

Omni Spectrographs

Omni- λ Monochromators and Spectrographs



Omni- λ Series of imaging spectrographs and monochromators from Zolix Instruments are profession standard for researchers who demand the highest quality data. Zolix spectrographs and monochromators feature a very flexible design that can be configured for a wide range of applications & spectral range from UV to NIR.

- 200mm, 320 mm,500 mm,750 mm focal length
- Our rugged Czerny-Turner spectrographs come pre-aligned and pre-calibrated for ease of operation.
- Interchangeable triple grating turret– Different wavelength ranges and resolutions, Provide a simple, accurate and convenient way for the user to change gratings within the spectrograph unit
- These instruments can be integrated with single point detectors, InGaAs cameras and CCDs to offer a versatile, most sensitive modular solution for different applications ;
- Accessories including filter wheels, fiber adapters, shutters, motorized slits, sample chambers etc.
- Software can complete data acquisition for detectors including single point detectors and CCD.
- Labview driver for programming to operate Omni- λ Series spectrographs and monochromators.

Omni- λ Specifications(@1200g/mm*)

	Omni- λ 200i	Omni- λ 300i	Omni- λ 500i	Omni- λ 750i
Focal Length (mm)	200	320	500	750
Aperture Ratios	f/3.5	f/4.2	f/6.5	f/9.7
Resolution(nm)-PMT*	0.15	0.08	0.05	0.03
Resolution(nm)-CCD(26 μ m) *	0.27	0.173	0.11	0.077
Dispersion (nm/mm) *	3.58	2.29	1.49	1.02
Wavelength Accuracy(nm)	± 0.2	± 0.2	± 0.2	± 0.2
Wavelength Repeatability (nm)	± 0.1	± 0.025	± 0.025	± 0.025
Step (nm)	0.01	0.005	0.005	0.005
Stray Light	5×10^{-5}	1×10^{-5}	1×10^{-5}	1×10^{-5}
Focal Plane Size (mm)	30(w) \times 14(h)	30(w) \times 14(h)	30(w) \times 14(h)	30(w) \times 14(h)
Optical Axis Height(mm)	146	146	146	146
Slit	Width: 0.01-3mm(Motorised or manual slit), Height: 2, 4, 14 mm, height selectable			
Grating Size(mm)	50 \times 50	68 \times 68	68 \times 68	68 \times 68
Grating Mount	Dual grating turret	Interchangeable triple grating turret	Interchangeable triple grating turret	Interchangeable triple grating turret
Computer Interface	USB2.0	USB2.0 and RS232	USB2.0 and RS232	USB2.0 and RS232
Size (mm)	300 \times 216 \times 213	420 \times 295 \times 232	550 \times 288 \times 220	800 \times 338 \times 218
Weight (Kg)	14	16	22	32.5

- Dispersion measured with 1200g/mm grating @ 435.8nm
- PMT resolution measured with 1200g/mm @ 435.8nm, 10 μ m slit width and 4mm slit height
- CCD resolution measured with 1200g/mm @ 435.8nm, 10 μ m slit width and 26 μ m pixel

Omni-λ Spectrographs Named Views

Omni-λXX Y Z(i)

20: 200 mm focal length
 30: 320 mm focal length
 50: 500 mm focal length
 75: 750 mm focal length

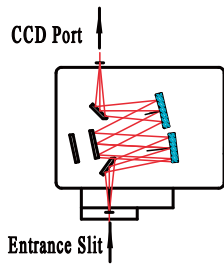
0: Standard (Side entrance, protected Al coated grating and mirror)
 1: IR (Protected gold coated)
 2: Dual slit entrances
 3: IR & Dual slit entrances
 4: UV
 5: UV & Dual slit entrances
 6: Protected silver coated
 7: Protected silver coated & Dual slit entrances

2: CCD side exit
 3: Slit front exit, CCD side exit
 4: Dual CCD exits
 5: Slit front exit
 6: CCD front exit
 7: Dual slit exits
 8: CCD front exit, slit side exit
 9: Slit side exit

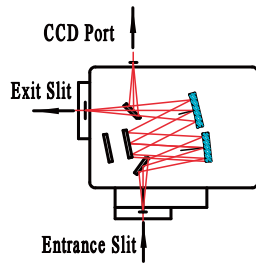
e.g Omni- λ 3047, side entrance, slit front exit, slit side exit, support 3 gratings simultaneously, UV monochromator.

