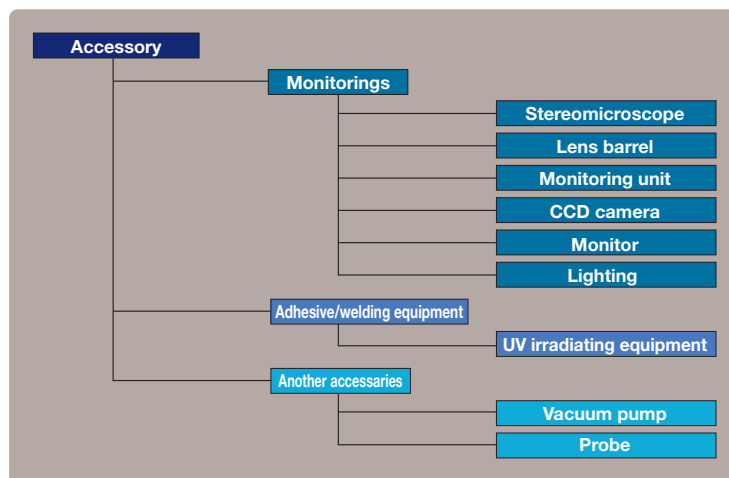
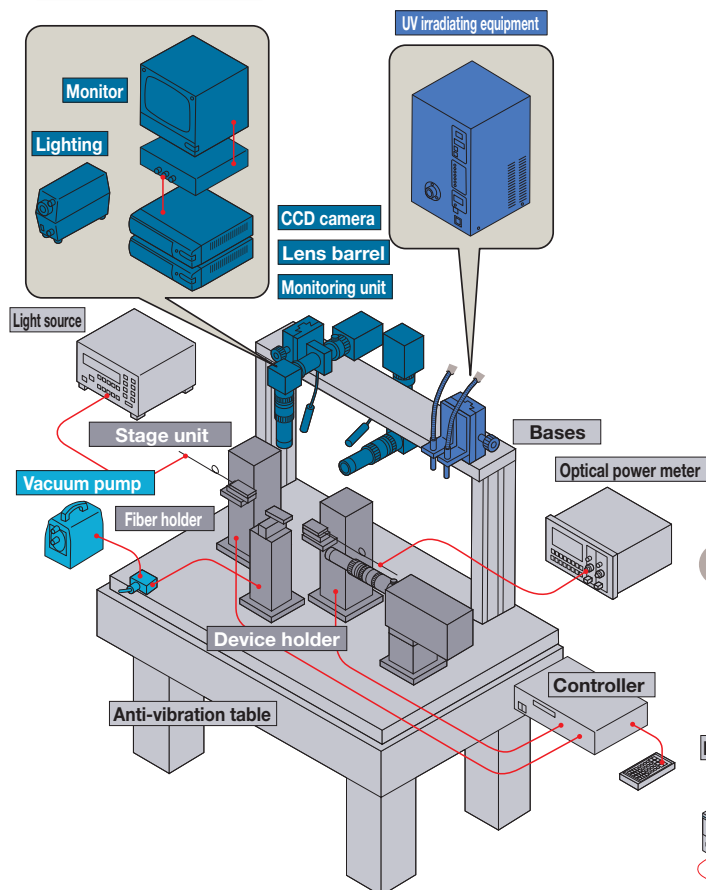


Alignment Accessory

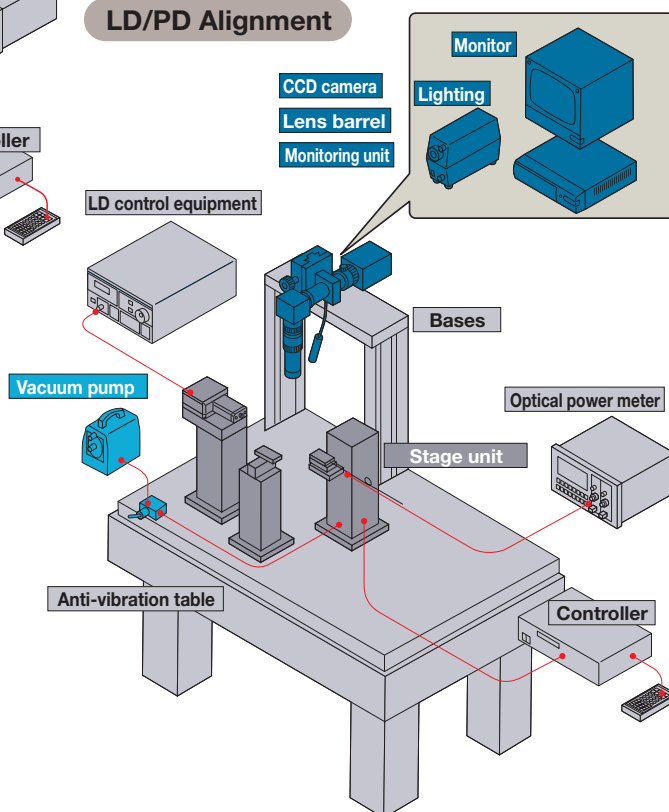
The following pages will help you use the accessory for WG, LD, PG alignment.



WG Alignment

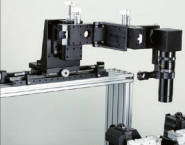












LD/PD Alignment







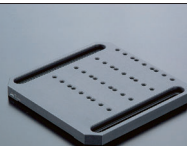
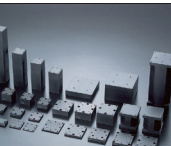
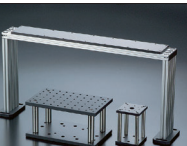
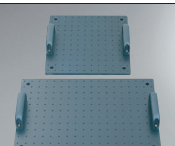


Alignment Accessory Lineup

Stereomicroscope		Lens barrel				
Type of product	stereomicroscope	Zoom head	Coaxial illumination/Straight lens barrel	Video Microscope	NFP Observation unit/Observation unit	Zoom lens
Model	V20	V20	V21	VMS	V25	VZL
Appearance						
Page	P.4-045	P.4-048	See WEB	P.4-049	P.4-050	P.4-051

Monitoring unit			CCD camera		Monitor	
Type of product	Monitoring unit (For zoom head)	The end face monitoring unit (For zoom head)	Color CCD camera	Black/White CCD camera	Color Monitor	Black/White monitor
Model	E701/E711/E721	E790	VSTC	VCS	VCM/VQT	V9LM
Appearance						
Page	P.4-052	P.4-053	P.4-054	P.4-054	P.4-054	P.4-054

Monitor		Lighting		UV irradiating equipment	
Type of product	Camera selector	Cold light	LED light	UV-LED light source	UV light source
Model	VCC	VMEGA	VSLD/VSLDH	VEEXECURE-H1VC2	VEEXECURE4000
Appearance					
Page	P.4-054	P.4-055	P.4-056	P.4-057	P.4-058

Pump				Probe
Type of product	Vacuum pump set	Vacuum pump	Vacuum pin set	Probe unit
Model	EV10A	V10A	V12A	MPU
Appearance				
Page	P.4-059	P.4-059	P.4-059	P.4-060

Plate/parts etc.						
Type of product	Base plate	Spacer	Plat form	Bread board	Anti-vibration table	Optical fiber
Model	A24	A49/A50/E0-h	A60/61/E11	A64/JF	J04/J05	V50/V51
Appearance						
Page	P.3-139	P.3-137	P.3-138	P.3-119	P.3-163	P.3-150

Accessory Guidance

Monitoring equipment P.4-045~

Monitor the contact part between devices and the appearance streamer from the edge during the alignment. As the size of device is so small, so it is improved with the microscope and the zoom lens barrel.

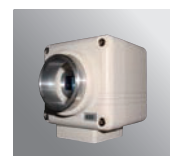
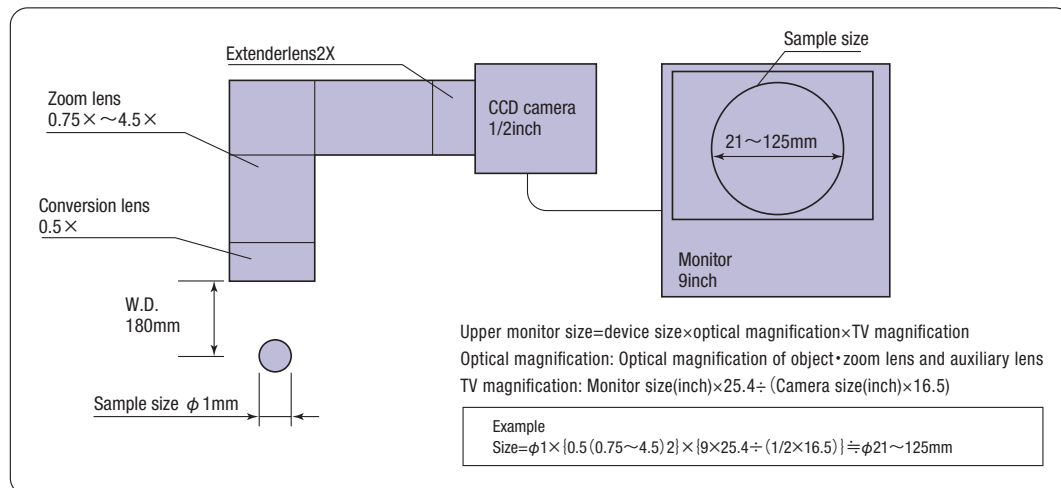
Selection

Please make sure the equipment depends on the distance of shape, size and wavelength.

