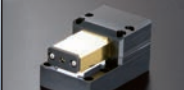




Manual stage alignment unit					Motorized stage alignment unit	
Type of product	Alignment unit (3-axis)	Alignment unit (5-axis)	Alignment unit (5-axis) symmetrically opposite	Alignment unit (6-axis)	Alignment unit (3-axis) upper free	Alignment unit (3-axis)
Model	E2000S	E2000	E2001	E2200B	ES3700	ES3001
Appearance						
Page	P.4-017	P.4-017	WEB	P.4-018	P.4-019	P.4-019

Motorized stage alignment unit					Device unit	
Type of product	Alignment unit (3-axis) 8°	Alignment unit (4-axis)	Alignment unit (5-axis)	Alignment unit (6-axis) upper free	Alignment unit (6-axis)	Fixing device unit
Model	ES3800	ES4001	ES5201	ES6701	ES6201	E1000
Appearance						
Page	P.4-020	P.4-021	P.4-021	P.4-022	P.4-023	P.4-024

Fiber holder						
Type of product	Fiber holder	Fiber holder for proximity	Rotation fiber holder	Automatic rotation fiber holder	Automatic rotation fiber holder for proximity	Fiber array holder
Model	F260	F263	F264	FS266	F265	F267
Appearance						
Page	P.4-024	P.4-024	P.4-025	P.4-026	P.4-027	P.4-027

Fiber holder						
Type of product	FC connector holder	Ferrule holder	Fiber holder with lens	Preset base	Preset style fiber holder	Preset style V groove holder
Model	F261	F262	F268	E300	E310	E330
Appearance						
Page	P.4-028	P.4-028	P.4-029	P.4-029	P.4-030	P.4-030

Fiber holder			Device holder			
Type of product	Preset style FA holder	WG holder	WG holder	Preset style WG holder	Temperature control WG holder	Objective lens holder
Model	E340	F270/F271	F272/F273	E400/E410	F274	F280/F281
Appearance						
Page	P.4-031	P.4-032	P.4-033	P.4-034	P.4-036	P.4-036

Device holder			Adaptor			
Type of product	Selfoc ® lens holder	LD holder	Bracket for element adaptor	Holder adaptor	2-axis tilt table	Tilt stage
Model	F290	F125	A54	F270/PB	EB55	B50/B51/B53
Appearance						
Page	P.4-037	P.4-037	P.4-038	P.4-038	P.4-039	P.4-039

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment

Stage Unit Guidance

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

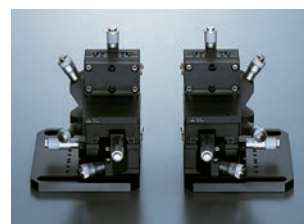
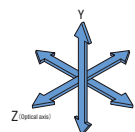
LD/PD alignment

Alignment Unit

Manual stage alignment unit (3-axis)

E2000S series

E2000 is a 3-axis unit with the high resolution manual stage (XYZ). E2000S is sufficient if tilt alignment ($\theta_x\theta_y$) is not required. It is the type that a tilt stage of the E2000 series became the L-shaped bracket.

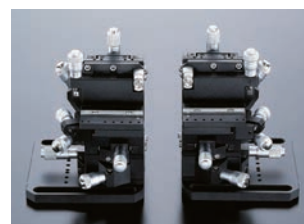
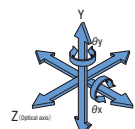


▶ P.4-017

Manual stage alignment unit (5-axis)

E2000/
E2001 series

E2000/E2001 series is 5-axis unit with the high resolution manual stage (XYZ) and tilt stage ($\theta_x\theta_y$). This is a perfect choice for the single core device alignment, focusing manual operations. E2001 is the symmetrically opposite XY axis of E2000.

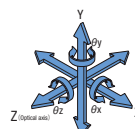


▶ P.4-017

Manual stage alignment unit (6-axis)

E2200 series

E2200 series is 6-axis unit which consists of the high resolution manual stage (XYZ), tilt stage ($\theta_x\theta_y$) and goniometer stage (θ_z). This is the most efficient unit for the multi core devices, which require rotation control as fiber array or an optical waveguide.

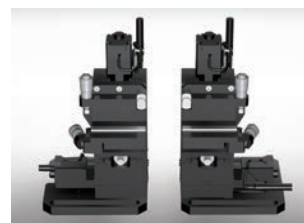
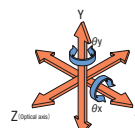


▶ P.4-018

Motorized stage alignment unit (3-axis)

ES3001/
ES3700 series

This is combination unit of motorize XYZ + manual tilting ($\theta_x\theta_y$) stages, and motorize stages are easy use for the single core ES3700 series is the best choice for combining visual system due to enough space on the above.

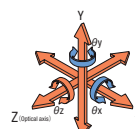


▶ P.4-019

Motorized stage alignment unit (4-axis)

ES4001 series

ES4001 series is the unit of ES3001(Z axis) + goniometer stage (θ_z). This is the most efficient unit for the multi core devices, which require rotation control as fiber array or an optical waveguide.

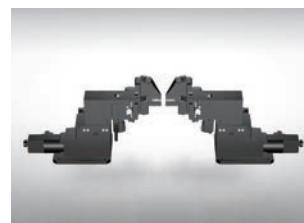
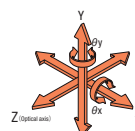


▶ P.4-021

Motorized stage alignment unit (5-axis)

ES5201 series

This is the linier motorized XYZ stages + tilt ($\theta_x\theta_y$) stages. This is a perfect choice for the alignment of single core devices.

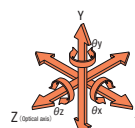


▶ P.4-021

Motorized stage alignment unit (6-axis)

ES6201/
ES6701 series

ES6201/ES6701 series is the unit of linier motorized XYZ stages + tilt ($\theta_x\theta_y\theta_z$) stages. This is suitable for many devices, such as single mode fiber, fiber array, optical waveguide or many optical elements, require to align 6 directions. ES6701 series is the best choice for combining visual system due to enough space on the above.

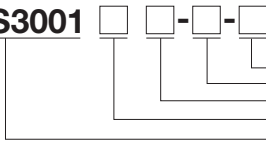


▶ P.4-022

▶ General purpose alignment control system: DA200MP series : P.4-063

Model/Option

ES3001



- 5 : Y axis angular option 8A/8B
 4 : Select L type/R type L/R
 3 : Select a tilt stage
 2 : Overhang option W
 1 : Base type

1.Base type

The base type for stage unit.

2.Overhang option W

Attachable tilt stage in overhang to the optical axis direction with overhang plate when it is difficult to close the device due to the interference of stage.

(See WEB for details)

3.Select a tilt stage

Select a tilt stage. (P.4-039)

A=Inner tilt stage (B50) The center of rotation is in inside.

B=Outer tilt stage (B51) The center of rotation is in outside.

4.Select L type/R type L/R

Select a L/R of stage unit.

5.Y axis angular option 8A/8B

Used for a device end-face which is cut 8 degree.

The Y axis stage can be traveled in 8 degree tilt.

There are A/B type according to cutting.

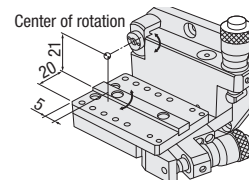
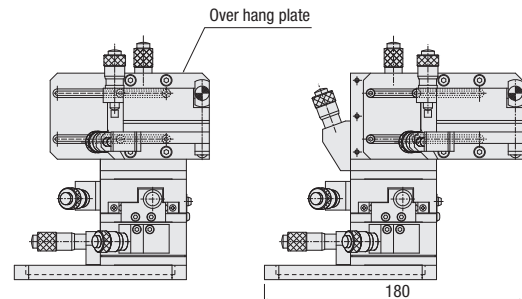
6.Others

Removable a fixation bracket instead of a tilt stage in E2000S.

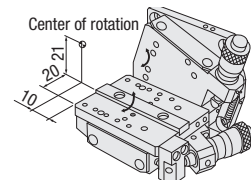
(See WEB for details)

Can change the stage stroke depends on model types

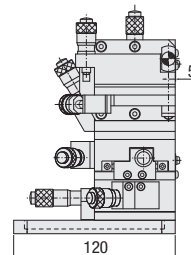
in ES5201/ES620 series. (Option「10」「20」P.4-021, 023)



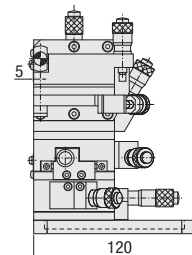
A:Inner tilt



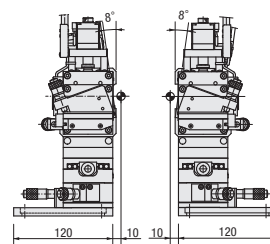
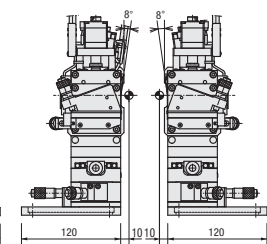
B:Outer tilt



L type



R type

ES3800-8A
(L/R 1set Model)ES3800-8B
(L/R 1set Model)

Correspondence table

	1.Base type	2.Overhang option W	3.Select a tilt stage		4.Select L type/R type		5.Y axis angular option		6.Others
		W	A	B	L	R	8A	8B	
Manual stages alignment unit (3-axis)	E2000S				○	○	△	△	No bracket, available option
Manual stages alignment unit (5-axis)	E2000	○	○	○	○	○	△	△	
	E2001	○	○	○	○	○	△	△	
Manual stages alignment unit (6-axis)	E2200	○	△	○	○	○	△	△	
	ES3001	○	○	○	○	○			
Motorized stage alignment unit (3-axis)	ES3700				○	○			
	ES3800						○	○	L/R 1set Model
Motorized stage alignment unit (4-axis)	ES4001	○	○	○	○	○			
Motorized stage alignment unit (5-axis)	ES5201				○	○	△	△	Available stroke change option
	ES6201				○	○	△	△	Available stroke change option
Motorized stage alignment unit (6-axis)	ES6701				○	○			

○ : Catalog standard △ : Custom-designed — : Without setup

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment

Holder Guidance

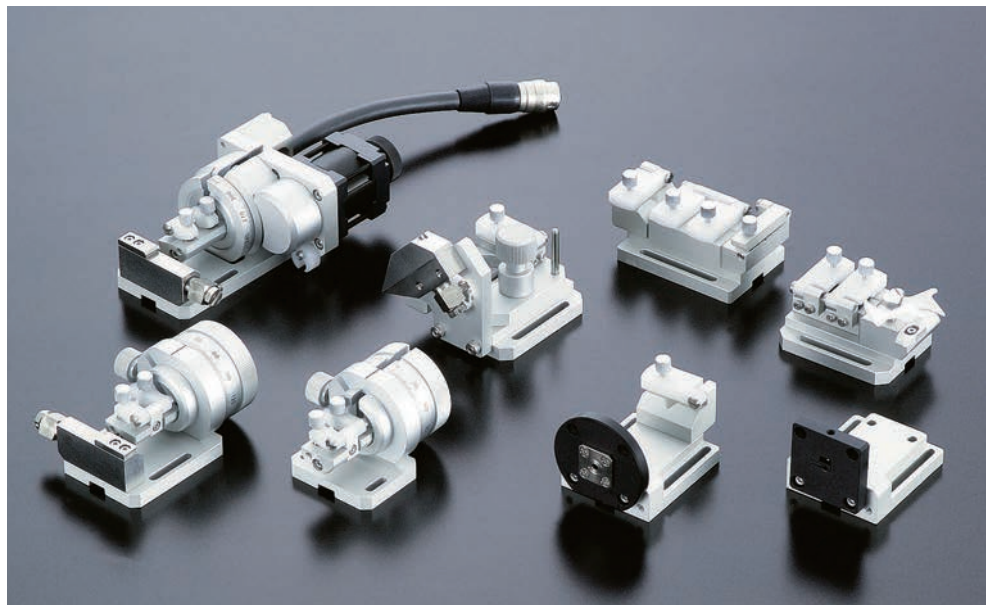
Fiber holder

Market of optical communications is required high accuracy.

The holders are designed with high accuracy but easy handling for detachable.

You can select your holders based on your meeting specs.

▶ Select a fiber from P.3-150



	Fiber holder						
	Fiber holder	Fiber holder for proximity	Rotation fiber holder		Automatic rotation fiber holder		Automatic rotation fiber holder for proximity
Appearance							
Uses							
Model	F260	F263	F264	F264N	FS266	FS266N	F265
Page	P.4-024	P.4-024	P.4-025	P.4-025	P.4-026	P.4-026	P.4-027

	Fiber holder			
	Fiber array holder	FC connector holder	Ferrule holder	Fiber holder with lens
Appearance				
Uses				
Model	F267	F261	F262	F268
Page	P.4-027	P.4-028	P.4-028	P.4-029

	Fiber holder (preset style)			
	Preset base	Preset style fiber holder	Preset style V groove holder	Preset style FA holder
Appearance				
Uses				
Model	E300	E310	E330	E340
Page	P.4-029	P.4-030	P.4-030	P.4-031

■ All holders can be mounted on the tilt tables and stages.

All holders have key groove to match the rotating center and optical axis. Mount on the tilt stage operates easily with M3 screw x 2pcs.

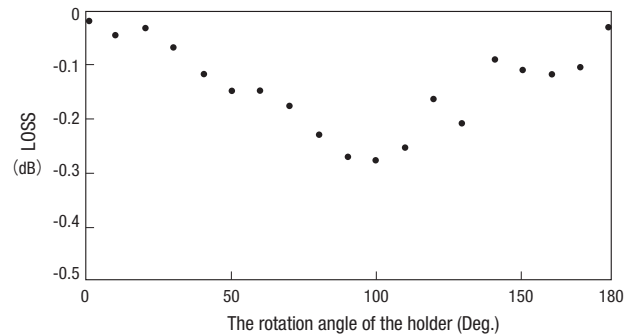
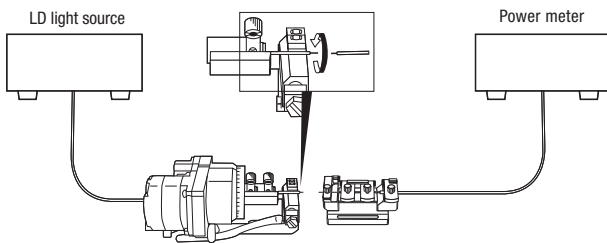


Deviation of the power loss related rotating angle

Fibers are fixed by rotating holer (left-hand side) and normal holder (right-hand side) and traveling angle of the rotating holder.

(Fiber=1.3μm SMF, 10μm core diameter)

Measurement optical system

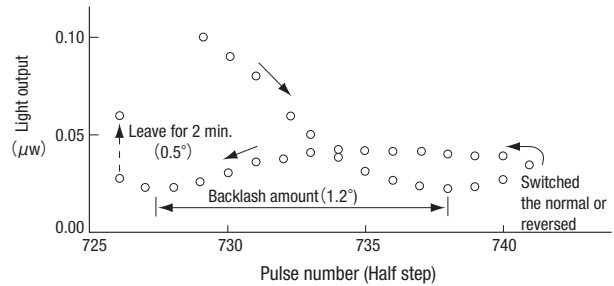
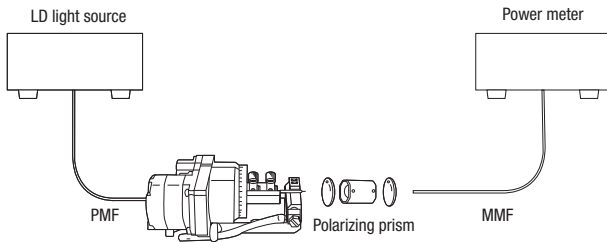


Deviation of the time position related backlash

Fibers may distort in the part of clad and jacket. Backlash may occurs in the time of changeover the forward reserve Backlash may occurs in the time of changeover the forward reserve.

Temporal change of rotation angle may occur because twisted will return to average levels with time.

Measurement optical system



Controller

Motorized rotary fiber holder used

5 phase stepping motor for rotation.

Our controller DS102/DS112 are

recommended for FS266 holder driving.

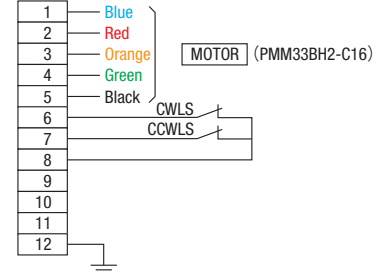
▶ Controller DS102/112: P.1-189

▶ General purpose alignment control system: DA200MP series: P.4-063



Connector HR10A-10J-12P

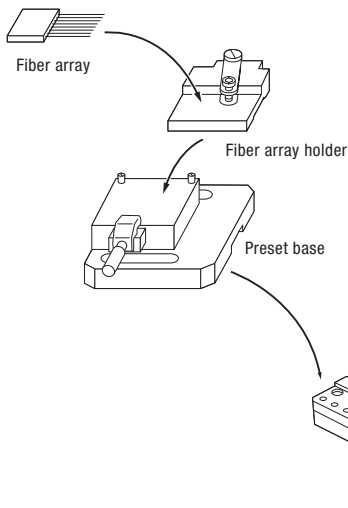
Connection diagram



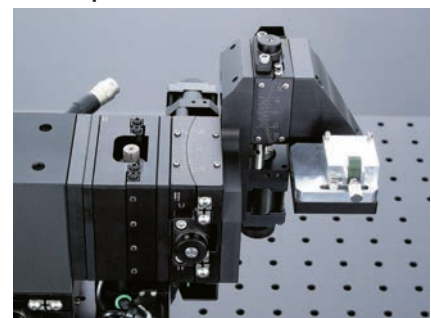
Pre-set type holder

The pre-set type holder is mounted on pre-set base.