Optical Configuration

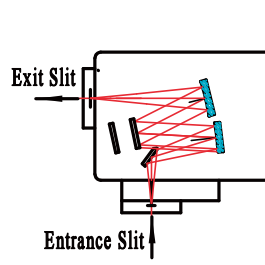
Omni- λ 200i Monochromator/Spectrograph



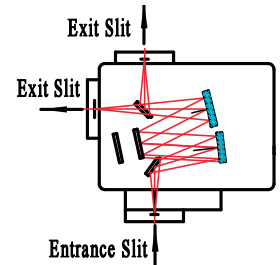
Omni- λ 2002i



Omni- λ 2003i

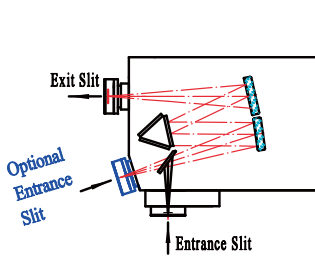


Omni- λ 2005i

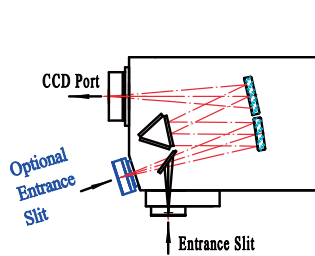


Omni- λ 2007i

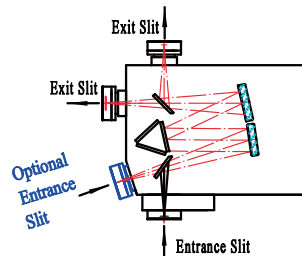
Omni- λ 300i Monochromator/Spectrograph



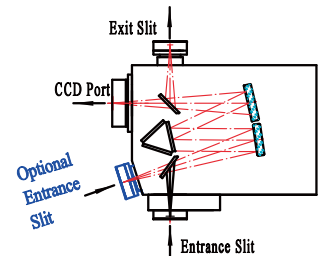
Omni- λ 3005i



Omni- λ 3006i

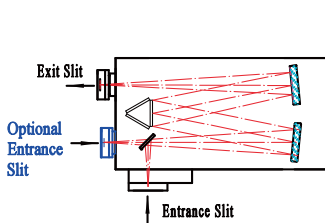


Omni- λ 3007i

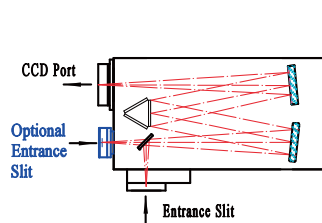