Monitoring proximity of the devices.

Use stereomicroscope and zoom-head+CCD camera.

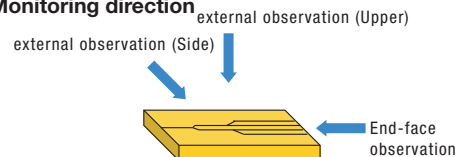
Device size as shown below during CCD camera operation on the monitor.



Monitoring unit

Monitoring devices or positioning proximity must be confirmed before the device alignment. We are preparing a sample of monitoring as follows.

Monitoring direction



	Monitoring unit				
	Monitoring unit (For zoom head)			The end face monitoring unit (For zoom head)	The end face monitoring unit (For zoom head)
Appearance					
Monitoring direction	external monitoring (Upper)	external monitoring (Upper)	external monitoring (Upper/Side)	End-face monitoring	End-face monitoring
Model	E701	E711	E721	E790	E791
Page	P.4-052	P.4-052	P.4-052	P.4-053	P.4-053

■ Adhesive a device. P.4-057~

We are preparing a UV curing products for adhesive a device.



UV curing equipment VEXECURE

Uv curing equipments are available in either lamp type or LED type.
 Wide selection of lightguide and lens.

■ More accessories P.4-059~

A wide variety of parts, units, combination holders and much more for the alignment operation.

■ Pump

A pump for vacuum absorption. Vacuum pin-set also available for pick-up the fine parts.



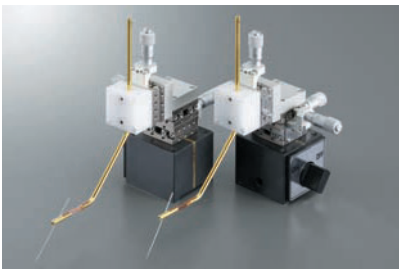
Vacuum pump set EV10A



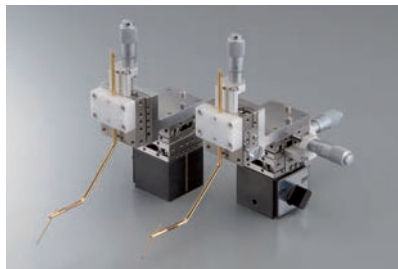
Vacuum pin set V12A

■ Probe

Use for LD chip or waveguide with electronics, and device probing.
 Combined with XYZ stage unit and probe holder on the magnet base plate. It is a small and easy-to-use.



Probe unit MPU-25



Probe unit MPU-40

■ Others

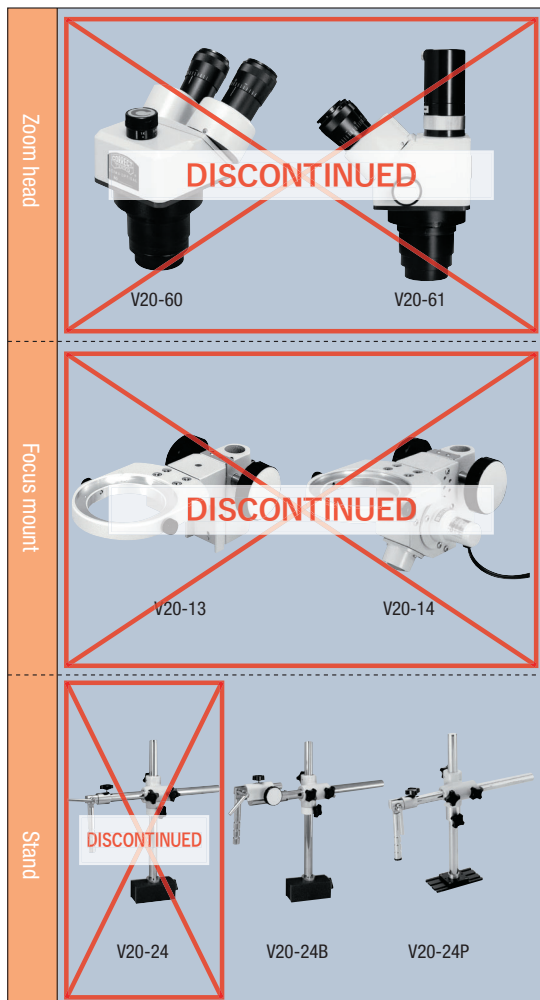
See more details for optorionics accessory following pages.

- Base plate P.3-139~
- Spacer P.3-137~
- Plat form..... P.3-138~
- Bread board P.3-119~
- Anti-vibration table P.3-163~
- Optical fiber P.3-150~

Stereomicroscope: V20 Series

- Monitoring a perspective and satirically erected image in wide range.-Greenough-type binocular stereomicroscope.
- It is good for rough positioning of butting between optical fiber and waveguide or butting between an optical fibers.

Microscope combination chart



Zoom-type optical combination performance chart (Magnification • F.N. • Operating distance)

Objective auxiliary lens	Objective zoom lens	Traveling	Eyepiece							
			V20-5X		V20-10X		V20-15X		V20-20X	
			Magnification	F.N.	Magnification	F.N.	Magnification	F.N.	Magnification	F.N.
0.25×	0.18~1.125×	300mm	0.93~5.62×	120~18.5mm	1.7~11.25×	130~20mm	2.81~16.87×	74~12mm	3.75~22.5×	70~11.5mm
0.4×	0.3~1.8×	200mm	1.5~9×	77~11.9mm	3~18×	83~14mm	4.5~27×	48~7.6mm	6~36×	45~7.3mm
Standard	0.75~4.5×	90mm	3.75~22.5×	27~4.5mm	7.5~45×	29.3~4.8mm	11.25~67.5×	17.1~2.8mm	15~90×	16~2.7mm
1.5×	1.12~6.75×	45mm	5.65~33.75×	17.3~2.9mm	11.25~67.5×	19.2~3.2mm	16.87~101.25×	11.3~2.0mm	22.5~135×	10.5~1.8mm
2.0×	1.5~9.0×	31mm	7.5~45×	13.1~2.2mm	15~90×	14.6~2.4mm	22.5~135×	8.6~1.42mm	30~180×	8.1~1.31mm

Eyepiece lens



There are 5X, 10X, 15X and 20X types for an eyepiece lens of binocular microscope. Also available 10X eyepiece lens with visibility controller.



SPEC				
Model	V20-5x	V20-10x	V20-15x	V20-20x
Magnification	5x	DISCONTINUED		20x
Applicable head	V2U-B0, V2U-B1			



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Zoom head



- Binocular zoom head: V20-60
Tilt 45 degree.
- Triple-lens zoom head: V20-61
Tilt 45 degree. Attachable camera and TV camera on cylinder.
- Dedicated adaptor is required when CCD is mounted.



V20-60



V20-61

SPEC		
Model	V20-60	V20-61
Type	Binocular zoom head	Triple-lens zoom head
Objective lens	0.75~4.5× zoom	
Mount	DISCONTINUED camera or CCD adaptor.	
Applicable focus mount	V20-13、V20-14	
Eyepiece	Please select from V20-5×、10×、15×、20×	
Travel distance	90mm	

Attachment objective lens



It is combined with zoom head. Can be changed magnification, fields and distance for your purpose.

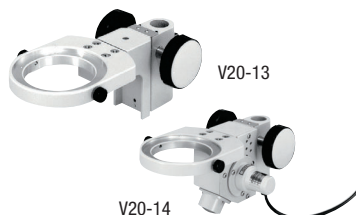


SPEC				
Model	V20-67	V20-68	V20-69	V20-70
Magnification	1.5×	DISCONTINUED		0.4×
Travel distance	45mm			200mm
Applicable head	V20-60、V20-61			

Focus mount



For zoom head.
 V20-14 has an oblique lighting.
 Please refer the specification of zoom head and stand.

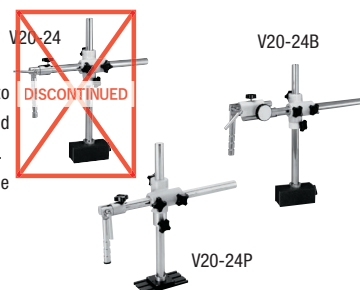


V20-14

SPEC		
Model	V20-13	V20-14
Lighting	—	With oblique illuminator
Vertical motion	Rack & Pinion type, stroke 50mm	
Slide	DISCONTINUED	
Pole hole diameter	φ19mm	
Applicable head	V20-60、V20-61	
Applicable stand	V20-24、V20-24B、V20-24P、V20-24BP	

Stand

Included base plate.
 Can be travel 300mm and 250mm to vertical and horizontal direction, and travel 50mm to parallel by dovetail type.
 Available magnet base plate and base plate.



V20-24P

SPEC				
Model	V20-24	V20-24P	V20-24B	V20-24BP
Back & force motion	—	—	Rack & Pinion type, stroke 50mm	
Base	DISCONTINUED magnet	Base plate	Magnet	Base plate
Applicable focus mount	V20-13、V20-14			

Illuminator



Illumination for microscope.
 V20-28C is an epi-illumination with collective lens, and V20-40C is ring form fluorescent illumination.
 Review the frequency when place an order.
 Also available cold-light.