Quick-release with mounting a positioning pin and clamp, and also it is good for the reproducibility of the position.



Example

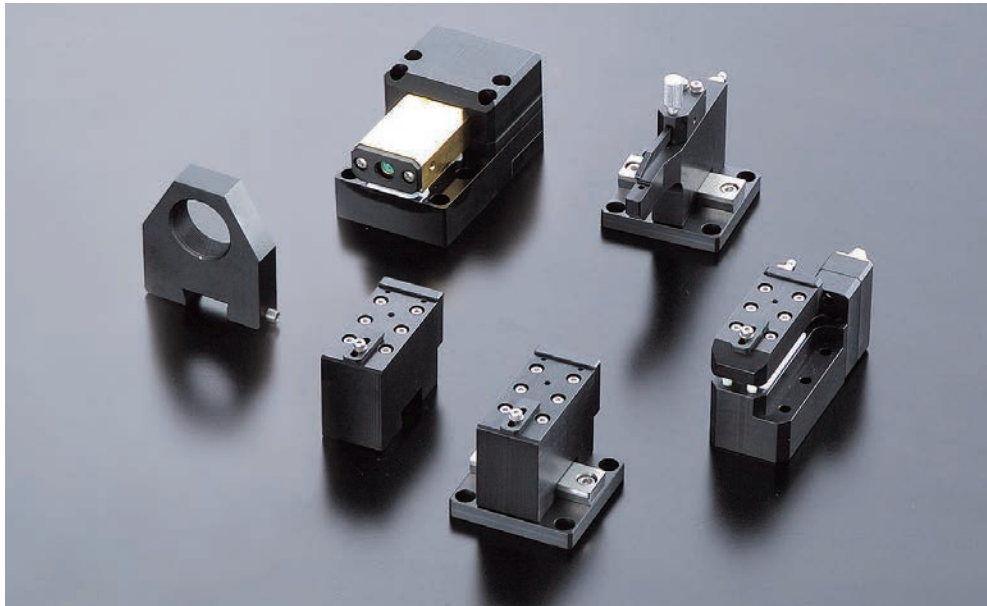










Holder Guidance







Device holder


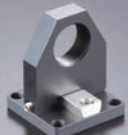

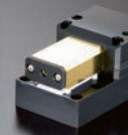




There are variety of fiber device for alignment.

The device holder is designed for fixing it to the device unit and can be aligned accurately.



	Device holder			
	WG holder			
Appearance				
Uses				
Model	F270	F271	F272	F273
Page	P.4-032	P.4-032	P.4-033	P.4-033

	Device holder (preset style)		Device holder
	Preset style WG holder		Temperature control WG holder
Appearance			
Uses			
Model	E400	E410	F274
Page	P.4-034	P.4-035	P.4-036

	Device holder			
	Objective lens holder		Selfoc lens @holder	LD holder (TO-Package model)
Appearance				
Uses				
Model	F280	F281	F290	F125
Page	P.4-036	P.4-036	P.4-037	P.4-037

■ Mount to the device unit

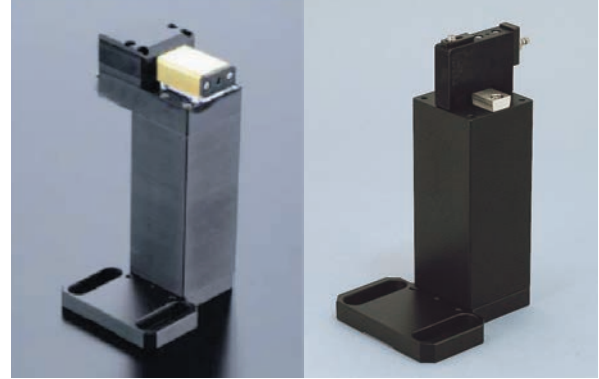
The device holder is designed for mounting the device unit (E1000).

※In case of the bottom is screwed, should be removed key-plate of the device.



Device unit

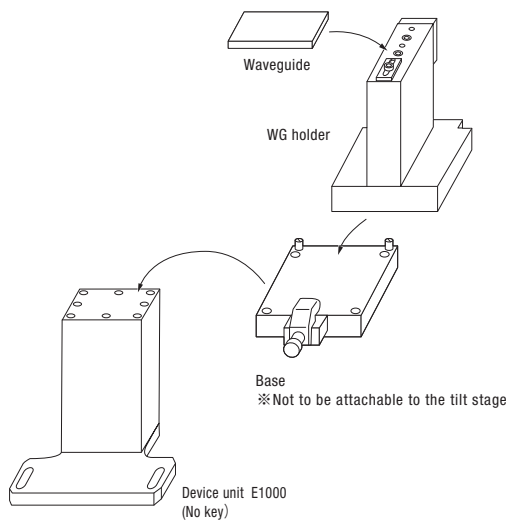
■ Device holder application example



■ Pre-set style holder

The pre-set holder should be mounted to the pre-set base.

It is easy to take off and on with mounting a positioning pin and clamp, and also it is good for the reproducibility of the position.



■ Example



■ Holder adaptor

This adaptor is for the device holder.

It is designed so that the optical axis height becomes 80mm by adding F270-PB10/20/26 adaptor to the device holder.

This adaptor can be helped in order to avoid any interference of the alignment.



Holder adaptor

■ Holder adaptor usage example



Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

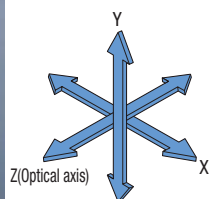
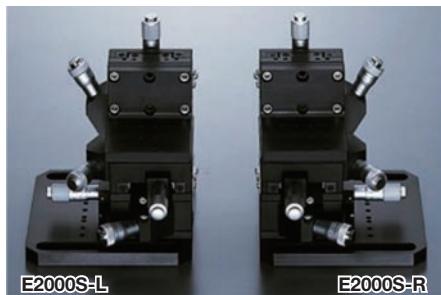
LD/PD alignment

Manual Stage Alignment Unit (3-axis): E2000S

CAD
2D

RoHS

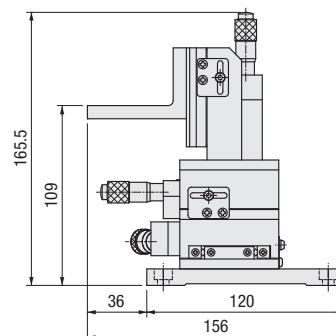
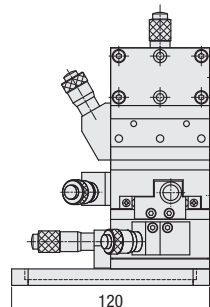
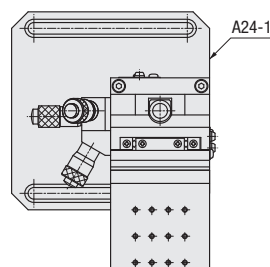
- E2000 is a 3-axis unit with the high resolution manual stage (XYZ).
- If tilt alignment (θ_x, θ_y) is not required, E2000S is sufficient.
- It is the type that a tilt stage of the E2000 series became the L-shaped bracket.



Dimensional outline drawings

E2000S-L

See WEB for R type external dimension



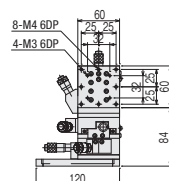
SPEC								
		X	Y	Z	θ_x	θ_y	θ_z	Weight
L	E2000S-L	B10-60LN	B30-60LK	B10-60RN	—	—	—	1.9kg
R	E2000S-R	B10-60RN	B30-60RK	B10-60LN	—	—	—	
Travel distance		Coarse motion : $\pm 6.5\text{mm}$ Fine motion : $\pm 0.3\text{mm}$			—			/
Resolution		Coarse motion : $10\mu\text{m}/\text{scale}$ Fine : $0.5\mu\text{m}/\text{scale}$			—			
Optical axis height				130mm				

Accessory: Installation screws (Hexagon socket head 4 of M6-12)

Model/Option

E2000S O - L R

L : Left type, R : Right type
Blank : Normal, O : No bracket
Unit base model number



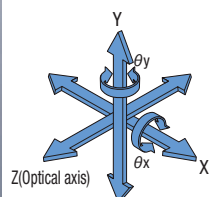
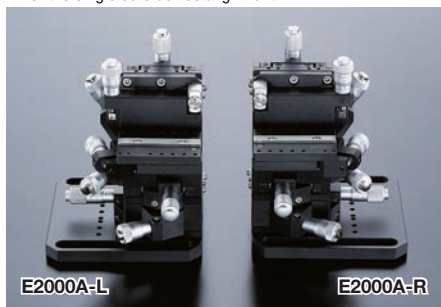
E2000S0-L
Available non-holder bracket type

Manual Stage Alignment Unit (5-axis): E2000

CAD
2D

RoHS

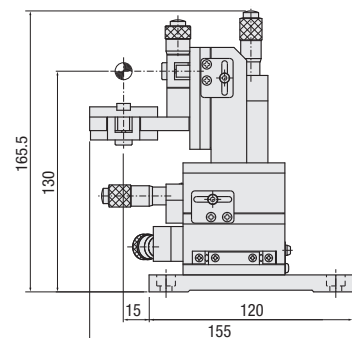
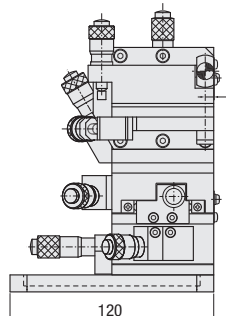
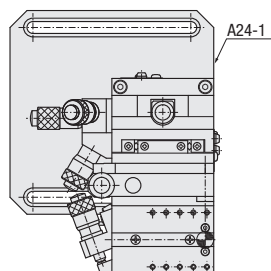
- E2000 series is 5-axis unit with the high resolution manual stage (XYZ) and tilt stage (θ_x, θ_y).
- This is developed for the manual alignment unit, so that it is the perfect choice for the single core device alignment.



Dimensional outline drawings

E2000A-L

See WEB for R type external dimension



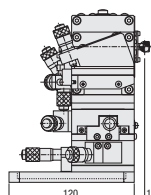
SPEC								Weight
		X	Y	Z	θ_x	θ_y	θ_z	
L	E2000A-L	B10-60LN	B30-60LK	B10-60RN	B50-60LN	—	—	2.1 kg
R	E2000A-R	B10-60RN	B30-60RK	B10-60LN	B50-60RN	—	—	
Travel distance		Coarse motion : $\pm 6.5\text{mm}$		Fine motion : $\pm 0.3\text{mm}$		$\pm 3^\circ$		
Resolution		Coarse : $10\mu\text{m}/\text{scale}$		Fine : $0.5\mu\text{m}/\text{scale}$		$33.8^\circ/\text{scale}$ $33.4^\circ/\text{scale}$		
Optical axis height		130mm						

Accessory: Installation screws (Hexagon socket head 4 of M6-12)

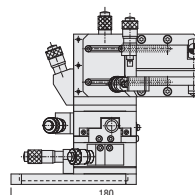
Model/Option

E2000 W B - A L R

L : Left type, R : Right type
A : Inner tilt, B : Outer tilt
Blank : Normal, W : Over hang type
Unit base model number



E2000B-L
(Outer tilt)



E2000WA-L
(Over hang type)

Available outer tilt and over hang type

Guidance

WG
alignment

LD/PD
alignment

Alignment
components

Manual
alignment unit

Motorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meter

Accessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unit

CCD
camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment
system

Alignment
controller

WG
alignment

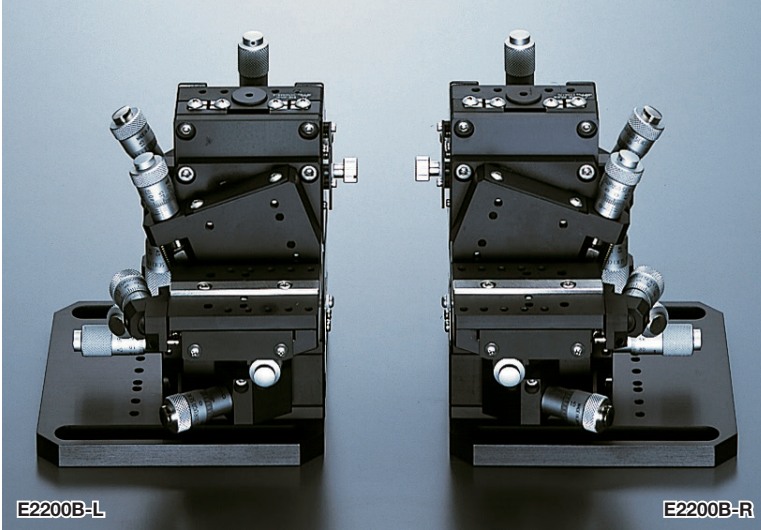
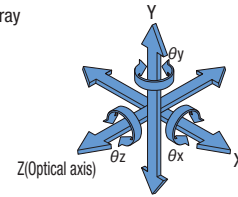
LD/PD
alignment

Manual Stage Alignment Unit (6-axis): E2200B

CAD
2D

RoHS

- 2200 series is 6-axis unit, which consist of the high resolution manual stage, tilt stage and goniometer stage.
- This is the most effective unit for multi core device alignment, which need rotation control of optical axis such as fiber array and an optical waveguide.
- Available an inner-tilt type. Please contact us for detail.

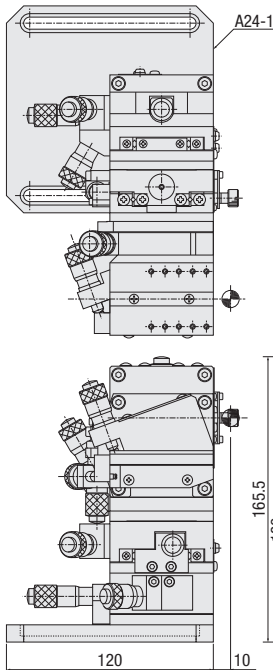


E2200B-L

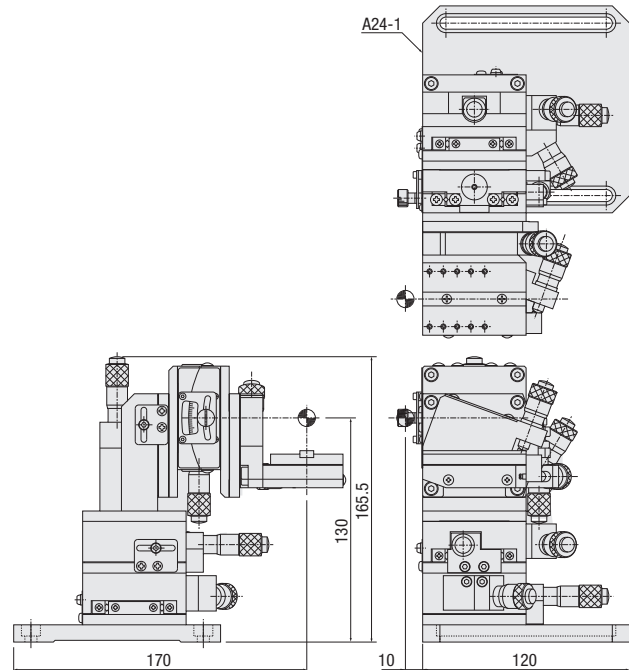
E2200B-R

Dimensional outline drawings

E2200B-L



E2200B-R

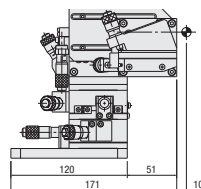


SPEC							
		X	Y	Z	θ_x	θ_y	θ_z
L	E2200B-L	B10-60LN	B30-60LK	B10-60RN	B51-60LN	B58-60UC	
R	E2200B-R	B10-60RN	B30-60RK	B10-60LN	B51-60RN	B58-60UCR	
Travel distance		Coarse motion : $\pm 6.5\text{mm}$ Fine motion : $\pm 0.3\text{mm}$			$\pm 2.5^\circ$		$\pm 4^\circ$
Resolution		Coarse : $10\mu\text{m}/\text{scale}$ Fine : $0.5\mu\text{m}/\text{scale}$			$29.3''/\text{scale}$	$27.8''/\text{scale}$	$33''/\text{scale}$
Optical axis height		130mm					

Model/Option

E2200 W B- L R

L : Left type, R : Right type
Blank : Normal, W : Over hang type
Unit base model number



E2200WB-L

Available over hang type

Accessory: Installation screws (Hexagon socket head 4 of M6-12)

Optical fiber alignment

Guidance

WG
alignmentLD/PD
alignment

Alignment components

Manual
alignment unitMotorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meterAccessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unitCCD
camera

Monitor

Lighting

UV equipment

Pump

Probe

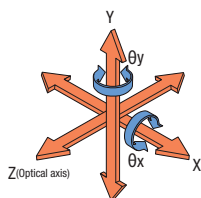
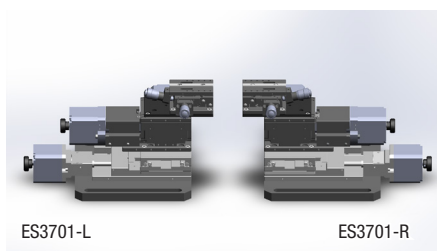
Alignment
systemAlignment
controllerWG
alignmentLD/PD
alignment

Motorized Stage Alignment Unit (3-axis):ES3701

CAD
2D·3D

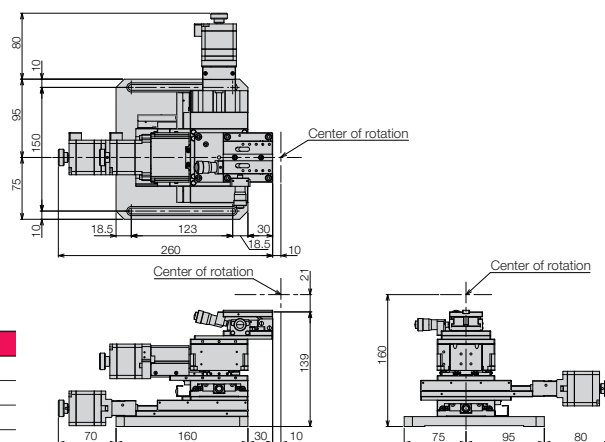
RoHS

- This is the unit which designed for integration of the motorized stage into the XYZ axis.
Also the attitude adjustment of tilt ($\theta_x\theta_y$) can be controlled by the manual axis.
- It supports the motorized alignment of the single core device application.
- ES3701 series is the best use for near focusing with a microscope and probe because there is enough space on a top.