Omni- λ 3008i

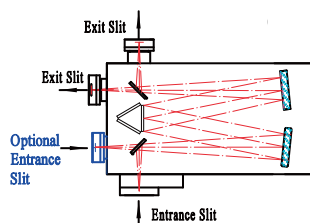
Omni- λ 500i Monochromator/Spectrograph



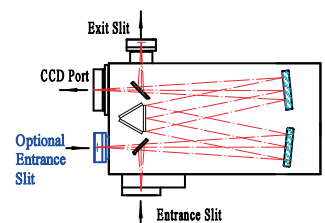
Omni- λ 5005i



Omni- λ 5006i

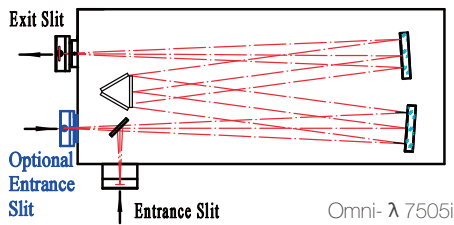


Omni- λ 5007i

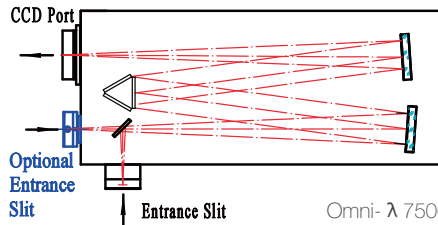


Omni- λ 5008i

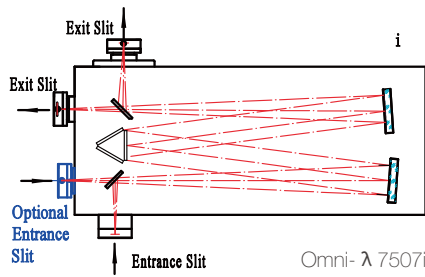
Omni-λ 750i Monochromator/ Spectrograph



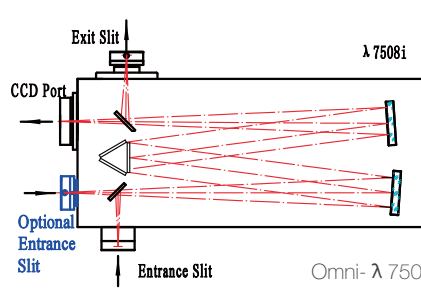
Omni-λ 7505i



Omni-λ 7506i



Omni-λ 7507i



Omni-λ 7508i

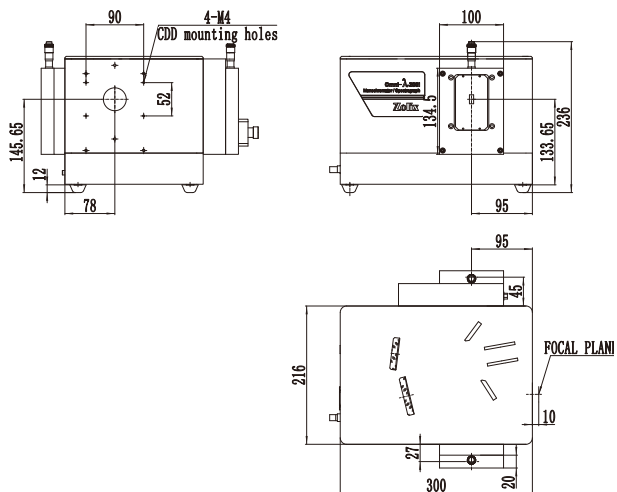
Note: the second entrance is the optional (blue).