V20-28C

SPEC		
Model	V20-28C	V20-40C
Type	Flexible incidence	Ring form incident lighting
Lighting	6V 100W with light intensity controller	100V 8W

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

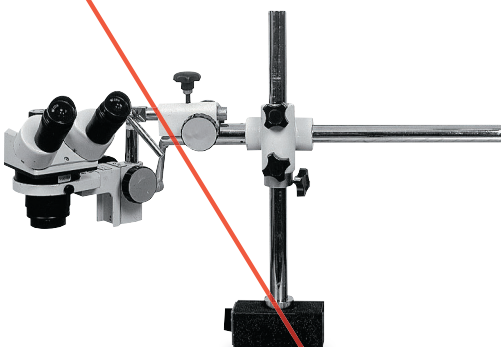
LD/PD alignment

Stereomicroscope Set



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■ Combination with a binocular stereo microscope mounted by magnet.



■ Component

Product name	Model
Eyeiece 10×	V20-10X
Binocular zoom head	V20-60
Focus mount	V20-13
Magnet stand	V20-24B

Model
V20-6013

■ Combination with a binocular stereo microscope mounted on a plate.



■ Component

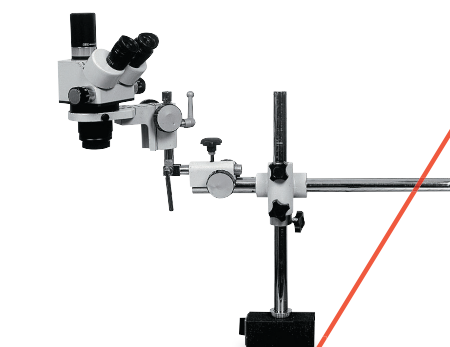
Product name	Model
Eyeiece 10×	V20-10X
Binocular zoom head	V20-60
Focus mount	V20-13
Base stand	V20-24P

※The original stand does not have dovetail type(V20-24P)

Model
V20-6013

DISCONTINUED

■ Combination with a trinocular stereo microscope mounted by magnet.



■ Component

Product name	Model
Eyeiece 10×	V20-10X
Triple-lens zoom head	V20-61
Focus mount	V20-13
Magnet stand	V20-24B

Model
V20-6113

■ Combination with a trinocular stereo microscope mounted on a plate.



■ Component

Product name	Model
Eyeiece 10×	V20-10X
Triple-lens zoom head	V20-61
Focus mount	V20-13
Base stand	V20-24P

Model
V20-6113A

※The original stand does not have dovetail type(V20-24P)

Zoom Head



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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

4

048

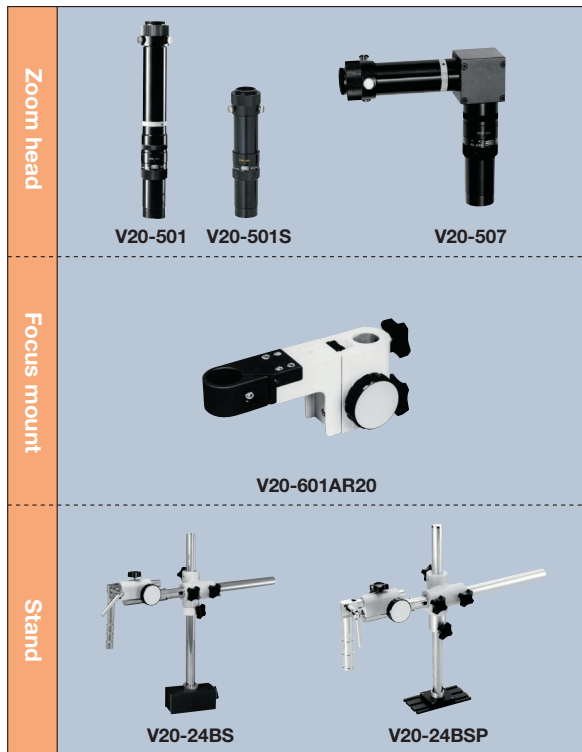
Zoom head

Tilt head with 0.75-4.5X zoom.

Good for butting between optical fiber and waveguide because of wide length.

In addition to the standard type, we have the fixed magnification and cylinder type.

List for zoom head combination



<V20-501>

Great resolving power and wide length and the compact style. Combine with a ring illumination, oblique lighting and transmissive.

<V20-501S>

The compact type of V20-501.

No variable throttles.

<V20-507>

Good for combining with unit.

The work motion should be unaffected with erected image prism.

See WEB for external dimension

SPEC			
Model	V20-501	V20-501S	V20-507
Type	Zoom head	Zoom head (Short)	Right angle zoom head
Objective lens	0.75~4.5× zoom		
Mount	With C-mount		
Applicable focus mount	V20-601AR20		
Travel distance	90mm		

SPEC	
Model	V20-601AR20
Vertical motion	Rack & Pinion type, stroke 50mm
Slide	Cross roller
Pole hole diameter	φ25mm
Applicable head	V20-501、V20-507
Applicable stand	V20-24BS、V20-24BSP

SPEC		
Model	V20-24BS	V20-24BSP
Back & force motion	Rack & Pinion type, stroke 50mm	
Base	Magnet	Base plate
Applicable focus mount	V20-601AR20	

Focus mounted

For zoom head.

V20-601AR20 is cross-roller type for traversing horizontal and finished the top of lens tube with R20.

Can be closed to use when you operate two tubes.

Stand

Stand with base plate.

Can be travel 300mm and 250mm to vertical and horizontal direction, and travel 50mm to parallel by dovetail type.

Available magnet base plate and base plate.

Conversion lens and extenderlens

<V20-CV> Easy to change magnification to mount V20-500 series.

<V20-EX2> This is an attachment lens for improving magnification to mount between C mount and camera C mount.



V20-CV

V20-EX2

SPEC	
Model	V20-EX2
Magnification	2×
Mount	C-mount/C-mount
Travel distance	No change
Magnification calibration	N/A

SPEC							
Model	V20-CV025	V20-CV04	V20-CV05	V20-CV075	V20-CV15	V20-CV20	V20-CV30
Magnification	0.25×	0.4×	0.5×	0.75×	1.5×	2.0×	3.0×
Travel distance	300mm	195mm	180mm	120mm	54mm	36mm	25mm

Compact Zoom Lens Tube: V22-0745D Series



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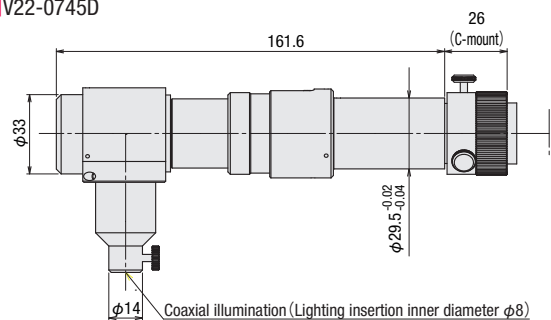
- This is the 0.7~4.5X compact zoom lens tube for 1/2 inch camera. Can be monitored even range at the zoom.
- Magnification set up by click.
- Available inner focus type.



V22-0745DIN

Dimensional outline drawings

V22-0745D



SPEC		
Model	V22-0745D	V22-0745DINF
Optical magnification	0.7~4.5x	
Zoom ratio	6.4x	
Inner Focus	N/A	±1.5mm
Depth of field	MIN1.8mm : MAX0.13mm	
Travel distance (From the lens tube edge)	92mm	
Weight	440g	

Coaxial Lens Tube: VMS200TWL Series



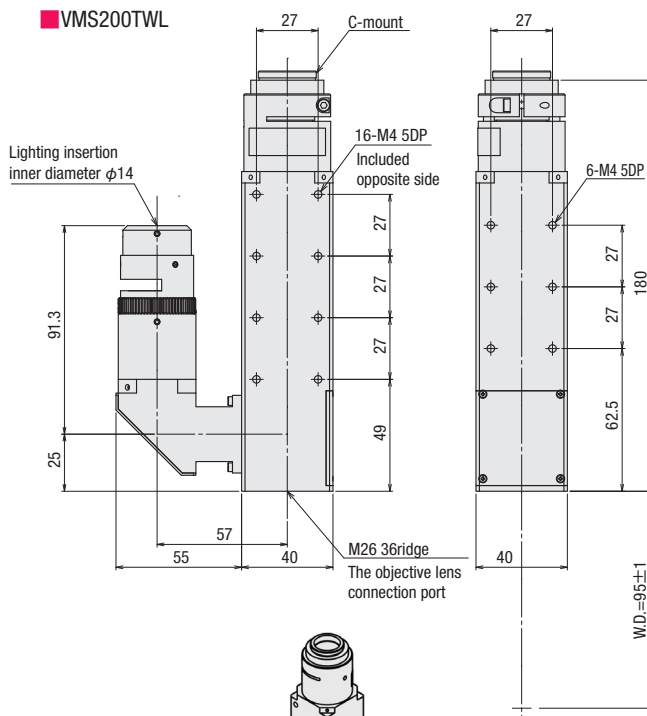
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- VMS200TWL is compact and low weight.
- Corrects the harmonics to 1064/532/355nm.
- High performance monitoring provides bright field. To be near-infrared microscope by combining with S72PEIRP.
- Available till 1.1 inch camera.