Dimensional outline drawings

ES3701



SPEC					
L type		ES3701-L			
R type		ES3701-R			
Com-position	Axis	X	Y	Z	θ_x θ_y
	ES3701-L	EKT4-50R2(※)	EKS3-10L(※)	EKT4-50L2(※)	EB55-1L
	ES3701-R	EKT4-50L2(※)	EKS3-10R(※)	EKT4-50R2(※)	EB55-1R
Travel distance		50mm	10mm	50mm	$\pm 2.5^\circ$
Optical axis height		160mm			
Resolution		1 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/20)	0.5 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/10)	1 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/20)	approx.0.58°/rotation approx.0.57°/rotation
MAX speed		10mm/sec	5mm/sec	10mm/sec	- -
Repeatability positioning accuracy		$\pm 0.5\mu$ m	$\pm 0.5\mu$ m	$\pm 0.5\mu$ m	- -
Load capacity		0.3kgf			
Weight		5.5kg			
Accessory		Motor cable(D214-2-2E)、Installation screws(Hexagon socket head 4 of M6-12)			
Remarks		※ Dedicated stage for alignment The repeatability positioning accuracy is tested in a single-axis state.			

Example proximity probe

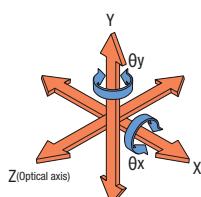
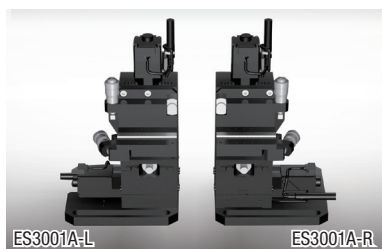


Motorized Stage Alignment Unit (3-axis):ES3001

CAD
2D·3D

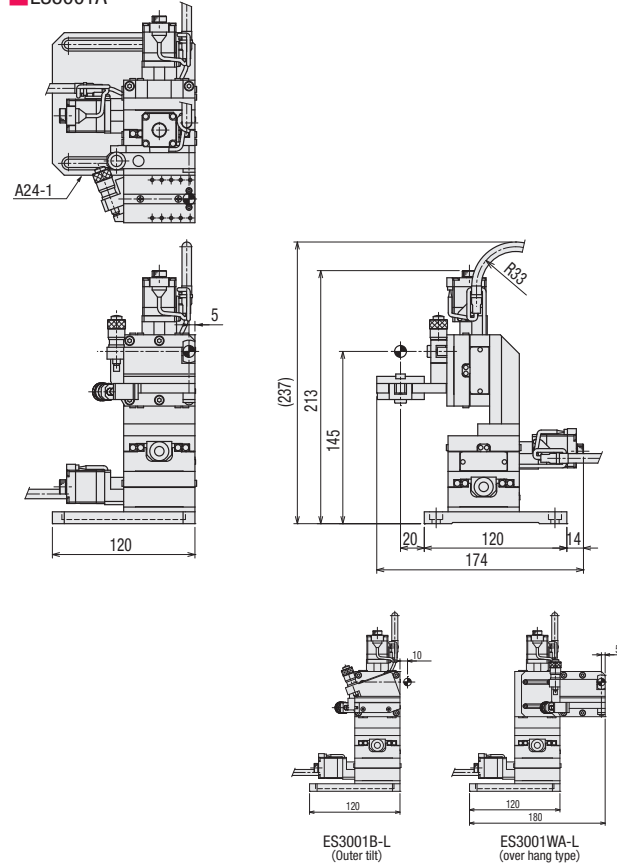
RoHS

- This is the unit which designed for integration of the motorized stage into the XYZ axis.
Also the attitude adjustment of tilt ($\theta_x\theta_y$) can be controlled by the manual axis.
- It supports the motorized alignment of the single core device application.



Dimensional outline drawings

ES3001A



SPEC					
L type		ES3001A-L			
R type		ES3001A-R			
Com-position	Axis	X	Y	Z	θ_x θ_y
	ES3001A-L	KXC06020-G	KXC06020-G	KXC06020-G	B50-60LN
	ES3001A-R	KXC06020-G	KXC06020-G	KXC06020-G	B50-60RN
Travel distance		20mm			$\pm 3^{\circ}$
Optical axis height		145mm			
Resolution		1 μ m/Pulse(Full) 0.05 μ m/Pulse(MS1/20)			$\approx 33.8''$ / scale $\approx 33.4''$ / scale
MAX speed		20mm/sec			— —
Repeatability-positioning accuracy		$\pm 0.2\mu$ m			— —
Load capacity		0.3kgf			
Weight		2.7kg			
Accessory		Motor cable(D214-2-2E)、Installation screws(Hexagon socket head 4 of M6-12)			
Remarks		The repeatability positioning accuracy is tested in a single-axis state.			

Model/Option

ES3001 A L
W B R

L : Left type, R : Right type
A : Inner tilt, B : Outer tilt
Blank : Normal, W : Over hang type
Unit base model number

ES3001B-L

(Outer tilt)

ES3001WA-L

(over hang type)

Available outer tilt and over hang type

Motorized Stage Alignment Unit (3-axis) Correspond to 8 degree:ES3800 Series

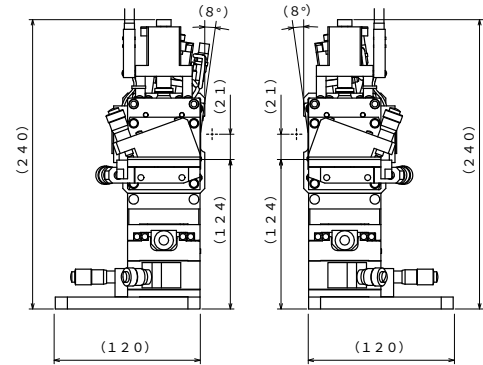
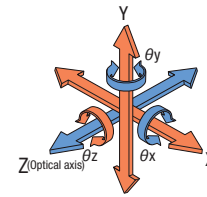
CAD
2D・3D

RoHS

- This is the unit which designed for integration of the motorized stage into the linear 2-axis of XY and a rotation axis (θ_z).
- Also the attitude adjustment of a high resolution manual stage (θ_z) and tilt ($\theta_x\theta_y$) can be controlled by the manual axis.
- This is the most effective unit for multi core device motorized alignment,
which need rotation control of optical axis such as fiber array and an optical waveguide.
- It correspond the device that cut element edge 8 degree because Y axis stage is assembled in a 8 degree tilt position.



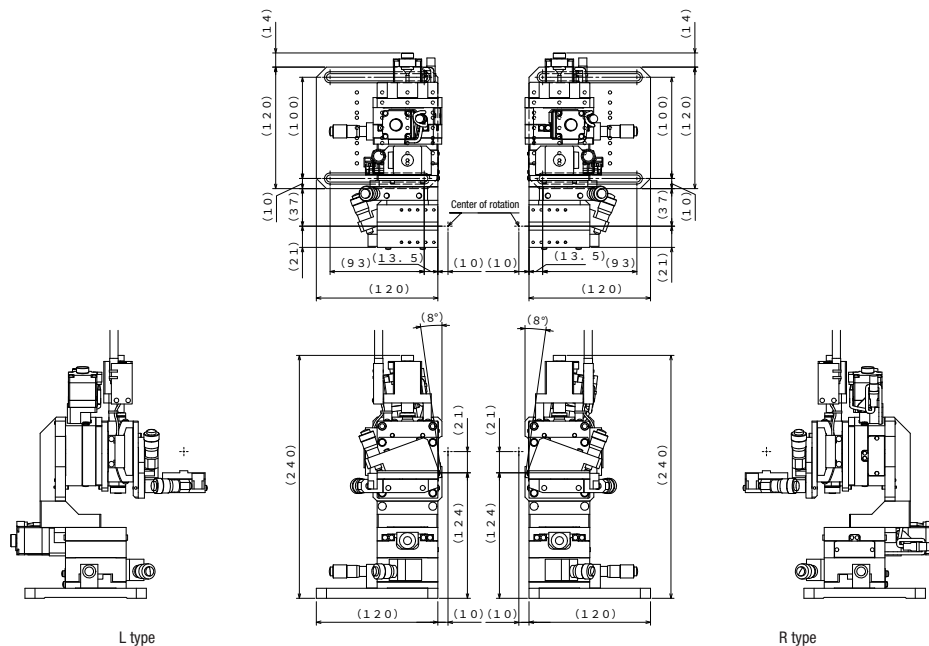
ES3800-8A



ES3800-8B (8°)

Dimensional outline drawings

ES3800-8A (-8°)



L type

R type

SPEC								
A type			ES3800-8A					
B type			ES3800-8B					
Com- position	Axis		X	Y	Z	θx	θy	θz
	ES3800-8A/B	L-unit	KXC06020-G	KXC06020-G	B10-60RN	B51-60LN		KGW06050T-LC
		R-unit	KXC06020-G	KXC06020-G	B10-60LN	B51-60RN		KGW06050T-RC
Travel distance			20mm	20mm	Coarse motion : ±6.5mm Fine motion : ±0.3mm	±2.5°	±2.5°	±10°
Optical axis height			145mm					
Resolution			1μm/Pulse(Full) 0.05μm/Pulse (MS1/20)		Coarse motion : 10μm/scale Fine motion : 0.5μm/scale	≒29.3"/scale	≒27.8"/scale	0.00450°/Pulse(Full) 0.00225°/Pulse(Half)
MAX speed			20mm/sec		—	—	—	22.5°/sec
Repeatability positioning accuracy			±0.2μm		—	—	—	±0.003°
Load capacity			0.3kgf					
Weight			3.5kg					
Accessory			Motor cable(D214-2-2E)、Installation screws(Hexagon socket head 8 of M6-12)					
Remarks			The repeatability positioning accuracy is tested in a single-axis state.					

Model/Option

ES3800-8

A
B

The direction of 8 degrees cutting : A, B
Unit base model number

- Available the type of Y axis zero degree in conformity to a device end-face zero degree cutting.
Please contact us for details.

Guidance

WG
alignment

LD/PD
alignment

Alignment components

Manual
alignment unit

Motorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meter

Accessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unit

CCD
camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment
system

Alignment
controller

WG
alignment

LD/PD
alignment

Motorized Stage Alignment Unit (4-axis): ES4001 Series

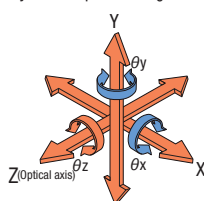
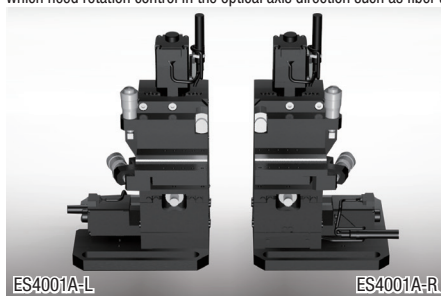
CAD
2D·3D

RoHS

● This is the unit which designed integration of the motorized stage into the linear 3-axis of XYZ and the rotation axis (θ_z) in the optical axis direction.

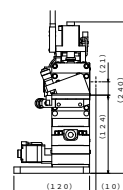
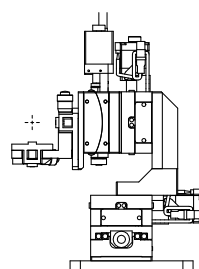
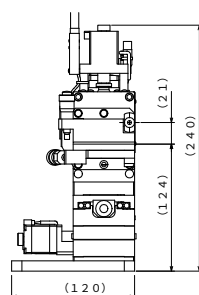
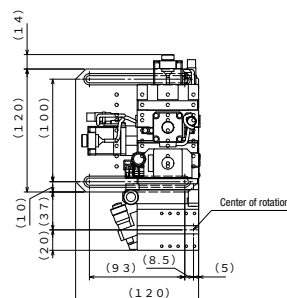
Also the attitude adjustment of tilt ($\theta_x\theta_y$) can be controlled by the manual axis.

This is the most effective unit for multi core device motorized alignment, which need rotation control in the optical axis direction such as fiber array and an optical waveguide.

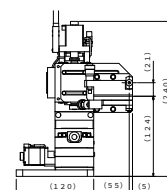


Dimensional outline drawings

■ ES4001A-L



ES4001B-L
(Outer tilt)

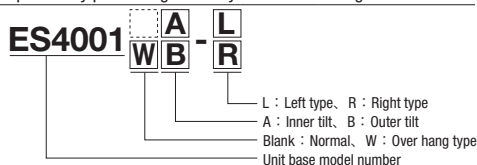


ES4001WA-L
(over hang type)

Available outer tilt and over hang type

SPEC							
L type	ES4001A-L						
R type	ES4001A-R						
Com-position	Axis	X	Y	Z	θ_x	θ_y	θ_z
	ES4001A-L	KXC06020-G			B50-60LN		KGW06050T-LC
	ES4001A-R	KXC06020-G			B50-60RN		KGW06050T-RC
Travel distance		20mm			$\pm 3^\circ$		$\pm 10^\circ$
Optical axis height		145mm					
Resolution		1 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/20)			$\approx 33.8''$ /scale	$\approx 33.4''$ /scale	0.0045°/Pulse (Full) 0.00225°/Pulse (Half)
MAX speed		20mm/sec			—		22.5°/sec
Repeatability positioning accuracy		$\pm 0.2\mu$ m			—		$\pm 0.003^\circ$
Load capacity		0.3kgf					
Weight		3.5kg					
Accessory		Motor cable(D214-2-2E)、Installation screws(Hexagon socket head 4 of M6-12)					
Remarks		The repeatability positioning accuracy is tested in a single-axis state.					

■ Model/Option



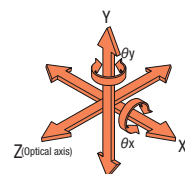
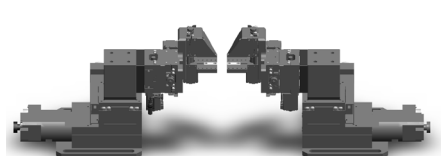
Motorized Stage Alignment Unit (5-axis): ES5202

CAD
2D·3D

RoHS

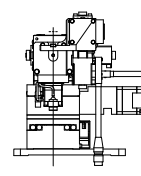
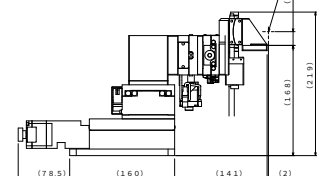
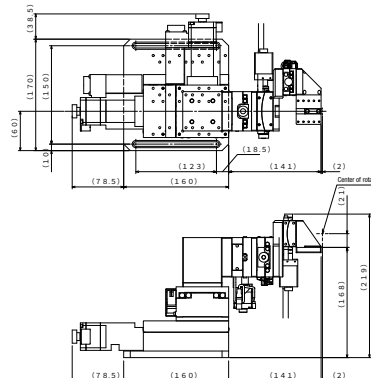
● This is the unit which designed integration of the motorized stage into the linear 3-axis of XYZ and the tilt two axes.