Omni-λ Selections

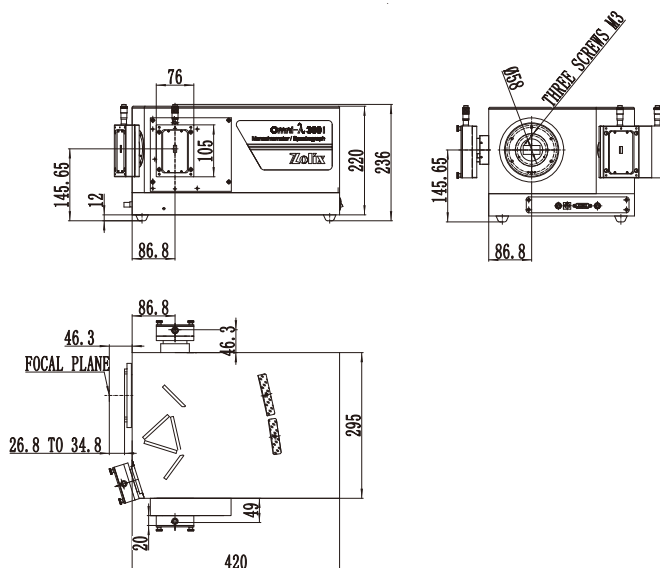
Model	Description
Omni-λ200i series Monochromator(200 mm focal length, support 2 gratings simultaneously)	
Omni-λ2003i	side entrance, slit front exit, CCD side exit, support 2 gratings simultaneously
Omni-λ2002i	side entrance, CCD side exit, support 2 gratings simultaneously
Omni-λ2005i	side entrance, slit front exit, support 2 gratings simultaneously
Omni-λ2007i	side entrance, slit front exit, slit side exit, support 2 gratings simultaneously
Omni-λ300i series Monochromator/ spectrograph(320 mm focal length, support 3 gratings simultaneously)	
Omni-λ3005i	side entrance, slit front exit, support 3 gratings simultaneously
Omni-λ3007i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously
Omni-λ3008i	side entrance, CCD front exit, slit side exit, support 3 gratings simultaneously
Omni-λ3004i	side entrance, CCD front exit, CCD side exit, support 3 gratings simultaneously
Omni-λ3015i	side entrance, slit front exit, support 3 gratings simultaneously, IR monochromator,
Omni-λ3017i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously, IR monochromator
Omni-λ3027i	Dual entrances, slit front exit, slit side exit, support 3 gratings simultaneously
Omni-λ3028i	Dual entrances, CCD front exit, slit side exit, support 3 gratings simultaneously
Omni-λ3024i	Dual entrances, CCD front exit, CCD side exit, support 3 gratings simultaneously
Omni-λ3047i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously, UV monochromator
Omni-λ3048i	side entrance, CCD front exit, slit side exit, support 3 gratings simultaneously, UV monochromator
Omni-λ3044i	side entrance, CCD front exit, CCD side exit, support 3 gratings simultaneously, UV monochromator
Omni-λ500i series Monochromator/ spectrograph (500 mm focal length, support 3 gratings simultaneously)	
Omni-λ5005i	side entrance, slit front exit, support 3 gratings simultaneously
Omni-λ5007i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously
Omni-λ5008i	side entrance, CCD front exit, slit side exit, support 3 gratings simultaneously
Omni-λ5004i	side entrance, CCD front exit, CCD side exit, support 3 gratings simultaneously
Omni-λ5015i	side entrance, slit front exit, support 3 gratings simultaneously, IR monochromator,
Omni-λ5017i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously, IR monochromator
Omni-λ5027i	Dual entrances, slit front exit, slit side exit, support 3 gratings simultaneously
Omni-λ5028i	Dual entrances, CCD front exit, slit side exit, support 3 gratings simultaneously
Omni-λ5024i	Dual entrances, CCD front exit, CCD side exit, support 3 gratings simultaneously
Omni-λ5047i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously, UV monochromator
Omni-λ5048i	side entrance, CCD front exit, slit side exit, support 3 gratings simultaneously, UV monochromator
Omni-λ5044i	side entrance, CCD front exit, CCD side exit, support 3 gratings simultaneously, UV monochromator
Omni-λ750 series Monochromator/ spectrograph (750 mm focal length, support 3 gratings simultaneously)	
Omni-λ7505i	side entrance, slit front exit, support 3 gratings simultaneously
Omni-λ7507i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously
Omni-λ7508i	side entrance, CCD front exit, slit side exit, support 3 gratings simultaneously
Omni-λ7504i	side entrance, CCD front exit, CCD side exit, support 3 gratings simultaneously
Omni-λ7515i	side entrance, slit front exit, support 3 gratings simultaneously, IR monochromator,
Omni-λ7517i	side entrance, slit front exit, slit side exit, support 3 gratings simultaneously, IR monochromator