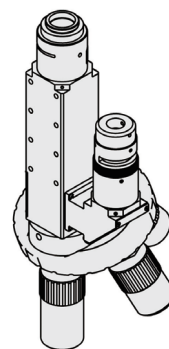
Dimensional outline drawings

VMS200TWL



SPEC	
Model	VMS200TWL
Lens mount	C-mount
Applicable objective lens	S72MPA, S72PEIRP
Applicable guide diameter	φ14
Weight	0.65kg

Objective lens P. 3-051, 052



Manual revolver with lens tube

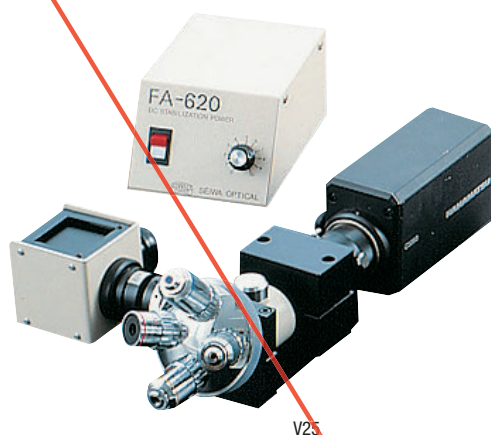
DISCONTINUED

Objective lens P. 3-051, 052



N.F.P. Monitoring Optical Unit: V25 Series

CORRECT 株式会社 清和光学製作所



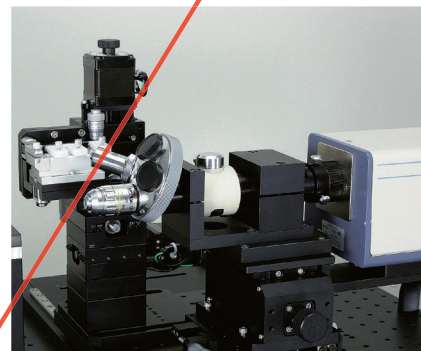
A variable type by revolver.

The objective lens are set to a 4 holes revolver, and combine with coaxial illumination, lens tube and C mount adaptor.

This is a cost-effective unit.

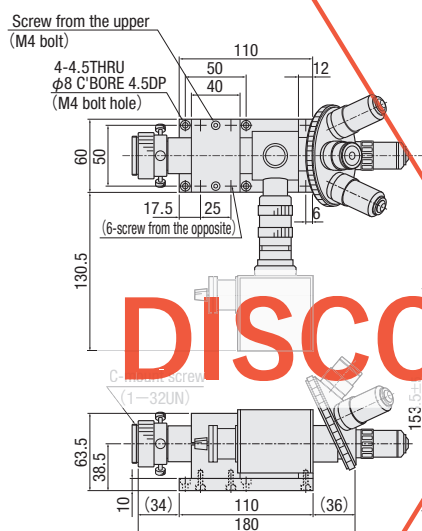
- The magnification will be changed 4 stages, so can be monitored the observation and all field.
- No illumination
- Not all types has objective lens.

Example for using

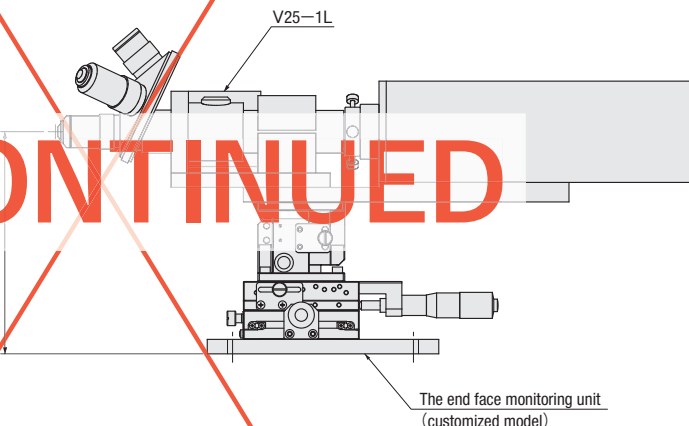


Dimensional outline drawings

V25-1L



Example cnfiguration with XYZ stages.



DISCONTINUED

Available customized configuration that combined with stages for using camera.
 For details, feel free to contact us

SPEC

Model	V25-1L	V25-1LN
Objective lens	5×, 10×, 20×, 40×	—
Light sources	Coaxial vertical illuminating (6V20W Halogen lamp)	
Mount	C-mount	

《V25-1L light specifications》

6V20W Halogen lamp
 AC100V 50/60Hz With stabilized power source
 Diaphragm and light quantity control system
 Coaxial vertical illuminating

■About total magnification

Approximately total magnification that combined with objective lens, camera and monitor is as follows
 (Total magnification) = (Optical magnification) × (Television magnification)

● Optical magnification: Depending on objective lens and relay lens

Television magnification: Depending on camera, pick-up tube and monitor size.

Television magnification = monitor size × 25.4 ÷ (camera size × 16.5)

《Objective lens specification》S72S series

	W.D.	N.A.	f
5×	19.0mm	0.1	37.9mm
10×	7.52mm	0.25	22.17mm
20×	2.2mm	0.4	11.72mm
40×	0.65mm	0.65	5.78mm

《V25 approximately total magnification》

	2/3 inch pick-up tube • CCD camera			1 inch pick-up tube • CCD camera		
	9 inches monitor	12 inches monitor	14 inches monitor	9 inches monitor	12 inches monitor	14 inches monitor
objective lens 5×	104	138	161	69	92	107
" 10×	208	277	323	138	184	215
" 20×	415	554	646	277	369	431
" 40×	831	1108	1293	554	739	862

Detailed 3-051

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

High Magnification Micro Zoom Lens: VZL-8N Series



● For 1/2inch~1/4inch camera.

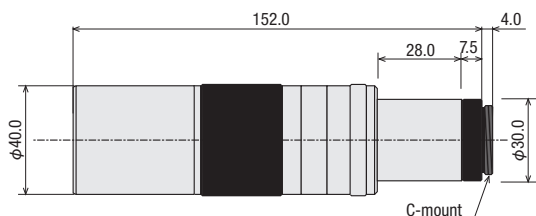
Distance will be X38~X300 when using 1/2inch camera and 15inch monitor.

● Magnification will be wide without changing travel length when combine the extender (1.5~5.0X)

Can be get wider magnification when combine the front convertor.

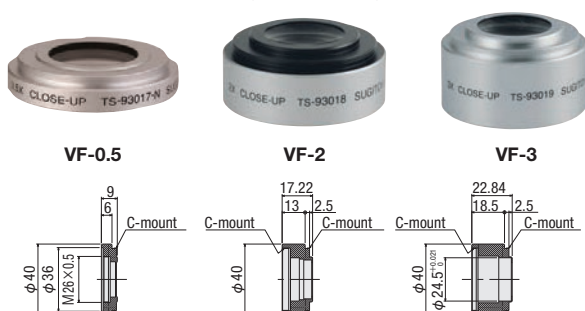
Dimensional outline drawings

High magnification micro zoom lens



SPEC	
Model	VZL-8N
Magnification	0.8~6.4X
Zoom ratio	8X ±5%
Depth of field (At the diaphragm open)	MIN 0.3mm : MAX 0.02mm
Side of the object resolution	MIN 50 /mm : MAX 256 /mm
Travel distance (From the lens tube edge)	78.78mm±5%
Weight	300g

Front convertor lens (for VZL-8N)



SPEC			
Model	VF-0.5	VF-2	VF-3
Magnification	0.38~3.0X	1.6~12.8X	2.4~19.0X
Travel distance※1	167.9mm	48.9mm	31mm
Weight	40g		

※1 The travel distans that combined with VZL-8N.

Zoom Lens: VZL-8 Series



● For 1/2 inch CCD camera.

Good for the unit with 200mm travel distance.

● Can be increased magnification by combined with extender (1.5~5.0X).

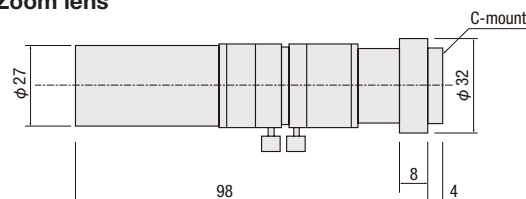
It allows high magnification by combining with a front convertor.

● Easy to fix with C-mounted for combination with zoom lens, extender, front convertor and CCD camera.