● It supports the motorized alignment of the single core device application.



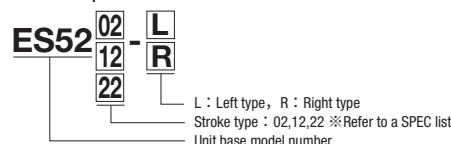
Dimensional outline drawings

■ ES5202-L



SPEC							
L type	ES5202-L, ES5212-L, ES5222-L						
R type	ES5202-R, ES5212-R, ES5222-R						
Com-position	Axis	X	Y	Z	θ_x	θ_y	
	ES5202-L	KS102-30LG	KXC06020-G	KS102-70RG	KGW04040T-LC	KGW06075T-RC	
	ES5202-R	KS102-30RG	KXC06020-G	KS102-70LG	KGW04040T-RC	KGW06075T-LC	
	ES5212-L	KS102-70LG	KXC06020-G	KS102-70RG	KGW04040T-LC	KGW06075T-RC	
	ES5212-R	KS102-70RG	KXC06020-G	KS102-70LG	KGW04040T-RC	KGW06075T-LC	
	ES5222-L	KS102-70LG	KXC06020-G	KS102-100RG	KGW04040T-LC	KGW06075T-RC	
	ES5222-R	KS102-70RG	KXC06020-G	KS102-100LG	KGW04040T-RC	KGW06075T-LC	
Travel distance	ES5202	30mm		70mm			
	ES5212	70mm	20mm	70mm	$\pm 8^\circ$	$\pm 8^\circ$	
	ES5222	70mm		100mm			
Optical axis height		189mm					
Resolution	Pulse/Full	1 μ m			0.0030°	0.0032°	
	Pulse/Half	—			0.0015°	0.0016°	
	Pulse/MS 1/20	0.05 μ m			—	—	
MAX speed		10mm/sec	20mm/sec	10mm/sec	15°/sec	16°/sec	
Repeatability positioning accuracy		$\pm 0.2\mu$ m			$\pm 0.005^\circ$	$\pm 0.003^\circ$	
Load capacity		0.3kgf					
Weight		ES5202 : 6.6kg / ES5212 : 7.0kg / ES5222 : 7.3kg					
Accessory		Motor cable(D214-2-2E)、Installation screws(Hexagon socket head 4 of M6-12)					
Remarks		The repeatability positioning accuracy is tested in a single-axis state.					

■ Model/Option

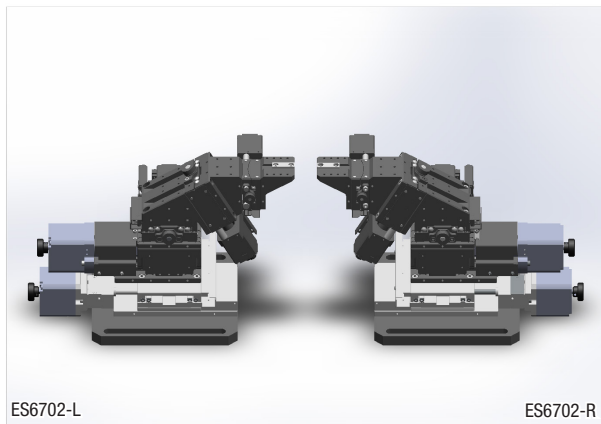
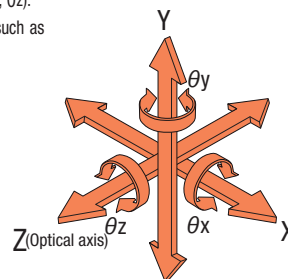


Motorized Stage Alignment Unit (6-axis): ES6702

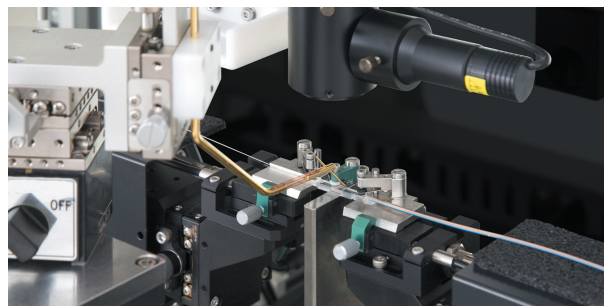
CAD
2D・3D

RoHS

- This is the unit which designed for integration of the motorized stage into the linear three axes of XYZ and the tilt 3-axis (θ_x , θ_y , θ_z).
 As this is omnidirectional controllable, so the most effective for all kinds of motorized alignment device whatever you want such as single core optical fiber, fiber array, optical waveguide and each optical element.
 ES6702 series is the best use for near focusing with microscope and probe because there is enough space on a top.

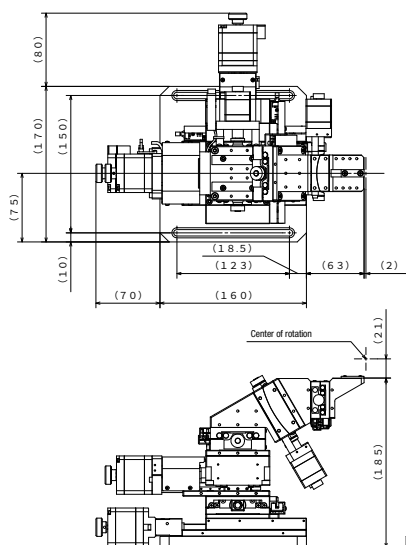


Proximity probe example

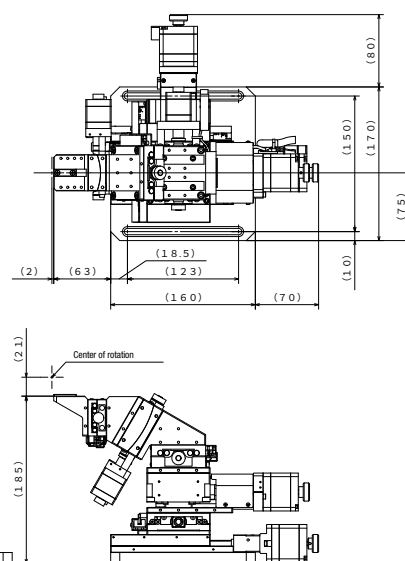


Dimensional outline drawings

ES6702-L



ES6702-R



SPEC

L type		ES6702-L					
R type		ES6702-R					
Com- position	Axis	X	Y	Z	θ_x	θ_y	θ_z
		EKT4-50L2 (※)	EKS3-10L (※)	EKT4-50L2 (※)	KGW06100T-LC	KGW04040T-RC	KGW06075T-LC
		EKT4-50R2 (※)	EKS3-10R (※)	EKT4-50R2 (※)	KGW06100T-RC	KGW04040T-LC	KGW06075T-RC
Travel distance		50mm	10mm	50mm	$\pm 6^\circ$	$\pm 8^\circ$	$\pm 8^\circ$
Optical axis height		206mm					
Resolution		1 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/20)	0.5 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/10)	1 μ m/Pulse (Full) 0.05 μ m/Pulse (MS1/20)	0.002466°/Pulse (Full) 0.001233°/Pulse (Half)	0.0030°/Pulse (Full) 0.0015°/Pulse (Half)	0.0032°/Pulse (Full) 0.0016°/Pulse (Half)
MAX speed		10mm/sec	5mm/sec	10mm/sec	12.5°/sec	15°/sec	16°/sec
Repeatability positioning accuracy		$\pm 0.5\mu$ m	$\pm 0.5\mu$ m	$\pm 0.5\mu$ m	$\pm 0.003^\circ$	$\pm 0.005^\circ$	$\pm 0.003^\circ$
Load capacity		0.3kgf					
Weight		6.7kg					
Accessory		Motor cable (D214-2-2E), Installation screws (Hexagon socket head 4 of M6-12)					
Remarks		※Dedicated stage for alignment The repeatability positioning accuracy is tested in a single-axis state.					

Optical fiber alignment

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment

Motorized Stage Alignment Unit (6-axis): ES6202/ES6212/ES6222

CAD
2D·3D

RoHS

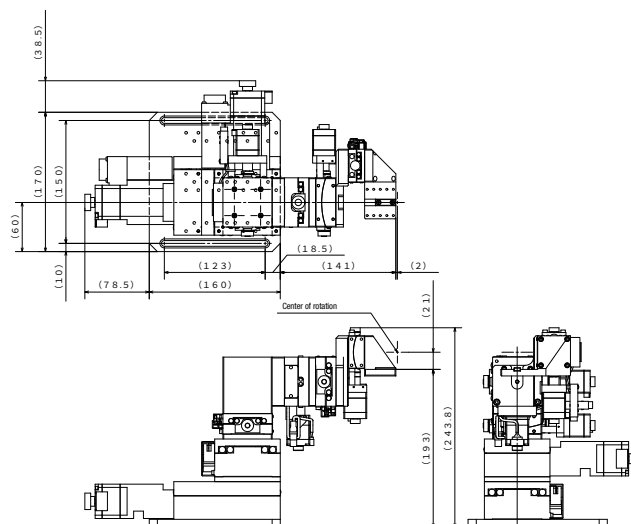
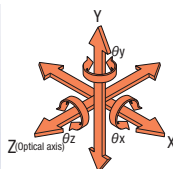
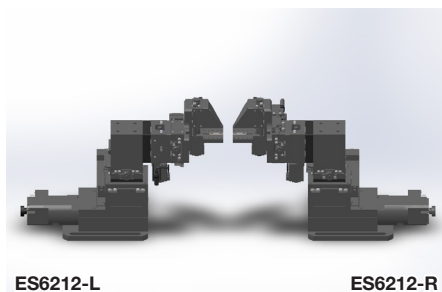
● This is the unit which designed for integration of the motorized stage into the linear three axes of XYZ and the tilt 3-axis (θ_x , θ_y , θ_z).

As this is omnidirectional controllable, so the most effective for all kinds of motorized alignment device whatever you want such as single core optical fiber, fiber array, optical waveguide and each optical element.

● Available Y axis tilt type according to a device edge 8 degree cutting.

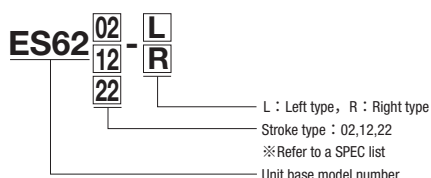
Dimensional outline drawings

ES6202-L



SPEC							
L type		ES6202-L、ES6212-L、ES6222-L					
R type		ES6202-R、ES6212-R、ES6222-R					
Com- position	Axis	X	Y	Z	θx	θy	θz
	ES6202-L	KS102-30LG	KXC06020-G	KS102-70RG	KGW04040T-LC	KGW06075T-RC	KGW06075T-LC
	ES6202-R	KS102-30RG	KXC06020-G	KS102-70LG	KGW04040T-RC	KGW06075T-LC	KGW06075T-RC
	ES6212-L	KS102-70LG	KXC06020-G	KS102-70RG	KGW04040T-LC	KGW06075T-RC	KGW06075T-LC
	ES6212-R	KS102-70RG	KXC06020-G	KS102-70LG	KGW04040T-RC	KGW06075T-LC	KGW06075T-RC
	ES6222-L	KS102-70LG	KXC06020-G	KS102-100RG	KGW04040T-LC	KGW06075T-RC	KGW06075T-LC
Travel distance	ES6222-R	KS102-70RG	KXC06020-G	KS102-100LG	KGW04040T-RC	KGW06075T-LC	KGW06075T-RC
	ES6202	30mm	20mm	70mm	±8°	±8°	±8°
	ES6212	70mm		70mm			
ES6222	70mm	100mm					
Optical axis height		214mm					
Resolution		1μm/Pulse (Full) 0.05μm/Pulse (MS1/20)			0.0030°/Pulse (Full) 0.0015°/Pulse(Half)	0.0032°/Pulse (Full) 0.0016°/Pulse(Half)	0.0032°/Pulse (Full) 0.0016°/Pulse(Half)
MAX speed		10mm/sec	20mm/sec	10mm/sec	15°/sec	16°/sec	16°/sec
Repeatability positioning accuracy		±0.2μm			±0.005°	±0.003°	±0.003°
Load capacity		0.3kgf					
Weight	ES6202	7.2kg					
	ES6212	7.6kg					
	ES6222	7.9kg					
Accessory		Motor cable(D214-1-2E/D214-2-2E)、 Installation screws(Hexagon socket head 4 of M6-12)					
Remarks		The repeatability positioning accuracy is tested in a single-axis state.					

Model/Option



Device Unit Fixed Type: E1000

CAD
2D

RoHS

- Unit for the device holder
Can be specified the height for each 1mm.



E1000-h

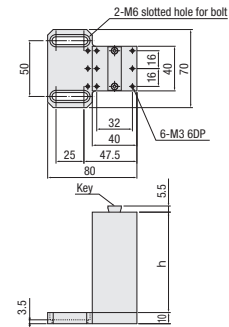
SPEC

Model	E1000-h
Height	h + 15.5mm
Base plate	A24-7
Main materials • Surface processing	Aluminium—Black alumite treatment

Accessory: Installation screws (Hexagon socket head 2 of M6-12)

Dimensional outline drawings

E1000-h

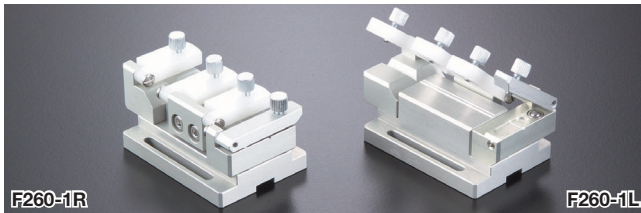


Fiber Holder: F260

CAD
2D

RoHS

- This holder is to fix the core wire.
- Available for 250μm and 900μm of jacket's radius.



F260-1R

F260-1L

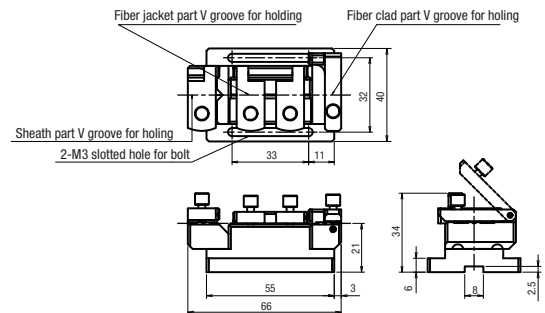
SPEC

Model	F260-1		F260-2	
	L	R	L	R
Clad diameter	125~250μm			
Jacket diameter	250μm		900μm	
Fixing type	Magnetic force			
Weight	0.1kg			
Main materials・Surface processing	Aluminium—White alumite treatment			

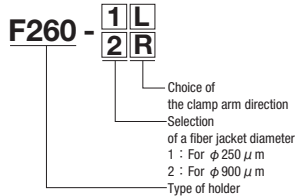
Accessory: Installation screws (Hexagon socket head 2 of M3-10)

Dimensional outline drawings

F260-L



Model/Option



Fiber Holder for Proximity: F263

CAD
2D

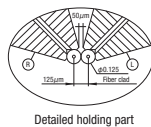
RoHS

- It is a holder to use a core wire fiber in parallel.
The optical fiber clad is fixed with vacuum, and jacket is fixed with magnet.
In case of using two optical fibers in parallel, fiber holder for proximity of opposite hand should be placed face to face.
The optical fiber center-to-center can be close minimum 125μm.
(When the clad radius is 125μm)
Space of one side and the bottom of optical fiber are available for any other elements.
- Available for 250μm and 900μm of jacket's radius.
- Require the vacuum pump for using.
- Vacuum pump set : EV10A : P.4-059



F263-1R

F263-1L



Detailed holding part

SPEC

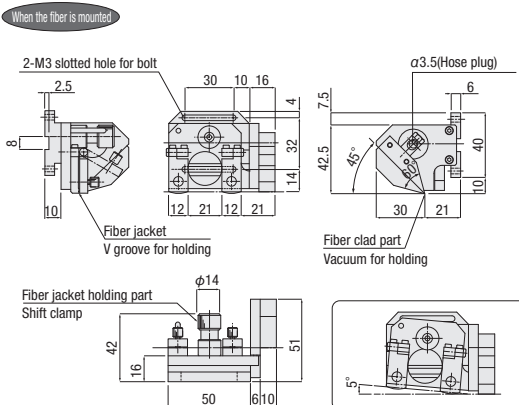
Model	F263-1		F263-2	
	L	R	L	R
Clad diameter	125μm			
Jacket diameter	250μm		900μm	
Fixing type	Vacuuming and magnetic force			
Weight	0.2kg			
Main materials・Surface processing	Aluminium—White alumite treatment		Stainless※	

(※Fiber clad part)

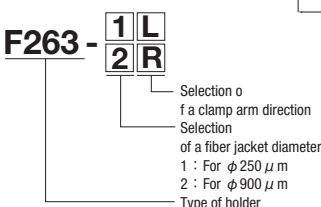
Accessory: 2m of silicon hose and installation screws (Hexagon socket head 2 of M3-10)