Omni-λ Drawings

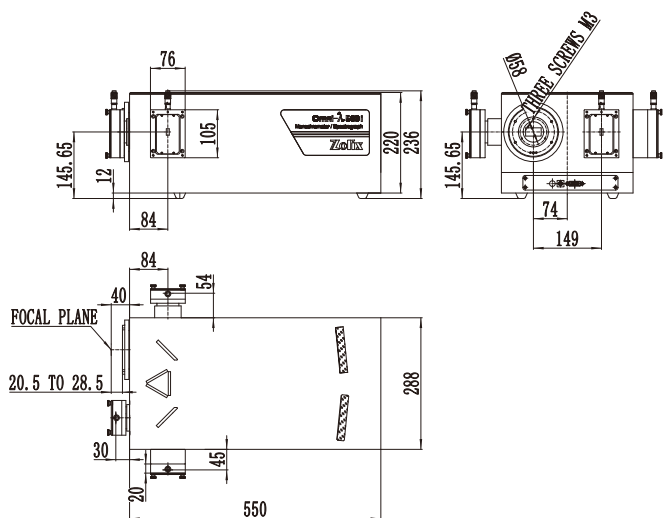
Omni-λ 200i Monochromator/Spectrograph



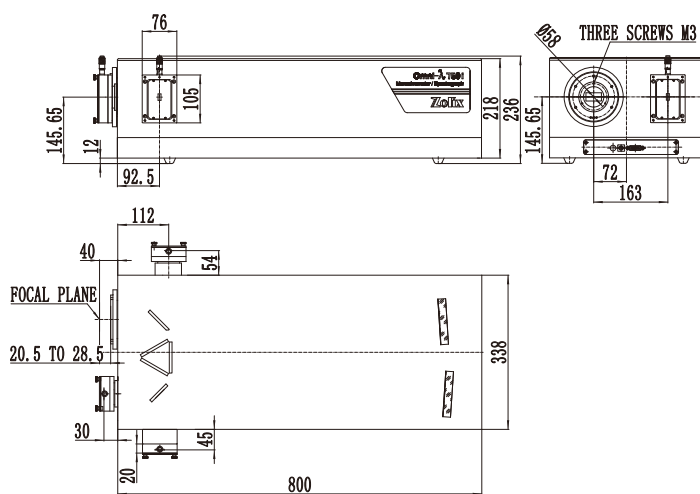
Omni-λ 300i Monochromator/Spectrograph