Dimensional outline drawings

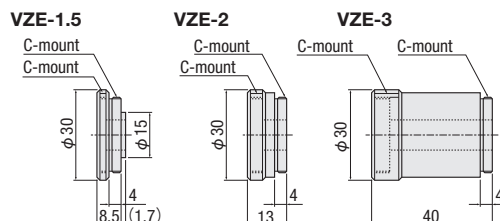
Multiple of 8 of the zoom lens

Zoom lens



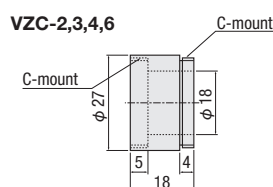
SPEC	
Model	VZL-8
Magnification	0.1~0.8X
Zoom ratio	8X±5%
Depth of field (At the diaphragm open)	MIN 30.89mm : MAX 0.48mm
Side of the object resolution	MIN 8/mm : MAX 64/mm
Travel distance (From the lens tube edge)	188.3mm±5%
Weight	110g

TV extender



SPEC			
Model	VZE-1.5	VZE-2	VZE-3
Magnification	1.5X	2X	3X

Close-up lens



SPEC				
Model	VZC-2	VZC-3	VZC-4	VZC-6
Magnification	2X	3X	4X	6X
Travel distance※1	82mm	35mm	35mm	17mm

※1 The travel distans that combined with VZL-8N.

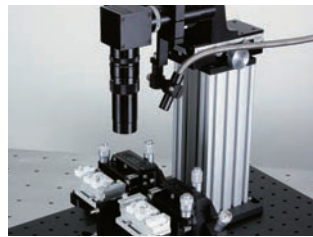
Monitoring Unit (for Zoom Head): E701

CAD
2D

RoHS



Example for using



It might be slightly different from the actual product. Please refer to the dimensional outline drawing.

	SPEC		
	X	Y (Focus direction)	Z
Travel distance	±30mm ±50mm	+30mm -20mm	±30mm
Resolution	0.1mm vernier		
Axis model	B05-13NH B06-1NM	B05-21KRM	B05-11NHM
Weight	2.5kg		

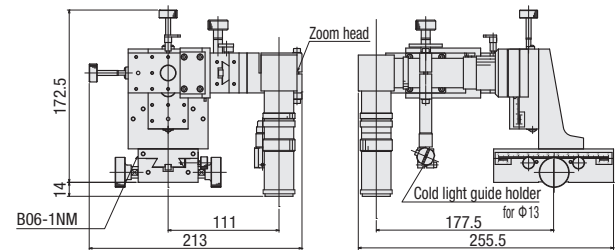
Accessory : Installation screws (Hexagon socket head M4-10)
 Applicable Zoom head : V20-507 P.4-048

- For mount the right angle zoom head.
- Available light guide holder.
- Mount and use to height control plat form E11 series.
- E11 series : P.3-138

Dimensional outline drawings

E701

See web for external dimension.



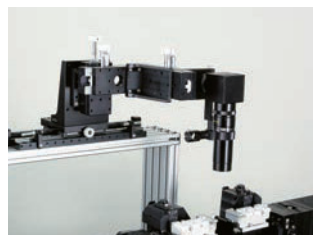
Monitoring Unit (for Zoom Head): E711

CAD
2D

RoHS



Example for using



It might be slightly different from the actual product. Please refer to the dimensional outline drawing.

	SPEC		
	X	Y (Focus direction)	Z
Travel distance	±30mm	+30mm -20mm	±30mm 128mm
Resolution	0.1mm vernier		
Axis model	B05-13NH	B05-21KRM	B05-11NHM B15-150
Weight	2.5kg		

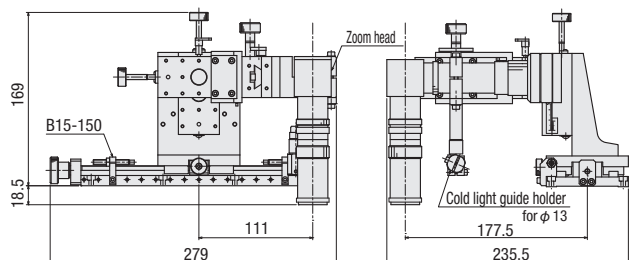
Accessory : Installation screws (Hexagon socket head M4-10)
 Applicable Zoom head : V20-507 P.4-048

- Built-in E701 to the long stroke stage (B15-150)
- Mount and use to height control plat form E11 series.
- E11 series : P.3-138

Dimensional outline drawings

E711

See web for external dimension.



Monitoring Unit (for Zoom Head): E721

CAD
2D

RoHS



Example for using



It might be slightly different from the actual product. Please refer to the dimensional outline drawing.

	SPEC		
	X (Focus direction)	Y (Focus direction)	Z
Travel distance	±30mm	+30mm -15mm	±30mm 128mm
Resolution	0.1mm vernier		
Axis model	B05-13NHR	B05-21KRM	B05-11NHM B15-150
Weight	4.0kg		

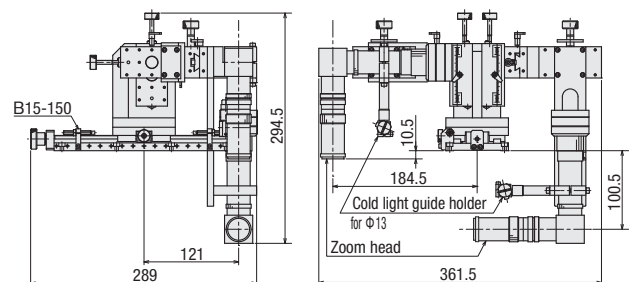
Accessory : Installation screws (Hexagon socket head M4-10)
 Applicable Zoom head : V20-507 P.4-048

- Built-in the stage unit for right angle zoom head of 2 types.
- Can be monitored both side of upper and side of device.
- Mount and use to height control plat form E11 series.
- E11 series : P.3-138

Dimensional outline drawings

E721

See web for external dimension.



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

End-Face Monitoring Unit (for Zoom Head): E790

CAD
2D

RoHS

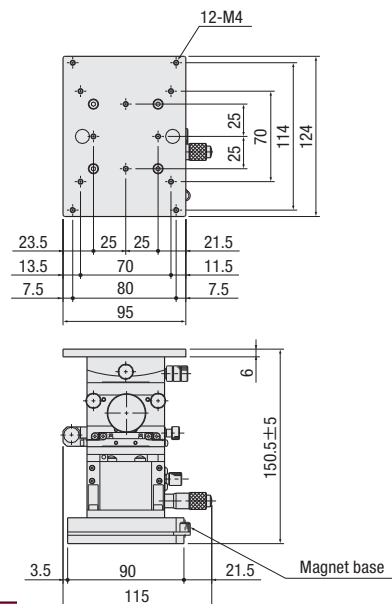
- For the zoom head (V20-501)
- Contact us if you would like to know more about the vidicon camera.
Custom designed adjustment plate is available when equip the other camera or evening the optical axis height.

Dimensional outline drawings

■ E790



Example for using



SPEC				
	X	Y	Z (Focus direction)	θx
Travel distance	±6.5mm	±5mm	±20mm	±15°
Resolution	0.5mm/Rotation	10um/scale	0.1mm / Vernier scale	0.1° / Vernier scale
Axis model	BSB16-60C1	B33-60KGA	B06-11M	B54-60LNR
Weight	3.3kg			

⚠ The lower plate is a magnet base plate.

End-Face Monitoring Unit (for Zoom Head): E791

CAD
2D

RoHS

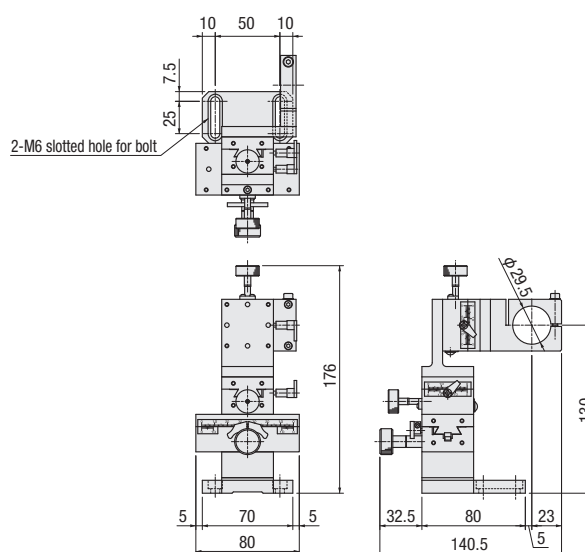
- The stage with zoom head is for monitored by CCD camera.
- Available E790 if CCD camera is heavy weight.

Dimensional outline drawings

■ E791



Example for using



SPEC			
	X	Y	Z (Focus direction)
Travel distance	±10mm	±10mm	±30mm
Resolution	0.1mm / Vernier scale		
Axis model	B05-41NM	B05-43N	B05-11NHM
Weight	3.3kg		

Accessory: Installation screws (Hexagon socket head 2 of M6-12)
Applicable zoom head : V20-501、V20-501S、V20-507 ➡ P.4-048

CCD Color Analog



- Integrated high performance 380 thousand pixel color camera.
- Available near-infrared models.



Configuration Camera head
Dedicated AC adaptor (Available AC100~240V)
BNC Cable (2m)

SPEC	
Model	VSTC-620PWCSET
TV style	Conform the NTSC method
Image sensor	1/2 type interline CCD
Effective pixel count	768 (H) × 494 (V) pixel
Scanning frequency	Horizon : 15.734kHz Vertical : 59.94Hz
Image output	VBS : 1.0V (n-p) / 75Ω, Y/C
S/N ratio	DISCONTINUED
Power supply	DC10~12V
Consumption current	170mA±20mA
Lens mounting	C-mount
Size	51 (W) × 51 (H) × 60.5 (D) mm (not include protrusions)
Weight	Approx. 190g

CCD Black and White Analog



- Integrated compact and light weight 410 thousand pixel camera.
- Available near-infrared models.