Dimensional outline drawings

F263-L



Model/Option



Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

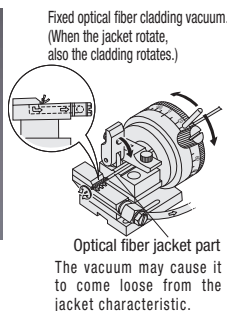
LD/PD alignment

Rotation Fiber Holder:F264

CAD
2D

RoHS

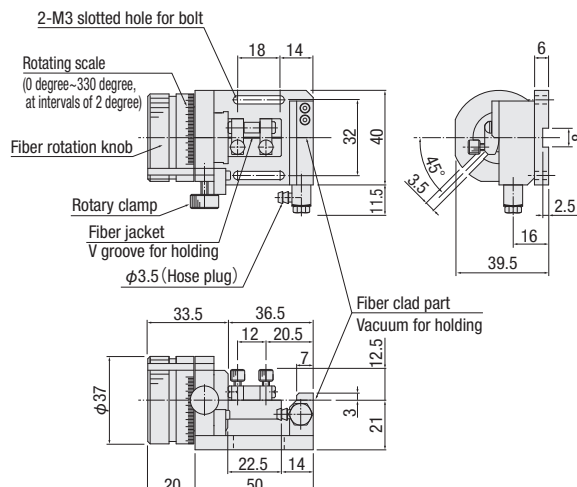
- This holder is for polarization-preserving fiber rotation.
- The positional alignment amount of the tip of optical fibers at the rotating is so small because this holder will rotate based on a cladding of optical fiber.
- Cladding is fixed by vacuum pump, and the jacket is fixed at the two points by the magnet.
- Correspond to a jacket diameter 250 μ m, 400 μ m and 900 μ m.
- A vacuum pump may be required when using this holder.
- The end of the fiber will not be positioned to the rotation center when it is mounted on ES5201 and ES6201 series.
- Vacuum pump set : EV10A : P.4-059



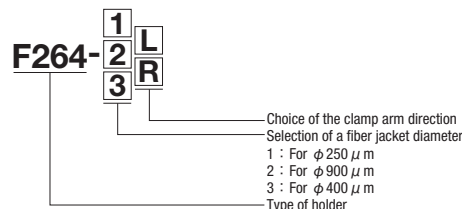
Dimensional outline drawings

F264-L

See WEB for R type external dimension



Model/Option



SPEC						
Model	F264-1		F264-2		F264-3	
	L	R	L	R	L	R
Clad diameter	125μm					
Jacket diameter	250μm		900μm		400μm	
Fixing type	Vacuuming and magnetic force					
Travel distance	360° (2° scale)					
Weight	0.2kg					
Main materials・Surface processing	Aluminium—White alumite treatment				Stainless※	

(※Fiber clad part)

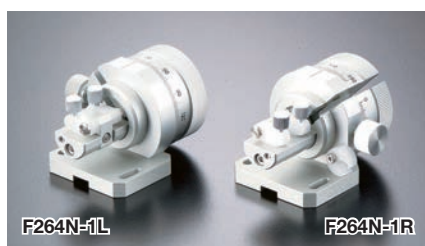
Accessory: 2m of silicon hose and installation screws (Hexagon socket head 2 of M3-10)

Rotation Fiber Holder (without vacuum):F264N

CAD
2D

RoHS

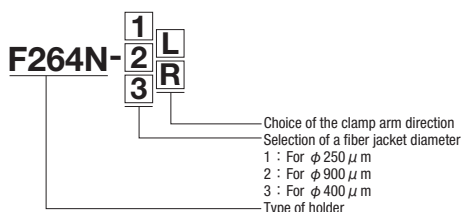
- Without vacuum on the tip.



SPEC						
Model	F264N-1		F264N-2		F264N-3	
	L	R	L	R	L	R
Jacket diameter	250μm		900μm		400μm	
Fixing type	Magnetic force					
Travel distance	360° (2° scale)					
Weight	0.1kg					
Main materials・Surface processing	Aluminum-White alumite treatment					

Accessory: Installation screws (Hexagon socket head 2 of M3-10)

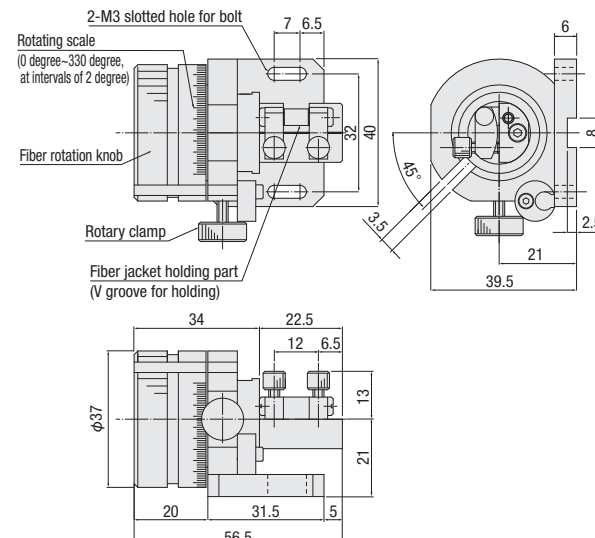
Model/Option



Dimensional outline drawings

F264N-L

See WEB for R type external dimension

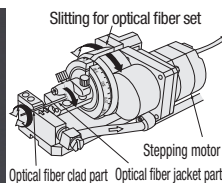
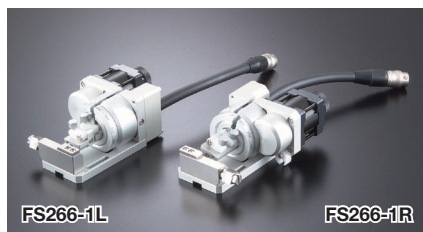


Motorized Rotation Fiber Holder:FS266

CAD
2D

RoHS

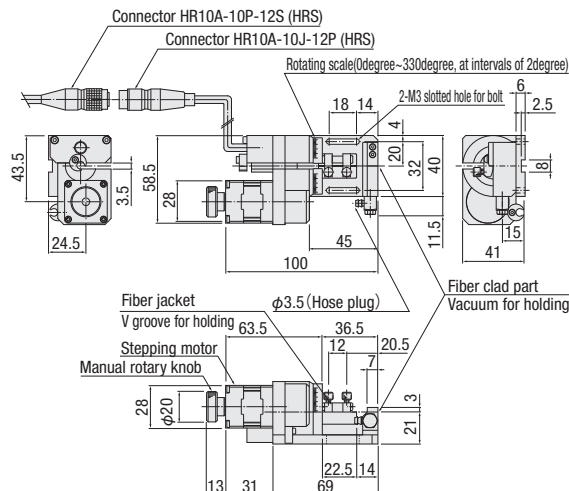
- This holder is rotated polarization-preserving fiber automatically.
- The positional alignment amount of the tip of optical fibers at the rotating is so small because this holder will rotate based on a cladding of optical fiber.
- Cladding is fixed by vacuum pump, and the jacket is fixed at the two points by the magnet.
- Stepping motor is mounted, and resolution is 0.247°.
- Correspond to a jacket diameter 250μm, 400μm and 900μm.
- A vacuum pump may be required when using this holder.
- Not applicable ES5201 and ES6201 series.
- Vacuum pump set : EV10A : P.4-059、Controller,Driver : P.1-189



Dimensional outline drawings

FS266-L

See WEB for R type external dimension



Model/Option

FS266-1
2
3

- Select a clamp arm direction
- Select a fiber jacket diameter
- 1 : For $\phi 250 \mu m$
- 2 : For $\phi 900 \mu m$
- 3 : For $\phi 400 \mu m$
- Type of holder

SPEC						
Model	FS266-1		FS266-2		FS266-3	
	L	R	L	R	L	R
Clad diameter	125μm					
Jacket diameter	250μm		900μm		400μm	
Fixing type	Vacuuming and magnetic force					
Stepping motor	PK523HPB-C15 5 phase stepping motor (Oriental Motor Co.,Ltd.)					
Travel distance	260° (With CW and CCW limit sensor)					
Minimum resolution	0.247°/Pulse (Full)					
Weight	0.3kg					
Main materials・Surface processing	Aluminium—White alumite treatment				Stainless※	

(※Fiber clad part)

Accessory: Motor cable (D214-2-2E)

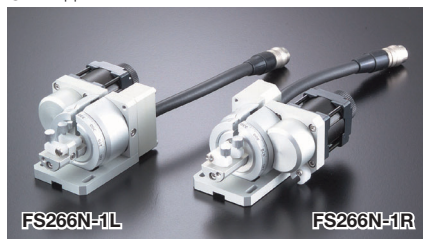
2m of silicon hose and installation screws (Hexagon socket head 2 of M3-10)

Motorized Rotation Fiber Holder (without vacuum):FS266N

CAD
2D

RoHS

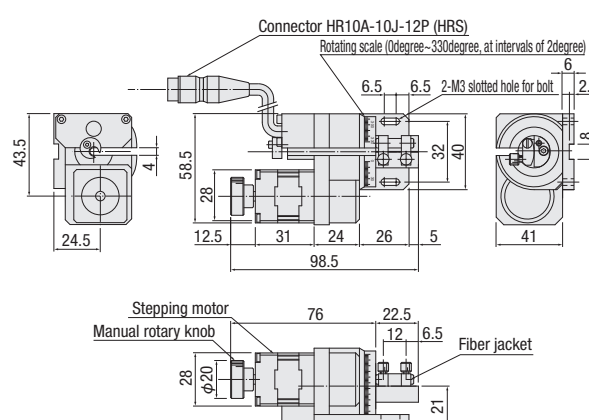
- Without vacuum on the tip.
- Not applicable ES5201 and ES6201 series.



Dimensional outline drawings

FS266N-L

See WEB for R type external dimension



SPEC						
Model	FS266N-1		FS266N-2		FS266N-3	
	L	R	L	R	L	R
Jacket diameter	250μm		900μm		400μm	
Fixing type	Magnetic force					
Stepping motor	PK523HPB-C15 5 phase stepping motor (Oriental Motor Co.,Ltd.)					
Travel distance	260° (With CW and CCW limit sensor)					
Minimum resolution	0.247°/Pulse (Full)					
Weight	0.2kg					
Main materials・Surface processing	Aluminium—White alumite treatment					

Accessory: Motor cable (D214-2-2E)

Installation screws (Hexagon socket head 2 of M3-10)

Model/Option

FS266N-1
2
3

- Select a clamp arm direction
- Select a fiber jacket diameter

- 1 : For $\phi 250 \mu m$
- 2 : For $\phi 900 \mu m$
- 3 : For $\phi 400 \mu m$
- Type of holder

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment

F265-L

Rotating scale 2-M3 slotted hole for bolt
(0degree~330degree,
at intervals of 2degree)

30 10 16 4 32 14 12 21

33.5 22.5

45° 3.5

25°

Fiber jacket(V groove for holding)

Fiber jacket(Stopper for runout)

Fiber rotation knob

Fiber jacket holding part Shift clamp

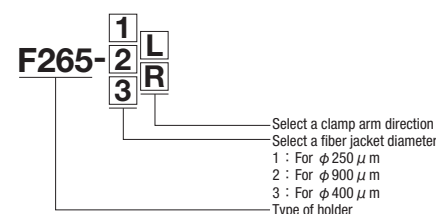
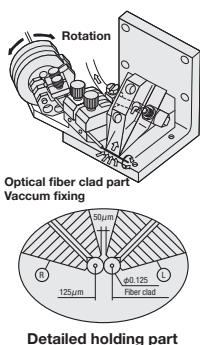
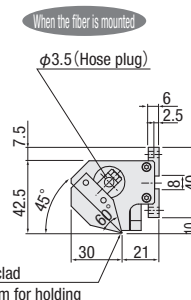
Rotary clamp

51

51

50 50 6 10


φ14



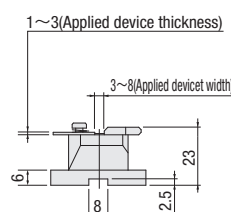
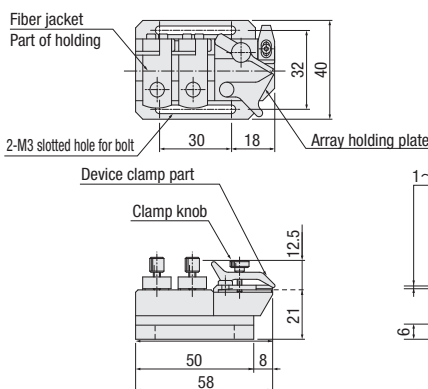
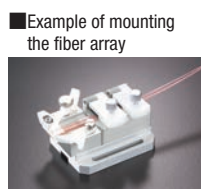
Accessory: 2m of silicon hose and installation screws (Hexagon socket head 2 of M3-10)

RoHS

F267-L

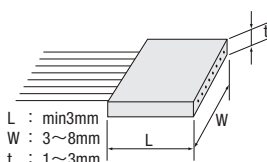
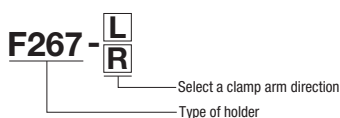


F267-L **F267-R**



Accessory: Installation screws (Hexagon socket head 2 of M3-10)

Compatible with fiber array size

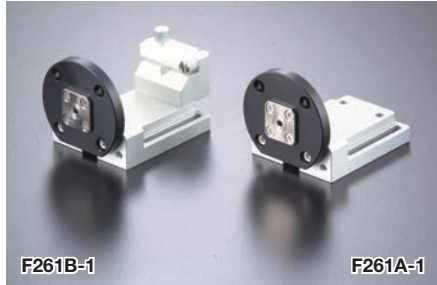


FC Connector Holder: F261

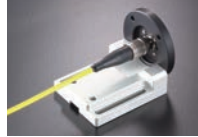
CAD
2D

RoHS

- Holder for fixing the fiber with FC connector.
 - This is a combination of adaptor F16 for a connector and bracket A54 for element adaptor.
 - There are two types, one with sheath hold part and the other without sheath hold part.
 - The ferrule end-face is positioned off approx.5mm the receptacle when a FC connector is inserted.
- ▶ F16 : P.3-018、A54 : P.4-038



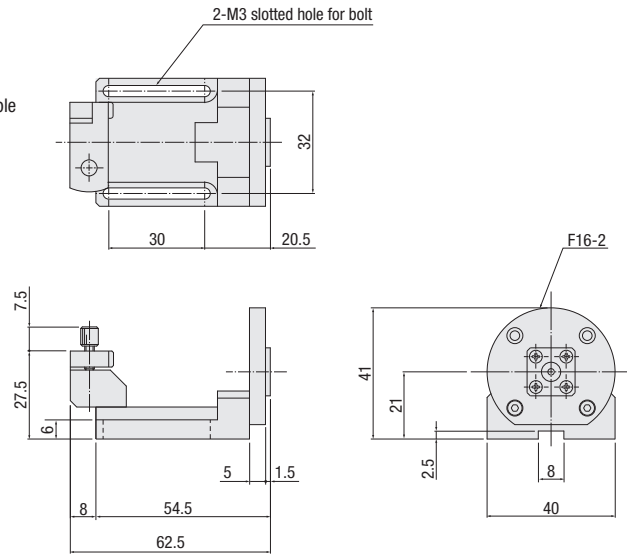
■ Connector mounting example



Dimensional outline drawings

F261B-1

▶ See WEB for F261A-1 external dimension



SPEC		
Model	F261A-1	F261B-1
Applicable fiber	Fiber with FC connector	
Adaptor	F16-2	F16-2
The hold part for sheath	No	Yes
Weight	0.06kg	0.07kg
Main materials・Surface processing	Aluminium—Alumite finishing	

Accessory: Installation screws (Hexagon socket head 2 of M3-10)

Model/Option

F261 A B - 1

Select the hold part for sheath

A : N/A B : A

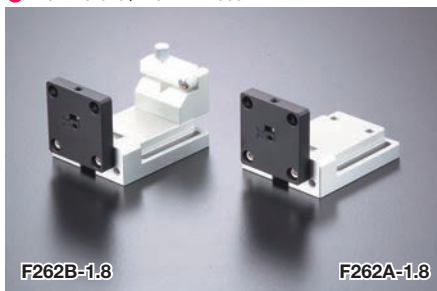
Type of holder

Ferrule Holder: F262

CAD
2D

RoHS

- Holder for fixing the optical fiber with ferrule.
 - This is a combination of adaptor F15 for ferrule and bracket A54 for element adaptor.
 - There are two types, one with sheath hold part and the other without sheath hold part.
 - Non-standard hole diameter is available. Please contact us for more information. Ferrule into the hole and tentatively fasten it using an Allen wrench. It is fixed by surface contact without damaging ferrule.
- ▶ F15 : P.3-018、A54 : P.4-038



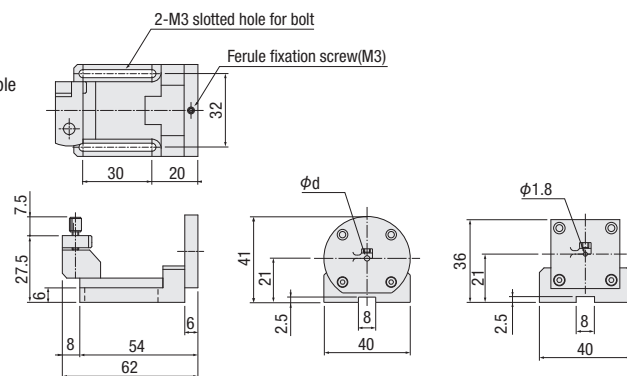
■ Connector mounting example



Dimensional outline drawings

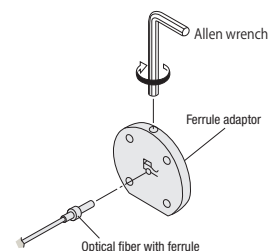
F262B

▶ See WEB for F262A external dimension



Mounting

Ferrule into the hole and tentatively fasten it using an Allen wrench.
It is fixed by surface contact without damaging ferrule.