Omni-λ 500i Monochromator/Spectrograph

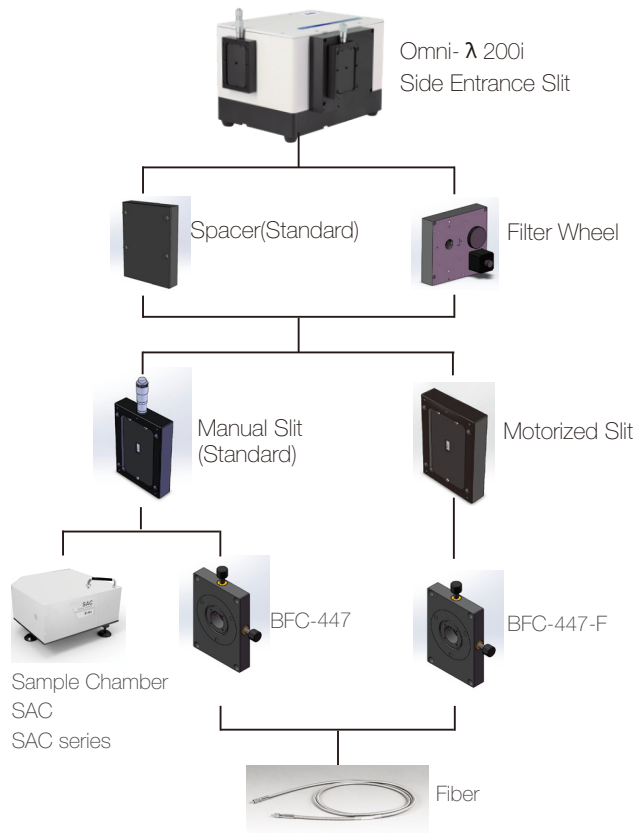


Omni-λ 750i Monochromator/Spectrograph

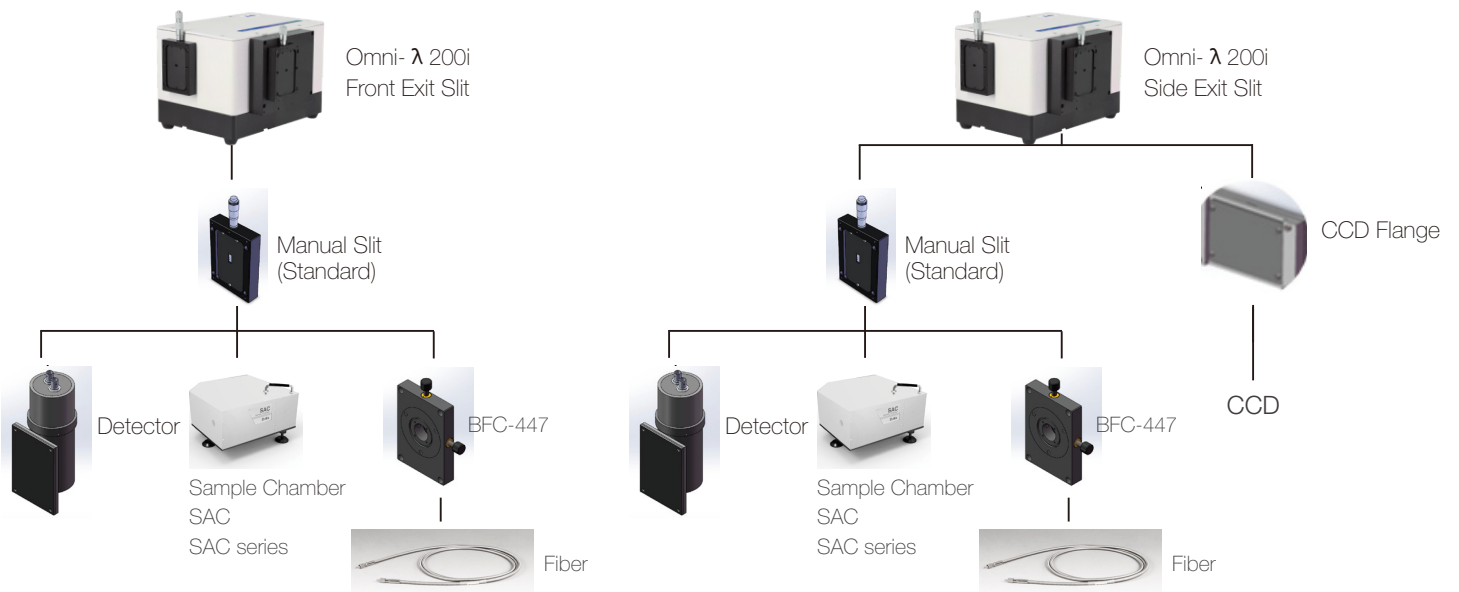