Configuration Camera head
Cable (2m)
Dedicated AC adaptor (Available AC100)
BNC Cable (2m)

SPEC	
Model	VCS8620ISET
TV style	Conform the EIA method
Image sensor	1/2 type interline CCD
Effective pixel count	768 (H) × 494 (V) pixel
Scanning frequency	Horizon : 15.734kHz Vertical : 59.94Hz
Image output	VS : 1.0V (n-p) / 75Ω
S/N ratio	DISCONTINUED
Power supply	DC12V±10%
Consumption current	Approx. 108mA
Lens mounting	C-mount
Size	29 (W) × 29 (H) × 31 (D) mm (not include protrusions)
Weight	Approx. 50g

Color Monitor

- Available 4 types of monitors. Wide variety of lineup for various application



Color LCD monitor

SPEC				
Model	VCM-562	VQT-802P-AVG	VQT-1007P-AVG	VQT-1504P
Monitor size	5.6inch 1113 (W) × 84 (H) mm	8inch 164 (W) × 123 (H) mm	10inch 212 (W) × 160 (H) mm	15inch Approx. 307 (W) × 230 (H) mm
Input systems	Video input RCA×1	Video input D-Sub15 pin (small 3 string type) Video input RCA×2	Video input D-Sub15 pin (small 3 string type) Video input RCA×2	Video input D-Sub15 pin (small 3 string type) Video input RCA×2
Output channels		Speaker output with built-in 0.25W×1	Speaker output with built-in 2W×1	Speaker output with built-in 2W×1
Touch panel function				Interface USB The correspondence OS Windows7/Vista/XP
AC adaptor※	VCM-562-AC (sold separately)	included	included	included
Electricity consumption	Approx. 9W	Approx. 6.6W	Approx. 10W	Approx. 25W
Size	163 (W) × 112 (H) × 30 (D) mm	220 (W) × 210 (H) × 150 (D) mm	252 (W) × 267 (H) × 185 (D) mm	347 (W) × 327 (H) × 160 (D) mm
Weight (only main body)	0.5kg	1.1kg	1.6kg	3kg

Black and White Monitor



- 8.4 inch LCD panel monitor for imaging display. Display EIA based signal clearly in about 8 bit (256 gradation)



V9LM20

SPEC		
Model	V9LM20	
Display	Display device	8.4 type Monochrome LCD monitor
	Display resolution	800 (H) × 600 (V)
	Simultaneously	Corresponding 256 gradations (LCD panel spec. 8 Bit)
Input method	Conform to EIA signal (Interface)	
Video input part	Input signal	1.0V (n-p) (VIDEO 0.7V (p-p) SYNC 0.3V (p-p))
	Connector	DISCONTINUED BNC Connector
White luminance	450cd/m ² (Typ.) / 350cd/m ² (Min)	
Contrast	600 : 1 (Typ)	
Power supply part	Electricity consumption	AC100~240V±10% less than 0.7A 50/60Hz
	Size	220±3 (W) × 250±3 (H) × 130±1 (D) mm
Others	Weight	Less than 1.6kg (not include stand options)

Camera Selector

- Display to the monitor max. 6 cameras by manual.



VCC-3011B

SPEC	
Model	VCC-3011B
Video input part	VBS 1.0V (p-p) 75Ω BNC channels
Image output	VBS 1.0V (p-p) 75Ω BNC channels
switch	Mechanical key mechanism switch
Range of using temperature	-10°C~+50°C
Size	210 (W) × 47 (H) × 248 (D) mm
Weight	1.4kg

Cold Light Source: VMEGA Series

SCHOTT

The VMEGA series consists of light source for fiber light with high illumination and long life halogen lamp.
Simply select the appropriate cold light source to meet your requirements.

VMEGA100

- Compact and low-price.
- Integrated the remote modulated light function from external.
- Illuminance difference less than 0.3%.



Halogen lamp for exchange

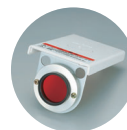


Model
VJCR-12V

SPEC	
Model	VMEGA100
Model name	JCR12V100W 10H
Electricity consumption	Approx. 135W
Lump life (Note 1)	Approx. 1000 hours
Illuminance (Note 2)	0~650000lx
Illuminance (Note 3)	0~240000lx
Color temperature (Note 4)	3100K
Size	76 (W) × 120 (H) × 235 (D) mm
Weight	About 1.5kg
Power supply	AC100~120V 50/60Hz
Lump	Halogen lamp with dichroic mirror
Illuminance stability	Within ± 0.3% (when the input voltage fluctuation ± 10%)
Light level control	Voltage regulator system
Environmental temperature	0~40°C
Cooling methods	Forcedly air-cooled fan
Connection cable length	2m
Remote function	Light intensity is controlled by external analog voltage(DC0~5V)

- (Note 1) Number of hours at which survival rate becomes 50%
 (Note 2) Luminance at a $\phi 6 \times \ell 1000$ mm light guide head
 (Note 3) Luminance at a 100mm distance from a $\phi 6 \times \ell 1000$ mm light guide head
 (Note 4) Color temperature at the maximum luminance

Color filter



Easy to judge the object by transmitted only particular wavelength.

Refer WEB for transmission characteristics

Model	Color
VHL F30.5SH-R60	RED
HLF30.5SH-G52	GREEN
HLF30.5SH-B40	BLUE
HLF30.5SH-L48	PURPLE
VHLF30.5SH-Y48	YELLOW

Option



8 bits dimmer substrate



Mechanical shutter

※To order a cold source with option, refer to the following.

Model S: With mechanical shutter

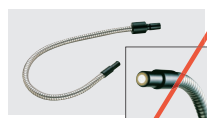
Model D: With 8 bit remote dimming

DISCONTINUED

Cold light guide

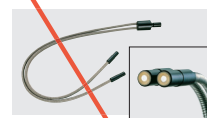
Cold light guide VFG series feature the high quality due to an integrated manufacturing from careful selection of raw materials to dissolution, fiber spinning, design, assembly and polishing.

By our own spinning process, the optical fiber maintains high optical transmittance, and with the assembling process improved, balanced light is supplied to irradiation portions efficiently.



VFGS Single type

When a high intensity of illumination is required, this model is highly effective because the light transmitted by the fiber of 6mm bundling diameter can be concentrated and irradiated to one place.



VLFGB/VFGB Bifurcation type

This model is used with one light being branched when illuminating two places or illuminating from two directions. It is highly effective to reduce shade when illuminating a comparatively patterned surface.



VFGR Ring type

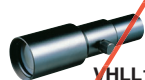
Because of the multipoint illumination from all around 360 degree direction, irradiated object can be illumination without any shade. As the case is in a ring shape, this model is most suitable for coaxial incident light of a microscope or CCD camera.

SPEC				
Model	VFGS6S-500 / VFGS6F- ℓ	VLFGB6S-500 / VFG6F- ℓ	VFGR6F- ℓ -D18RN	VFGR6F- ℓ -D32RN
Type	Single	Bifurcation	Ring	
Diameter of bundled fibers	Incident $\phi 6$ mm Output $\phi 6$ mm	Incident $\phi 6$ mm Output $\phi 4.2 \times 2$ mm	Incident $\phi 6$ mm Output $\phi 18$ mm	Incident $\phi 6$ mm Output $\phi 32$ mm
Covering	Flexible SUS tube (-500 interlock type)		Flexible SUS tube	
Allowable bending radius R (mm)	50 (60 for -500)	50 (60 for -500)	50	50

material of fiber Multicomponent glass(LB56N) NA=0.56 (68°) Diameter of single line 50 μ m

※We have additional catalog which has more details

Condenser lens for cold light guide



VHL101

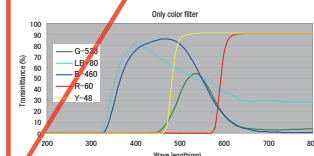


VHL201

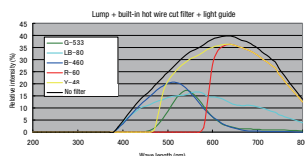


VHL301

Color filter spectral characteristic



Only color filter



There is variety of output ring diameter or guid of line beam type. Please feel free to contact us.

SPEC			
Model	VHLL101	VHLL201	VHLL301
Illumination distance (Note 1)	50mm~ ∞		
Illumination area (Note 1)	$\phi 26$ mm~ ∞	$\phi 20$ mm~ ∞	$\phi 12$ mm~ ∞
Center illumination (Note 2)	150000lx	240000lx	140000lx
Uniformity of illumination (Note 3)	80%		
Size	$\phi 24 \times 80$ mm	$\phi 24 \times 68$ mm	$\phi 19 \times 39$ mm
Applicable light guide	VFGS/VFGB		

- (Note 1) Distance and area where contour of the illuminating area is focused
 (Note 2) Values used for VMEGA100 + VFGS6F1000.
 For the illumination, values when the illuminating distance is focused at 50mm
 (Note 3) Standard value; not guaranteed

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

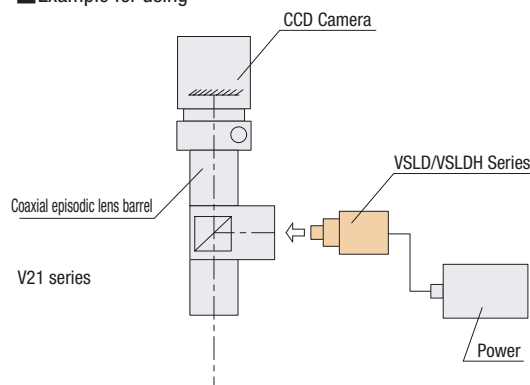
WG alignment

LD/PD alignment

Coaxial Reflected Spot Lighting: VSLD/SLDH Series 株式会社 清和光学製作所



Example for using



VSLDH series

As it is used power LED, we recommend over 3 magnifications of a coaxial lens tube lighting.