SPEC						
Model	F262A-1.8	F262A-2.5	F262A-3.0	F262B-1.8	F262B-2.5	F262B-3.0
Applicable diameter (φd)	1.8mm	2.5mm	3.0mm	1.8mm	2.5mm	3.0mm
Adaptor	F15-1.8	F15-2.5	F15-3.0	F15-1.8	F15-2.5	F15-3.0
The hold part for sheath	No			Yes		
Weight	0.06kg			0.07kg		
Main materials・Surface processing	Aluminium—Alumite finishing					

Accessory: Installation screws (Hexagon socket head 2 of M3-10)

Model/Option

F262 A B - 1.8 2.5 3.0

Select the ferrule diameter (mm)

1.8、2.5、3.0

Select the hold part for sheath

A : N/A B : A

Type of holder

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment

Fiber Holder with Lens: F268

CAD
2D

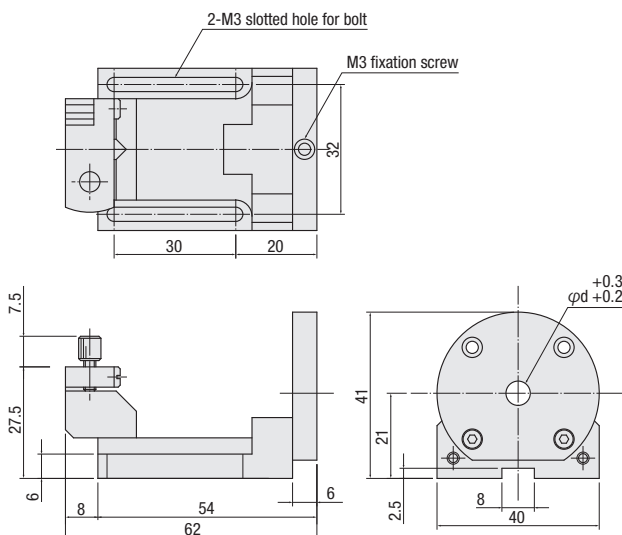
RoHS



F268

- Holder for fixing the cylindrical elements such as optical fiber with a lens.
- This is a combination of adaptor F510C for a lens and bracket A54 for element adaptor.
- Please choose a compatible with element diameter (ϕd) when you order.
- ▶ F510C : P.3-016、A54 : P.4-038

F268-d



SPEC	
Model	F268-d
Applicable diameter (ϕd)	$\phi 4 \sim \phi 14.5\text{mm}$ (every 0.1mm)
Adaptor	F510C-d
Weight	0.08kg
Main materials • Surface processing	Aluminium—Alumite finishing ϕd part: No treatment

Accessory: Installation screw (hexagon socket head cap bolt 2 of M3-10)

Model/Option

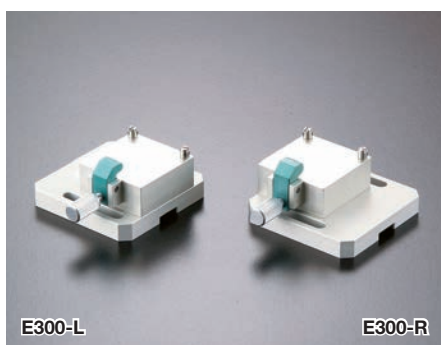
F268-d

Applicable diameter d
4~14.5mm every 0.1mm
Type of holder

Base Plate for Preset Holder: E300

CAD
2D

RoHS



E300-L

E300-R

Example



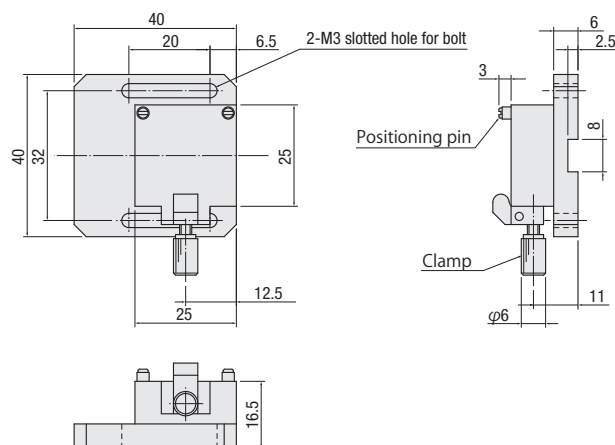
Mounting



- The preset holder installed on the base plate.
- Install to each stage unit.

E300-L

▶ See WEB for R type external dimension



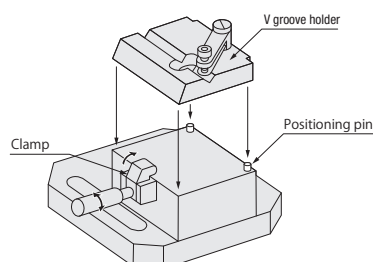
SPEC	
Model	E300-L E300-R
Applicable holders	E310/E330/E340
Mounting	Mechanical clamp
Weight	0.05kg
Main materials • Surface processing	Aluminium—Alumite finishing

Accessory: Installation screw (hexagon socket head cap bolt 2 of M3-10)

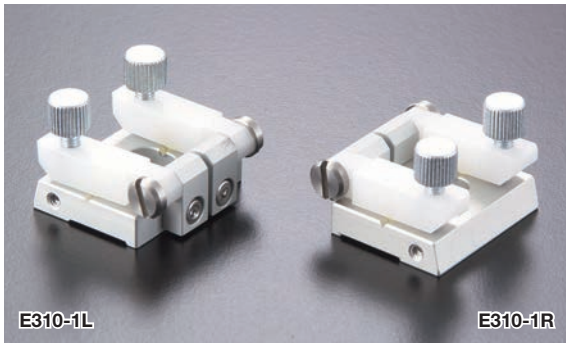
Model/Option

E300-L

Select a clamp arm direction
Type of holder



Preset Fiber Holder: E310

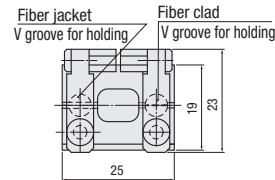


CAD
2D

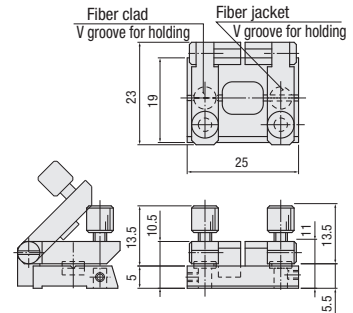
RoHS

- Preset fiber holder.
- Install to the base plate E300.

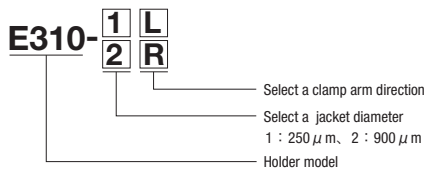
E310-1L



E310-1R



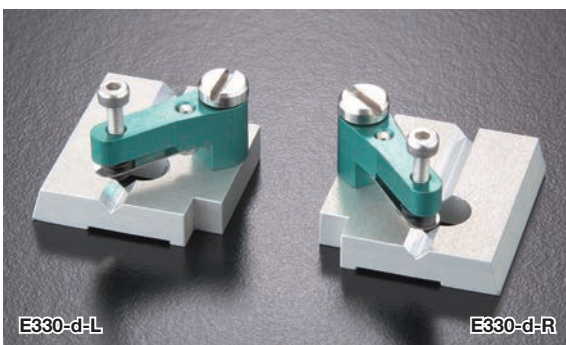
Model/Option



SPEC		
Model	E310-1L/R	E310-2L/R
Clad diameter	125 μ m	
jacket diameter	250 μ m	900 μ m
Mounting	Magnetic force	
Weight	0.01kg	
Main materials・Surface processing	Aluminum-White alumite treatment	

No surface treatment of V groove part

Preset V Groove Holder: E330

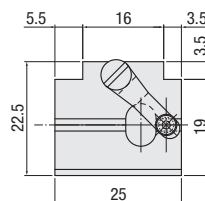


CAD
2D

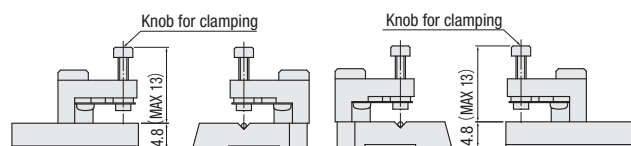
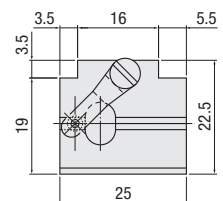
RoHS

- Preset V groove holder for cylindrical elements.
- Install to the base plate E300.
- Please choose a compatible with element diameter (ϕd) when you order.

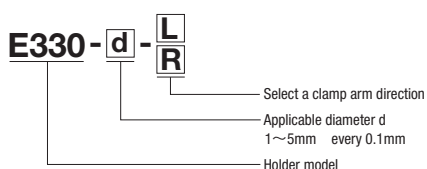
E330-d-L



E330-d-R



Model/Option



SPEC	
Model	E330-d-L/R
Applicable diameter (ϕd)	$\phi 1 \sim 5$ mm (every 0.1mm)
Mounting	Mechanical clamp
Weight	0.01kg
Main materials・Surface processing	Aluminium—Alumite finishing

No surface treatment of V groove part

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

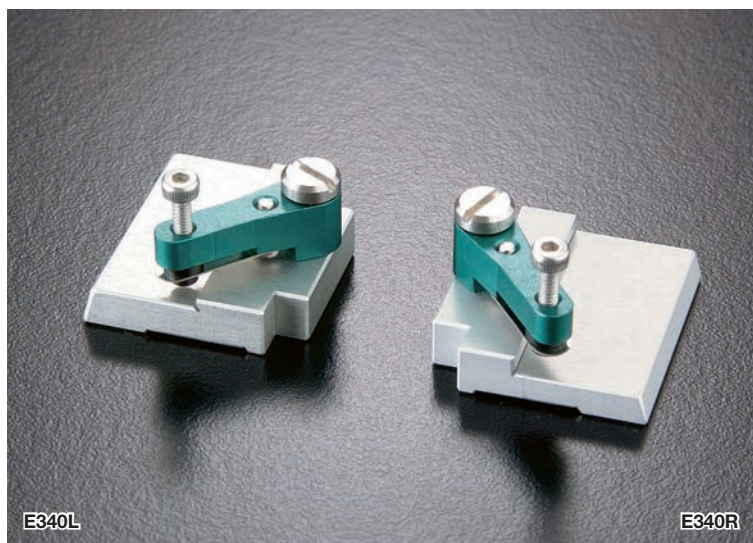
LD/PD alignment

Preset Fiber Array Holder: E340

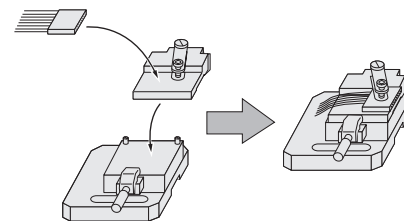
CAD
2D

RoHS

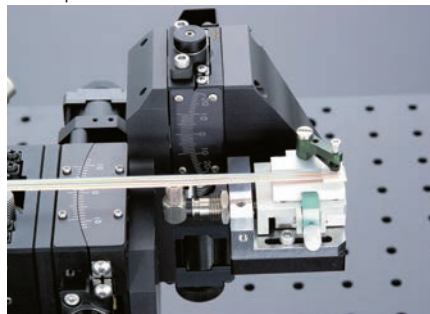
- Install to the base plate E300.
- Please choose a fiber array size when you order.



■ Mounting

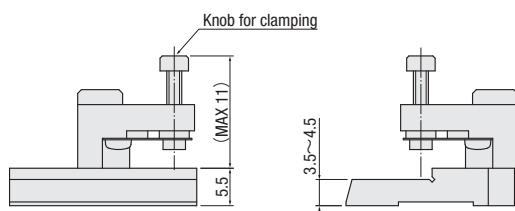
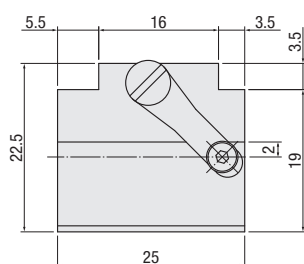


■ Example

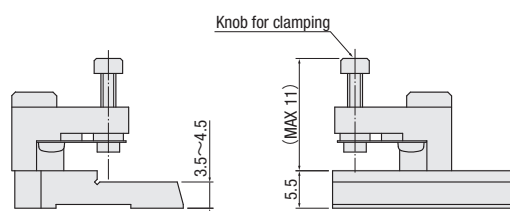
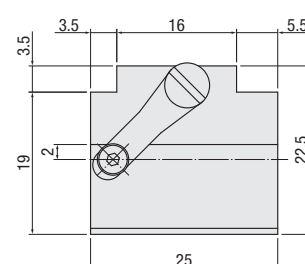


Dimensional outline drawings

■ E340L-1-A

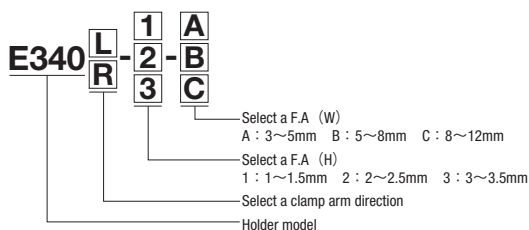


■ E340R-1-A



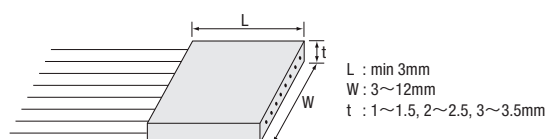
SPEC	
Model	E340L/R
F.A. size	(see the picture on the right)
Mounting	Mechanical clamp
Weight	0.01kg
Main materials・Surface processing	Aluminium—Alumite finishing

■ Model/Option



■ Fiber array size

Please use a fiber array bellows size or less.



※ Please ask us for detail of the size.

Guidance

WG
alignment

LD/PD
alignment

Alignment components

Manual
alignment unit

Motorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meter

Accessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unit

CCD
camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment
system

Alignment
controller

WG
alignment

LD/PD
alignment

Waveguide Holder: F270/F271

CAD
2D

RoHS

Optical fiber alignment



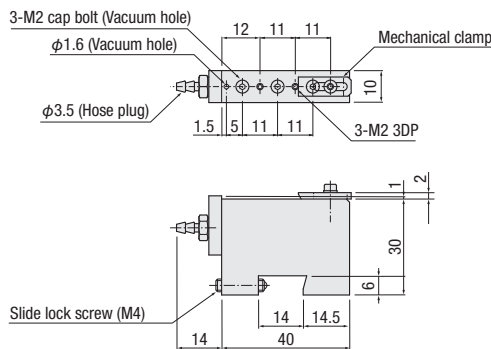
- The waveguide that hard to hold is held by vacuum.
As the hole for vacuuming can be covered by a volt and resin ring, absorption dimension to be changed to suit the waveguide range.
- There are two types, 10mm and 20mm width.
- There are two types, one with bottom plate and the other without bottom plate.
- Custom sizes are available.
- Mechanical clamp also available.
- In your actual use, need a vacuum pump.
- ▶ Vacuum pump set : EV10A : P.4-059
- As F271 will be fixed with key for a holder (AS49-5), it can be slid in the key direction.
- Can be used it for alignment unit by combining with an exclusive adapter (F270-PB10/20) to change optical axis height.



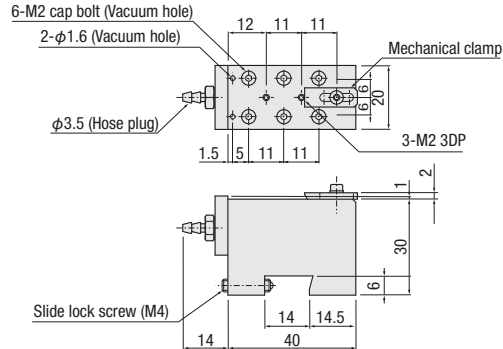
▶ Holder adaptor P.4-038

Dimensional outline drawings

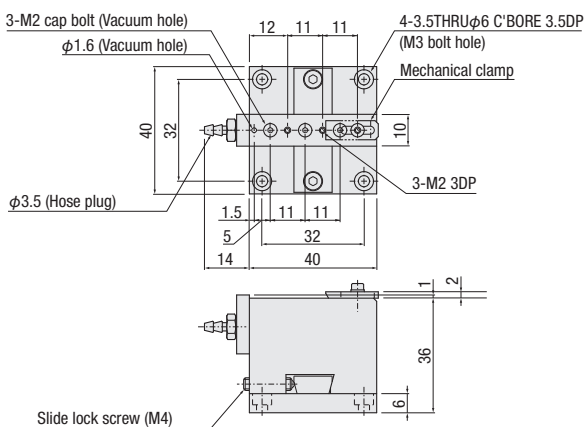
F270-10



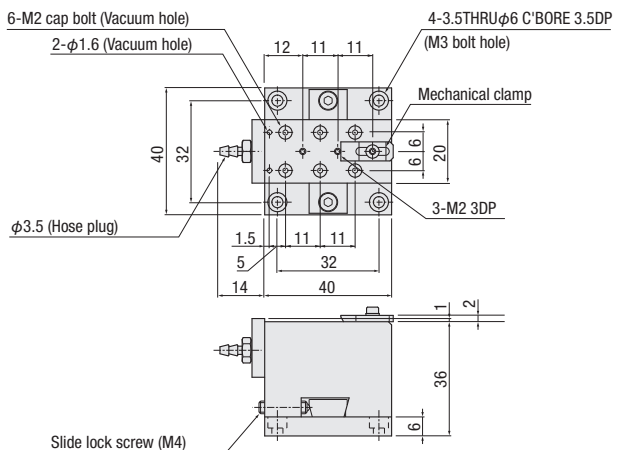
F270-20



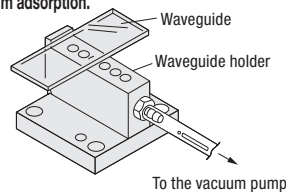
F271-10



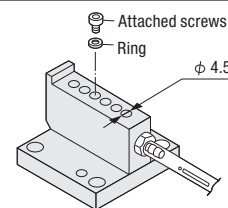
F271-20



How to mount a vacuum adsorption.



Remove a provided screw with hex wrench when vacuuming hole is opened.



SPEC					
Model	Absorption area	hold operation	Bottom plate	Weight	Main materials · Surface processing
F270-10	10×40mm	Vacuuming + Mechanical clamp (Side)	F271-B	0.02kg	Aluminum-Black alumite treatment
F270-20	20×40mm			0.04kg	
F271-10	10×40mm			0.06kg	
F271-20	20×40mm			0.08kg	

Accessory: 2m of silicon hose and installation screws (Hexagon socket head 4 of M3-6)
 ※Included screws for only F271-10 and F271-20

Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment

Waveguide Holder: F272/F273

CAD
2D

RoHS

- Hold of waveguide less than 10mm in length. Consider protruding fiber from both sides.
- There are two types, one with bottom plate and the other without bottom plate.
- The clamp is a vacuum method and machine clamp combination with the springs.
- ▶ Vacuum pump set : EV10A : P.4-059



F272



F273

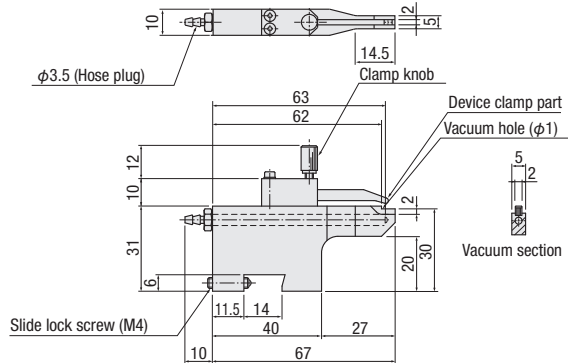
Can be used it for alignment unit by combining with an exclusive adapter (F270-PB10) to change optical axis height.



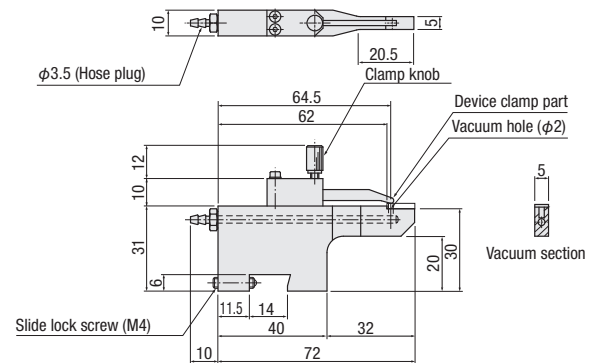
▶ Holder adaptor P.4-038

Dimensional outline drawings

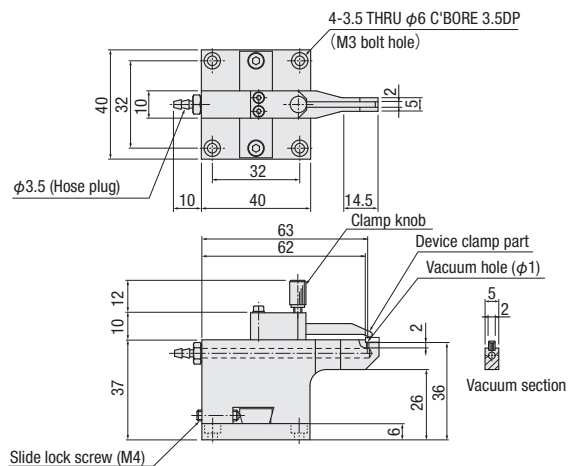
F272-2



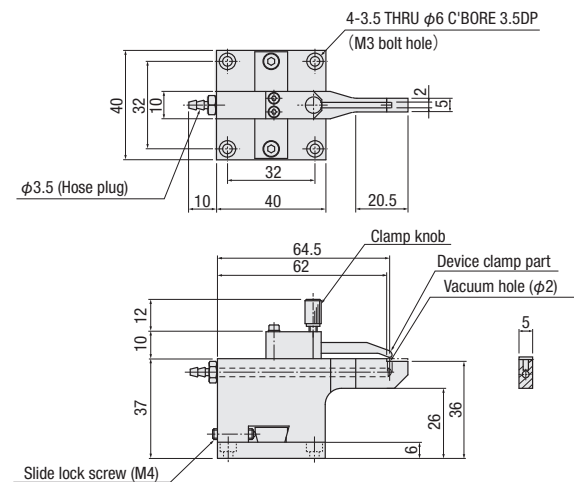
F272-5



F273-2



F273-5



SPEC

Model	Device width	hold operation	Bottom plate	Weight	Main materials・Surface processing
F272-2	2~5mm	Vacuuming + Mechanical clamp	F271-B	0.04kg	Aluminum-Black alumite treatment
F272-5	5~10mm			0.04kg	
F273-2	2~5mm			0.08kg	
F273-5	5~10mm			0.08kg	

Accessory: 2m of silicon hose and installation screws (Hexagon socket head 4 of M3-6)

※Included screws for only F273-2 and F273-5

Preset Waveguide Holder (Mechanical clamp type): E400

CAD
2D

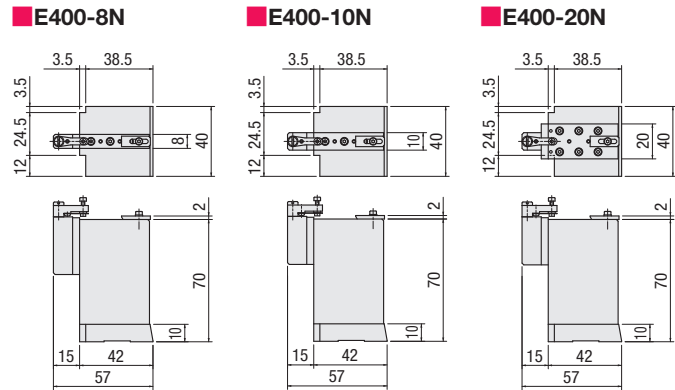
RoHS

- Add the clamp from the upper side to E400.
Improved holding power by mechanical clamp.
- No vacuum function.
- Install to the preset base plate E410-B.

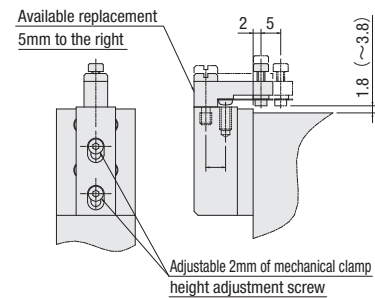
Dimensional outline drawings



E400-N



Details of the mechanical clamp



SPEC				
Model	Device attached surface	Hold operation	Weight	Main materials · Surface processing
E400-8N	8×38mm	Mechanical clamp	0.10kg	Aluminum- Black alumite treatment
E400-10N	10×38mm		0.12kg	
E400-20N	20×38mm		0.18kg	

Preset Waveguide Holder Unit: E410

CAD
2D

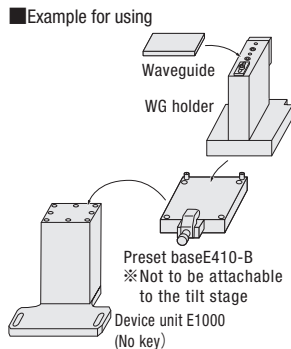
RoHS

- This holder is combined with E410-B and E400.
- When a variety of element size, should be changed only E400 to match the size what you want.
- Install to the stage unit E1000.

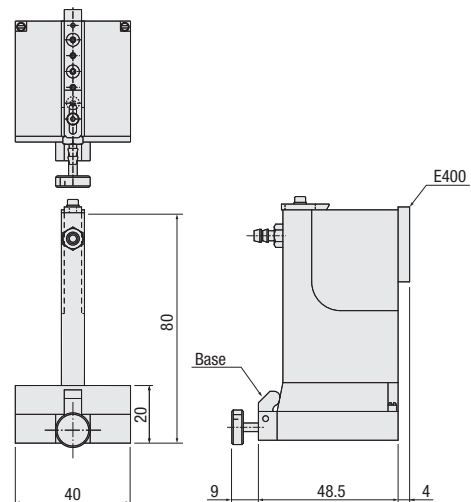
Dimensional outline drawings



E410-6



E410-6



SPEC				
Model	Absorption area	hold operation	Weight	Main materials · Surface processing
E410-6	6×38mm	Vacuuming + Mechanical clamp (Side)	0.14kg	Aluminium— Alumite finishing
E410-8	8×38mm		0.15kg	
E410-10	10×38mm		0.16kg	
E410-20	20×38mm		0.23kg	
E410-30	30×38mm		0.30kg	
E410-40	40×38mm		0.37kg	

Accessory: 2m of silicon hose and installation screws (Hexagon socket head 4 of M3-10)

Model	Device attached surface	Hold operation	Weight	Main materials · Surface processing
E410-8N	8×38mm	Mechanical clamp	0.15kg	Aluminium— Alumite finishing
E410-10N	10×38mm		0.17kg	
E410-20N	20×38mm		0.23kg	

Accessory: Installation screws (Hexagon socket head 4 of M3-10)

Temperature Control Waveguide Holder: F274

CAD
2D

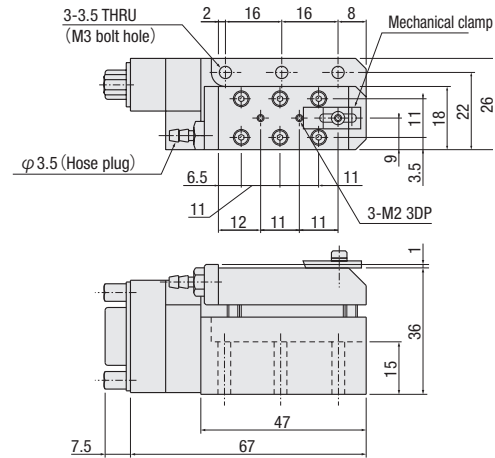
- The waveguide holder with temperature controller.
- As the hole for vacuuming can be covered by a volt and resin ring, absorption dimension to be changed to suit the waveguide range.
- A mechanical clamp also available.
- The holder will be changed to the thermal displacement when temperature control width is getting wider. Please ask for more details.
- Built in the corrected 10kΩ thermistor sensor using the Peltier device.
- ▶ Vacuum pump set : EV10A : P.4-059



F274-18

Dimensional outline drawings

F274-18



Connector 9-pin D-sub

- | | | |
|---|-------|-----------------------|
| 1 | _____ | Peltier devices (+) |
| 2 | _____ | |
| 3 | _____ | Peltier devices (-) |
| 4 | _____ | |
| 5 | _____ | |
| 6 | _____ | |
| 7 | _____ | Thermistor sensor (+) |
| 8 | _____ | Thermistor sensor (-) |
| 9 | _____ | |

SPEC	
Model	F274-18
Absorption area	18×37mm
Holding	Vacuuming(Tubing size IDφ3.0mm ODφ5.0mm) + Mechanical clamp(side)
Peltier devices	13W、4V、5A
Thermistor sensor	VTS510 (Calibrated 10kΩ thermistor sensor)
Weight	0.1kg
Main materials・Surface processing	Aluminum-Black alumite treatment

Accessory: 2m of silicon hose and installation screws (Hexagon socket head 3 of M3-18)

Objective Lens Holder: F280/F281

CAD
2D

RoHS
10

- Should be used JIS standard screw M20.32P=0.706 for fixing objective lens.
- There are two types, one with bottom plate and the other without bottom plate.



F280



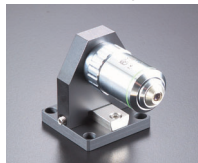
■ Lens mounting example

Can be used it for alignment unit by combining with an exclusive adapter(F270-PB10) to change optical axis height.

▶ Holder adaptor
P.4-038

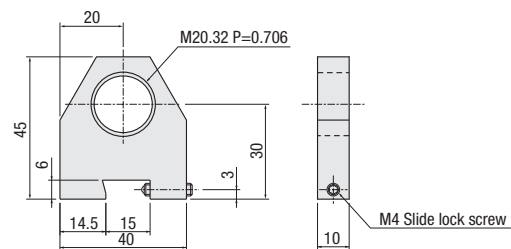


F281

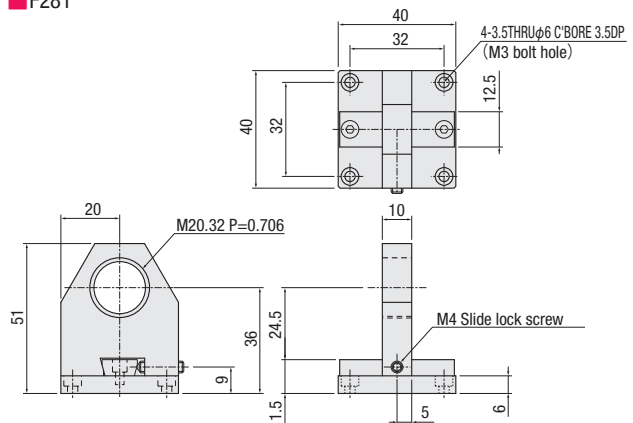


Dimensional outline drawings

F280



F281



SPEC	
Model	F280
Bottom plate	-
Weight	0.02kg
Main materials・Surface processing	Aluminum-Black alumite treatment

Accessory: Installation screws (Hexagon socket head 4 of M3-6)
 ※Included screws for only F281

Guidance

WG
alignment

LD/PD
alignment

Alignment components

Manual
alignment unit

Motorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meter

Accessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unit

CCD
camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment
system

Alignment
controller

WG
alignment

LD/PD
alignment

Selfoc® Lens Holder: F290

CAD
2D

RoHS

● This holder is combined with Selfoc lens holder F14 and bracket A54-0.