SPEC			
Model	LED	Electricity consumption (W)	Luminescent color
VSLDH-A20R	1	4.5	RED
VSLDH-A20W	1	4.5	WHITE

*Available BLUE(B), GREEN(G) LED and extension cables.

*Also available a high power LED.

*Please contact us for a high power LED.

VSLD series

Can be used for coaxial vertical lighting system. It is suitable for lighting of the coaxial tube that not need much light quantity.

SPEC			
Model	LED	Electricity consumption (W)	Luminescent color
VSLD-14R	1	0.3	RED
VSLD-14W	1	0.3	WHITE

*Available BLUE(B), GREEN(G) LED and extension cables.

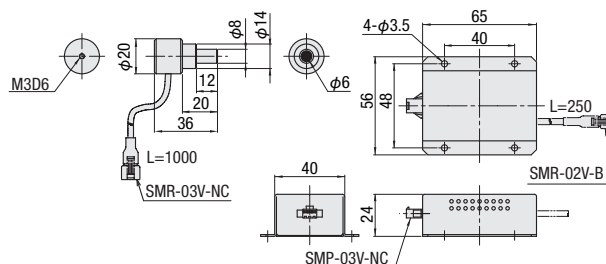
Pulse light control power

Selectable power using by lighting. Can be control light for each up to 2CH by one machine. Applicable input power AC100V~240V.

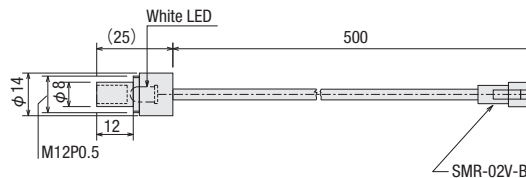


Dimensional outline drawings

VSLDH-A20R, VSLDH-A20W



VSLD-14R, VSLD-14W



SPEC		
Model	VSTP-1210D	VSTP-1230D-A
Input power		2CH
Output power	(1CH max. load 10W)	(1CH max. load 30W)
Power supply ripple	DISCONTINUED	Approx.60kHz PWM control
Output voltage		Knob type volume
Starting voltage	AC100V 50/60Hz 0.3A (typ)	AC100V 50/60Hz 0.7A (typ)
Output	DC12V/10W (2CH total) or 10W×1CH	DC12V/30W (2CH total) or 30W×1CH

*The model in above is knob volume type. Available pre-fix type in driver control. The end of model number becomes D or H if you select pre-fix type.

*Please select a suitable power source.

(e.g.) Please select power max. 30W if you use 2CH power in 15W and 6W.

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

UV_LED Light Source: VEXECURE-H1VC2 Series

High output, long-life UV-LED light source. Available 4 ch each control.



The photo shows combination of one controller and 4 heads unit.

AC adaptor (Purchase separately)

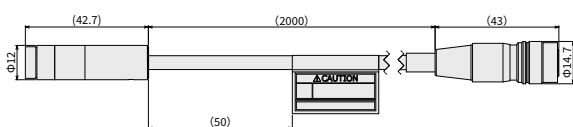
Model	VUIA336	VUEA370
Input power	AC100~240V 50/60Hz	
Heads	4	8
Electricity consumption	36W	70W

SPEC	
Model	VEXECURE-H1VC2
Power supply	DC24V (AC adaptor (sold separately))
Electricity consumption	21W (VH-1VH 4 heads using at the same time.) 60W (maximum)
Cooling methods	Naturally cooling
Connecting head	4 (Bifurcation cable VBB-2 when use, Max 8 head VH-1VH connected)
Program setting	Not available
Remote control	<ul style="list-style-type: none"> Emergency stop Irradiation for each 4ch Finish for each 4ch Ready output UV-output during irradiation Error output
Environment temperature	Operating time : +5~+35°C (Avoid dew condensation/freezing) On save : -10~+60°C (Avoid dew condensation/freezing)
Environment humidity	Operation/saving time : 30~85% (Avoid dew condensation/freezing)
Pannel display	UV, LED, ON/OFF : Indicator LED LEVEL/TIMERTIMER DISPLAY: 7 segments LED
Outline size	90 (W) × 40 (H) × 120 (D) mm
Weight	Approx.0.5kg

IO connector for remote controller (Purchase separately)

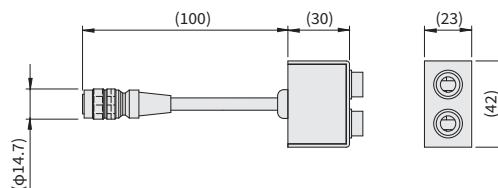
Model	VFK-MC-10	VFK-MC-8
Control contents	Input : Emergency stop, Start/finish irradiation Output : Ready output/output in irradiation/error output Not available irradiation for each	For extension : Start to irradiate for each, Finish to irradiate for each

Head unit



SPEC	
Model	VAS01-365
Length	2000mm

Bifurcation cable

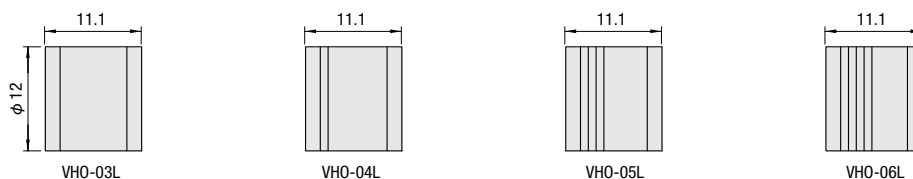


SPEC	
Model	VBB-2
Branches	2

Lens unit

Lens unit is attached on the top of a head unit. Easy to select the best lens unit for your requirement.

Available oval type irradiation.



SPEC					
Model		VHO-03L	VHO-04L	VHO-05L	VHO-06L
light source	Wave length	365nm*1			
	Class	Class 3B (JIS C 6802 2005)			
Recommendation irradiation distance		15mm	15mm	30mm	11mm
Peak intensity (*2)		3200mW/cm ²	1600mW/cm ²	350mW/cm ²	7500mW/cm ²
Spot diameter of irradiation spot		φ6mm	φ8mm	φ10mm	φ3mm

*1 Available wavelength 385nm

*2 Irradiation level 100/temperature 25°C/with screws. Not guaranteed.

UV-cut glasses

Protect eyes with UV-cut.



SPEC	
Model	VUV-G

UV Light Source: VEXECURE4000 Series



Replacement lamp

Model
V200MX

High performance, compact and reasonable UV spot light source.

Available labo to production line process.

Save electricity and equipment on the production line process.

Support the globalization of production base by integrated world voltage system.

SPEC	
Model	VEXECURE4000-D
Power supply	AC100~240V 50/60Hz
Electricity consumption	250W (260VA)
Lamp	200W mercury xenon
Lamp type	200MX (200W)
Lamp life (*1)	3000 hours
Initial strength	4000mW/cm ² (*2)
Environment temperature	0~40°C
Size	145 (W) × 300 (H) × 245 (D) mm
Weight	Approx. 8.5kg

*1 We guarantee the light will be turned on till its end-of-life in correct way.

*2 The value is calculated from the end of light guide to 10mm in use VFGS5F-1000UV-HT4.

Other option

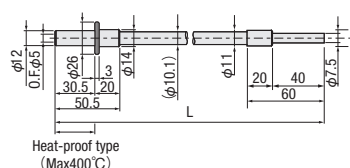
- Can be controlled irradiation set-up, operation by using utility software.
- Exhaust pressure monitoring is available with exhaust frange.
- Available special optics and lenses.
- Available various of filters, lenses and special optics.

UV light guide

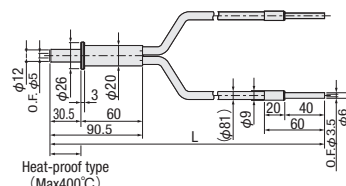
UV light guide VFG-UV series uses high quality quartz fiber. There are single, 2 branch, 3 branch and 4 branch.

Available special order for the top shape.

Dimensional outline drawings



VFGS5F1000/1500/2000UV
Allowable bending radius R 100mm

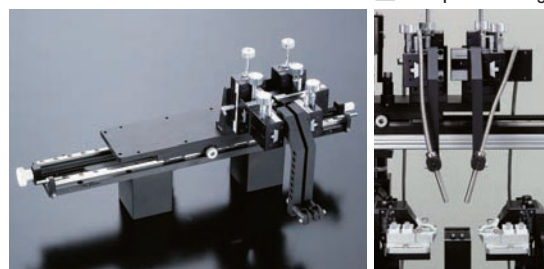


VFGB5F1000/1500/2000UVR
Allowable bending radius R 100mm

We can accept special order for mounting UV light guide.

Please ask as for details.

Example for using



SPEC				
Model	VFGS5F1000UV	VFGB5F1000UVR	VFG3B5F1000UVR	VFG4B5F1000UVR
	VFGS5F1500UV	VFGB5F1500UVR	VFG3B5F1500UVR	VFG4B5F1500UVR
	VFGS5F2000UV	VFGB5F2000UVR	VFG3B5F2000UVR	VFG4B5F2000UVR
Type	Single	Bifurcation	3 branches	4 branches
Fiber materials	Quartz fiber (LB20UV) NA=0.20 (23°) 200μm			
Bundle diameter	Incident sideφ5 Output sideφ5	Incident sideφ5 Output sideφ3.5×2	Incident sideφ5 Output sideφ2.9×3	Incident sideφ5 Output sideφ2.5×4
Allowable bending radius R	100mm			

*Available our catalog for more information.

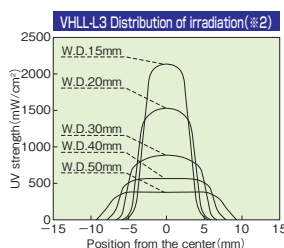
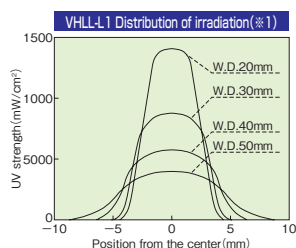
Lens

Integrated top the top of light guide. Selectable the most effective focus distance lens.

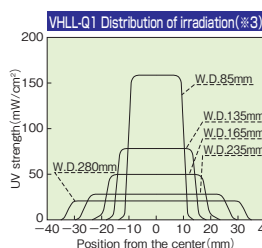
Available special order for the light type.

VHLL series Good for adhesive of optical device parts

Spot radiation type VHLL-L1/L3



Flat radiation type VHLL-Q1



※1 This is a standard characteristic when using combined Vexcure4000 and VFGB5F-1000UVR-HT4.

※2 This is a standard characteristic when using combined Vexcure4000 and VFGS5F-1000UVR-HT4.

※3 This is a standard characteristic when using combined Vexcure4000 and VFGS5F-1000UVR-HT.

SPEC			
Model	VHLL-L1	VHLL-L3	VHLL-Q1
Type	Spot radiation type		
Mounting	φ6mm	φ7.5mm	φ12mm

☞ Refer to the instructions for safety use.

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

Vacuum pump: V10A

For the rotation fiber holder (F263, F264, F265 and FS266) and waveguide holder (F270, F271, F272, F273, F274, E400 and E410). As this is linear motor drive free piston type, it is compact, light weight, low noise, low vibration and oil-less.



About the vacuum pump

- Ultimate vacuum Indicates the degree of vacuum when run with the suction side is closed.
- Open flow rate Indicates the flow rate under zero degree of vacuum.(Reference value)
- Electricity consumption Indicates maximum input power until ultimate vacuum.
- Rated time Indicates limits time of operation with coil temperature within 115 degree.
- Service time Indicates the accumulated operating time until discharge volume 10-20% of rated volume when used under rated conditions. Care should be taken to service time as the method of operation and replacement of consumable parts will differ according to operating location and ambient temperature.

Option

Available manifold hoses

- Silicon hose (bore diameter $\phi 3$ external diameter $\phi 5$) V11-2

This tube is for vacuuming. It is made by silicon tube that is a reducing vibration and high durability

- Manifold V11-3

Used in divided 2 or 3 vacuum pump.

Necessary vacuum pump V10A for connecting.

It is available to use waveguide holder and rotation fiber holder at the same time.

- Release valve V11-5A

One-touch opening and closing of vacuum with vacuum holder.

SPEC	
Model	V10A
Ultimate vacuum	-33.3kPa
Open flow rate	6ℓ/min
Electricity consumption	15/14W
Rated time	Continuous
Service time	5,000 hours
Discharge and inhalation size	Coupler for $\phi 4$ hose
Power supply	AC100V 50/60Hz
Power code	2.5m (Inlet with ground wire)
Power switch	Locker switch
Size	135 (L) × 91 (W) × 146 (H) mm
Weight	1.5kg

※2m tube is attached to a vacuum pump.

※2m tube is attached to a manifold and release valve.

Vacuum pump set: EV10A



The vacuum pump set for fiber holder and device holder.

Put a release valve on the bread board when use.

Configurations

Product name	Model
Vacuum pump	V10A
Release valve	V11-5A
Plate	E10

Accessory : Two tubes, screws (hexagon-headed bolt 4 of M4-22)
(hexagon-headed bolt 2 of M6-14)

Vacuum tweezers: V12A



Vacuum tweezers V12A with vacuum pump V10A is easy to use for absorption of tiny parts and lenses. Ask us when you need only tweezers.

Configurations

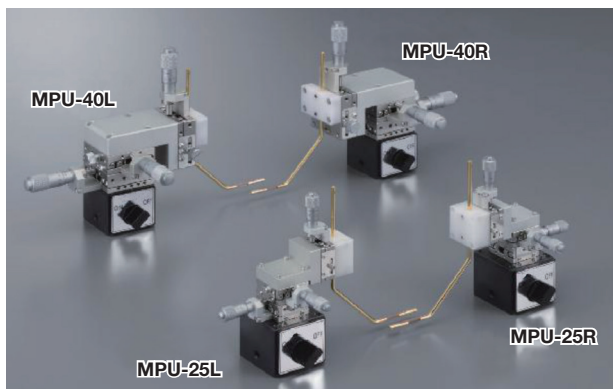
SPEC	
Model	V12A
Vacuum pump	V10A
Tweezers	Tweezers with valve $\phi 12 \times 144.5$ mm 18g
Accessory	Tube 2m Needle $\phi 1.0$ mm Pad $\phi 4 \phi 6$ mm Tweezers Stand

Probe Unit: MPU

CAD
2D

RoHS

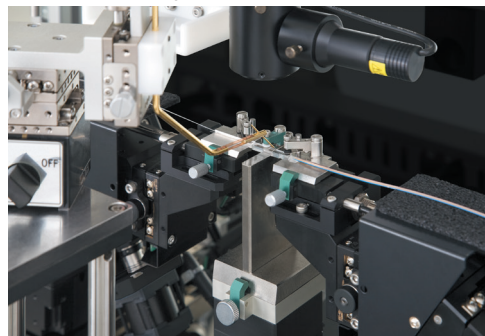
For contact probe to the device. Available left and right hand type.



(Probe sold separately)

Example for using

See web for external dimension



SPEC				
Model	MPU-25L	MPU-25R	MPU-40L	MPU-40R
Direction for operation	Left-hand	Right-hand	Left-hand	Right-hand
Stroke	XYZ : ±3.2mm		XYZ : ±6.5mm	
Resolution	10µm/div 0.5mm/1 rotation			
Probe holder	Brass-gold plated finishing(with spring)			
Magnet stand	Yes			
Weight	0.7kg		1.3kg	

Model/Option

MPU-25L
40R

L: Left type, R: Right type
 25: Stage face \square 25mm, 40: Stage face \square 40mm

Probe M904

DISCONTINUED

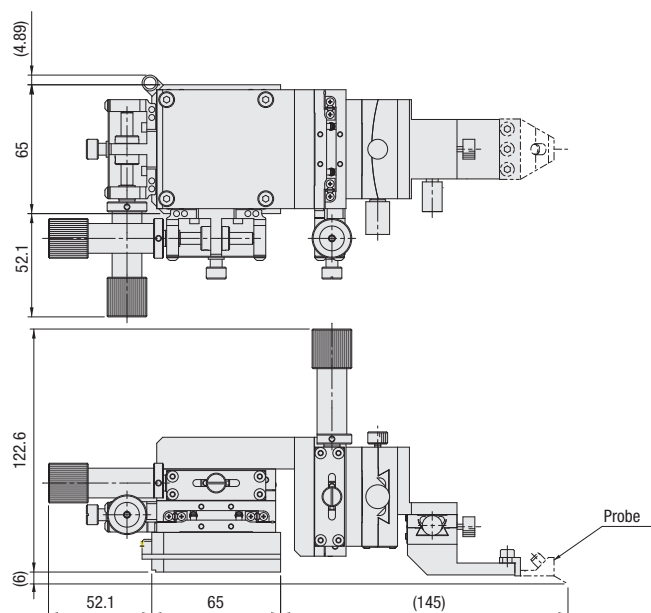
SPEC		
Model	Product name	Remarks
M904-0001	Metallic needle tip diameter R2 μm outer diameter 0.7mm	Metal alloy(gold plated) 10pcs.
M904-0002	Metallic needle tip diameter R5 μm outer diameter 0.7mm	Metal alloy(gold plated) 10pcs.
M904-0006	Metallic needle tip diameter R1 μm outer diameter 0.6mm	Tungsten 25pcs.

Probe Unit: MHP

For probe. Available custom-designed for your purpose. Please contact for details.

Dimensional outline drawings

Example implementing probe



Optical fiber alignment

Guidance

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LD/PD
alignment

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components

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Motorized
alignment unit

Device unit

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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