► F14 : P.3-015、A54 : P.4-038

Optical fiber alignment

Guidance

WG
alignment

LD/PD
alignment

Alignment
components

Manual
alignment unit

Motorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meter

Accessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unit

CCD
camera

Monitor

Lighting

UV equipment

Pump

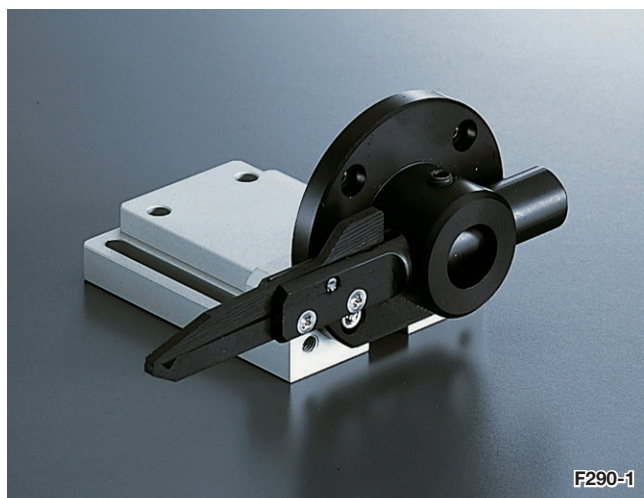
Probe

Alignment
system

Alignment
controller

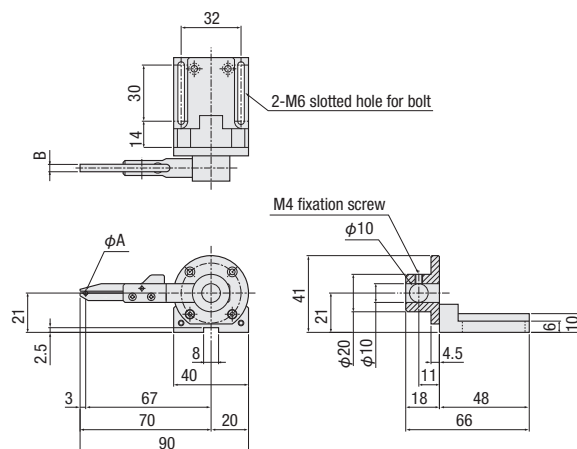
WG
alignment

LD/PD
alignment



F290-1

F290



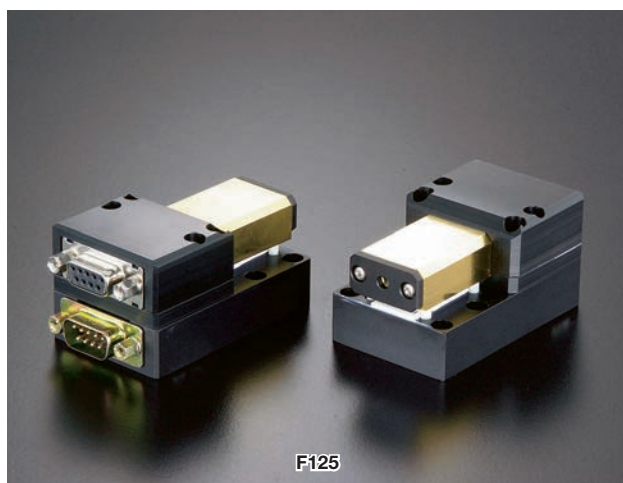
SPEC					
Model	Applicable lens diameter (A)	Width (B)	hold operation	Weight	Main materials・Surface processing
F290-1	φ0.5～ 1.5mm	2mm	Mechanical clamp	0.07kg	Aluminium— Alumite finishing
F290-2	φ1.6～ 2.5mm	4mm			
F290-3	φ1.6～ 2.5mm				
F290-4	φ2.5～ 5.0mm				
F290-5	φ4.0～ 8.0mm				
F290-6	φ7.0～12.0mm				

Accessory: Installation screws (Hexagon socket head 2 of M3-10)

LD Holder (TO-Package type): F125

CAD
2D

● Built-in Peltier device holder.



F125

SPEC				
Model	F125-3A	F125-3B	F125-4A	F125-4B
LD Size	φ5.6	φ9.0	φ5.6	φ9.0
Pin P.C.D.	2.0mm	2.54mm	2.0mm	2.54mm
Number of pin	3		4	
Weight	0.2kg			
Main materials・Surface processing	Aluminum-Black alumite treatment		Cooper-Gold plating processing	

► Detailed LD holder P.3-035

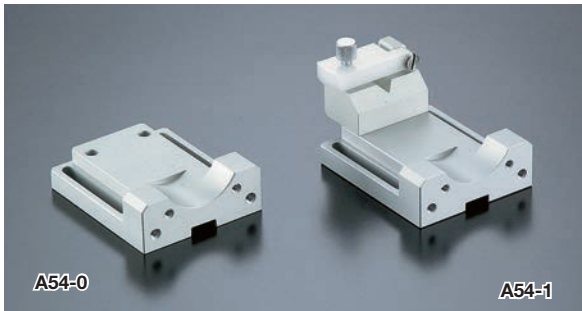
Bracket for Element Adaptor: A54

CAD
2D

RoHS

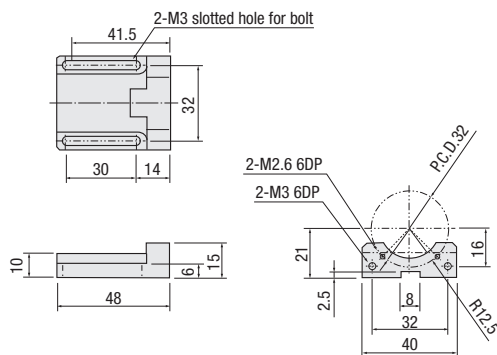
- Available for variety of adaptors.
- Tilt stage-mountable.
- A54-0 type, no jacket hold part, and A54-1, has it.

Available in various adaptors (except F19) as below the picture.
 (Use M2.6-P.C.D.32 screw for mounting adaptor)
 ▶ P.3-015~018

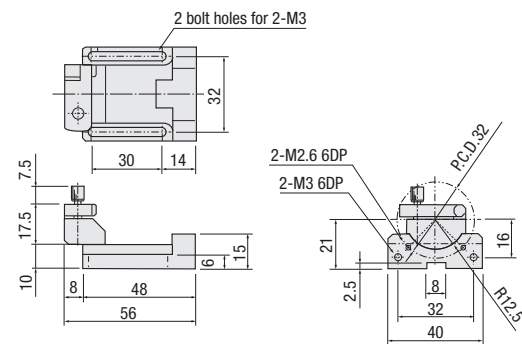


Dimensional outline drawings

A54-0



A54-1



SPEC		
Model	A54-0	A54-1
Part of holding	No	Yes
Weight	0.04kg	0.06kg
Main materials・Surface processing	Aluminum-White alumite treatment	
Accessory: Installation screws (Hexagon socket head 2 of M3-10)		

Holder Adaptor

CAD
2D

RoHS

- This is for the device holder. It is designed to be 80mm optical axis height by the mounting device holder (F270~F274, F280, F281) and adaptor (F270-PB10/20/26).
- In order to avoid the interference of the alignment unit.
- Also has line-up the base plate (F271-B, E410-B).



▶ See WEB for external dimension

■ Example for using



SPEC												
Applicable holders												Weight
Model	F270-10	F270-20	F271-10	F271-20	F274-18	F272-2	F272-5	F273-2	F273-5	F280	F281	
F270-PB10	○		○			○	○	○	○	○	○	0.06kg
F270-PB20		○		○								0.1 kg
F270-PB26					○							0.1 kg
F271-B	○	○				○	○			○		0.04kg

Main materials・Surface processing : Aluminium—Alumite finishing
 Accessory: Installation screws (Hexagon socket head 4 of M3-6 (F271-B)
 4 of M3-10 (E410-B))

Model	Applicable holders	Weight
E410-B	E400 series	0.06kg

Guidance

WG
alignment

LD/PD
alignment

Alignment components

Manual
alignment unit

Motorized
alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact
sensing meter

Accessories
for alignment

Stereomicroscope

Lens tube

Monitoring
unit

CCD
camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment
system

Alignment
controller

WG
alignment

LD/PD
alignment

2-axis Tilt Table: EB55

- This is the 2-axis tilt control table for matching a fiber holder parallel with the optical axis.
Good for proximity to the probe and monitoring.



SPEC		
Model	EB55-1L	EB55-1R
Travel distance	$\pm 2.5^\circ$	
Travel distance per one rotation(※)	Vertical approx. 0.57° /per rotation Horizontal approx. 0.58° /per rotation	
Weight	0.28kg	
Main materials・Surface processing	Aluminum-Black alumite treatment	

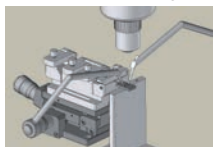
Accessory: Installation screws (Hexagon socket head 4 of M4-6)
※ Value of near the center of stroke

Model/Option

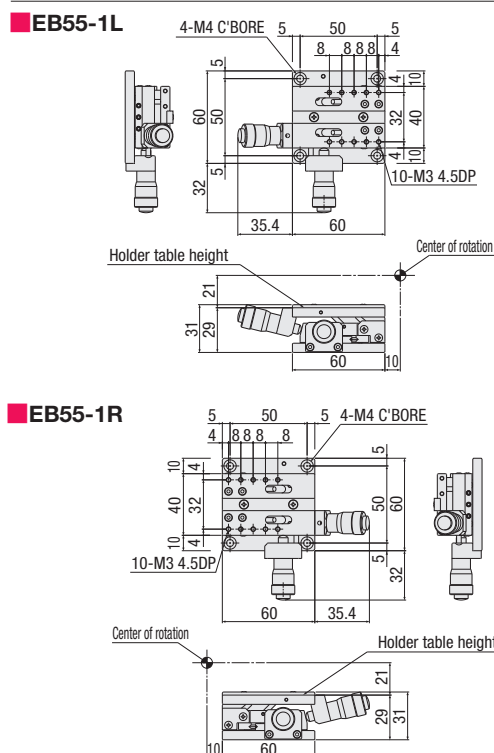
EB55-1 L R

L : Left type R : Right type

Example for using



Dimensional outline drawings



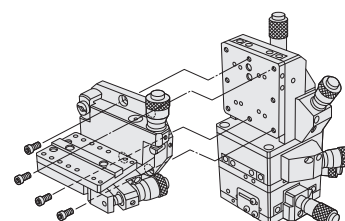
Tilt Stage: B50/B51/B53

- This is the 2-axis tilt stage for mounting a fiber holder.
Selectable from 3 type due to type of rotation center.

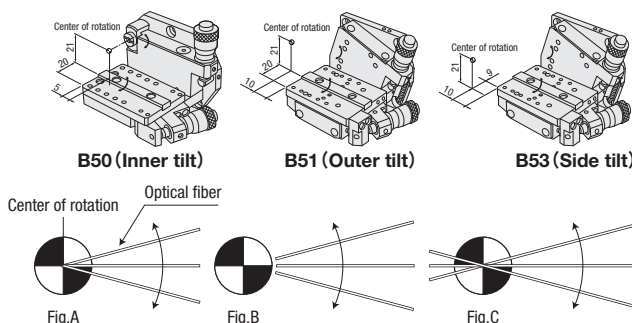


- Mount to the high resolution stage B10 series.

- Detailed High resolution stage B10 P.2-089
- Alignment unit P.4-017
- See WEB for external dimension



Dimensional outline drawings



- There are 3 types of different type of rotation center.
B50: Inner tilt stage (Center of the rotation is the inside a stage)
B51: Outer tilt stage (Center of the rotation is the outside a stage)
B53: Side tilt stage (Center of the rotation is the side a stage)

- It is very important to make a relation of tilt, rotation center and device position (e.c. fiber edge) when you wish a fine motion to begin.

As figure A shows, there is almost no difference in the top of optical fiber when it is aligned with the tilt rotation center.

As figure B and C shows, there may be a discrepancy in location at the top of optical fiber caused by the gap between the top of optical fiber and tilt rotation center.

- This is the control mechanism for positioning horizontal optical axis and optical fiber.
Do not use in vertical and upside down.

SPEC				
Model	B50-60LN	B50-60RN	B51-60LN	B51-60RN
Stage surface size	40×60mm			
Travel distance	$\pm 3.0^\circ$ ($\theta_y \pm 3.047^\circ$ $\theta_z \pm 3.013^\circ$) $\pm 2.5^\circ$ ($\theta_y \pm 2.645^\circ$ $\theta_z \pm 2.514^\circ$) $\pm 2.5^\circ$ ($\theta_y \pm 2.645^\circ$ $\theta_z \pm 2.869^\circ$)			
Micrometer minimum readable scale	$\theta_y 33.8^\circ$ /scale $\theta_z 33.4^\circ$ /scale $\theta_y 29.3^\circ$ /scale $\theta_z 27.8^\circ$ /scale $\theta_y 29.3^\circ$ /scale $\theta_z 31.8^\circ$ /scale			
Weight	0.32kg 0.39kg 0.40kg			
Main materials・Surface processing	Aluminum-Black alumite treatment			

Accessory: Installation screws (Hexagon socket head 4 of M4-6)

Model/Option

B5 1 -60 L R N

L : Left type R : Right type

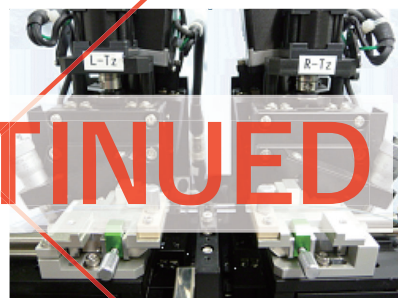
0 : Inner tilt, 1 : Outer tilt, 3 : Side tilt

Contact Sensing Meter: CSM

- CSM for GAP control or facing (paralleling) of fiber array and waveguide.
- Mount for the alignment unit E/ES series.
- CSM makes it possible for GAP adjustment/facing.



Example



It might be slightly different from the actual product.

Features

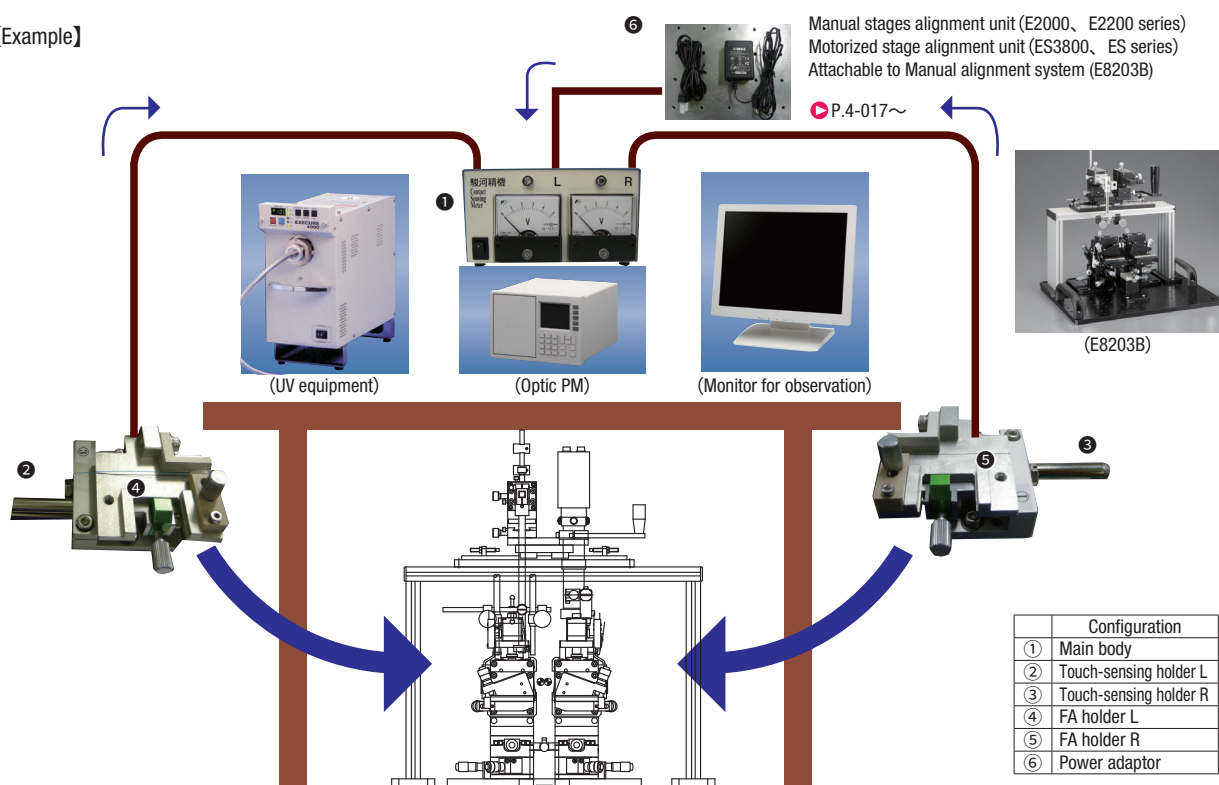
- It enables positioning while checking a display.
- As the contact position is detected, it enables positioning while checking a display.
- Provides a multi-device holder which attaches great importance to work efficiency.

SPEC

Configuration	A measuring device main body and one set of L and R holder
Applicable device size	3~12 (W) × 3~20 (L) × 1~3.5mm (t)
Measuring function	Contact realization (GAP adjustment) Facing
Reproducible	Contacting position w/in $\pm 2\mu\text{m}$, Facing w/in $\pm 0.05^\circ$
Electric power	AC100~240V $\pm 10\%$ ※1 50/60Hz 18W
Size	main body : 160 (W) × 130 (D) × 95 (H) mm Holder : 80 (W) × 55 (D) × 20 (H) mm
Weight	main body : 1.2kg Holder part: 0.12kg each

※1 : Power plug is different between Japan(100V) and China(220V)

【Example】



Guidance

WG alignment

LD/PD alignment

Alignment components

Manual alignment unit

Motorized alignment unit

Device unit

Fiber holders

Device holders

Adaptors

Contact sensing meter

Accessories for alignment

Stereomicroscope

Lens tube

Monitoring unit

CCD camera

Monitor

Lighting

UV equipment

Pump

Probe

Alignment system

Alignment controller

WG alignment

LD/PD alignment