Spectroscopy Instruments

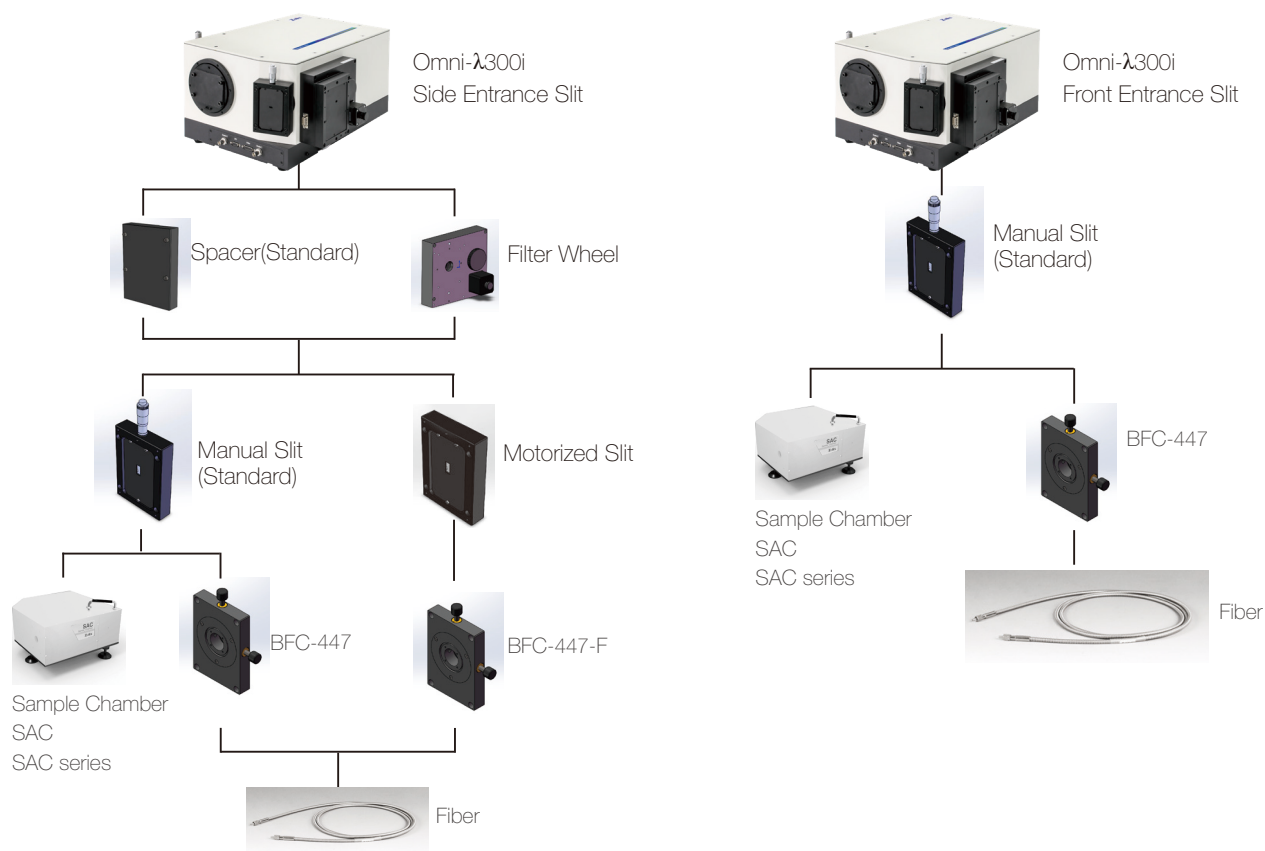
Omni-λ200i Input Port



Omni-λ200i Output Port

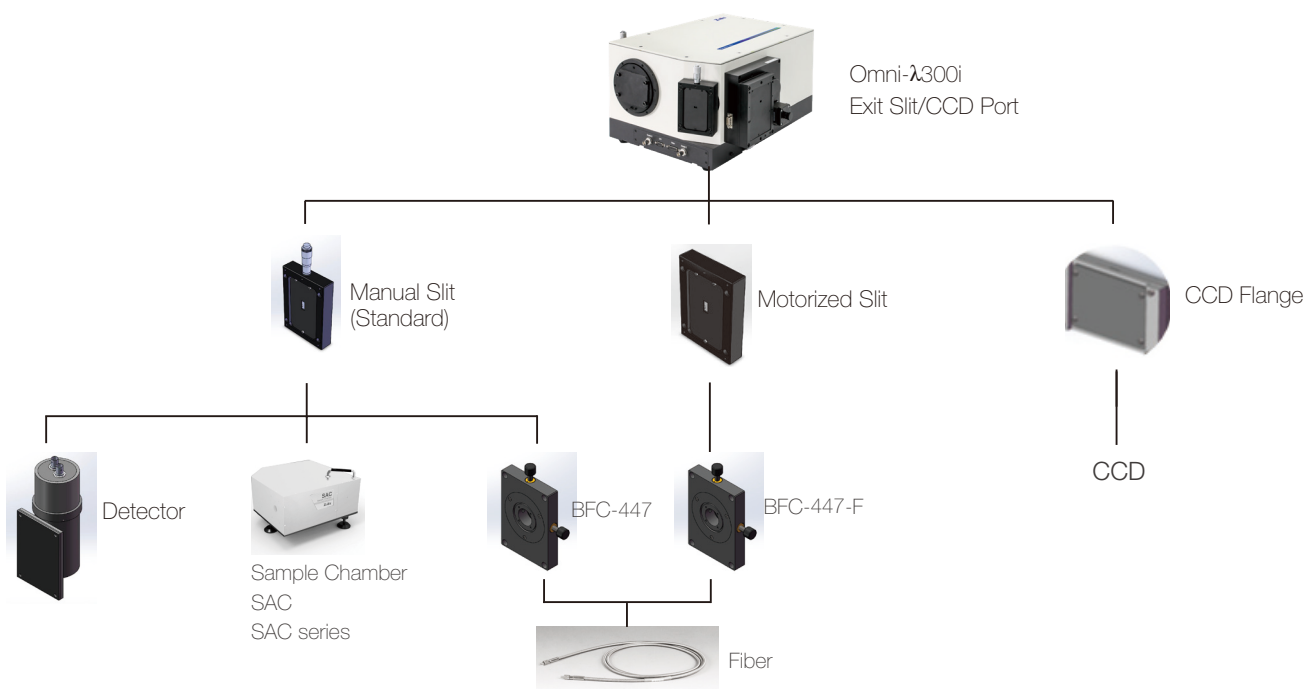


Omni-λ300i Input Port

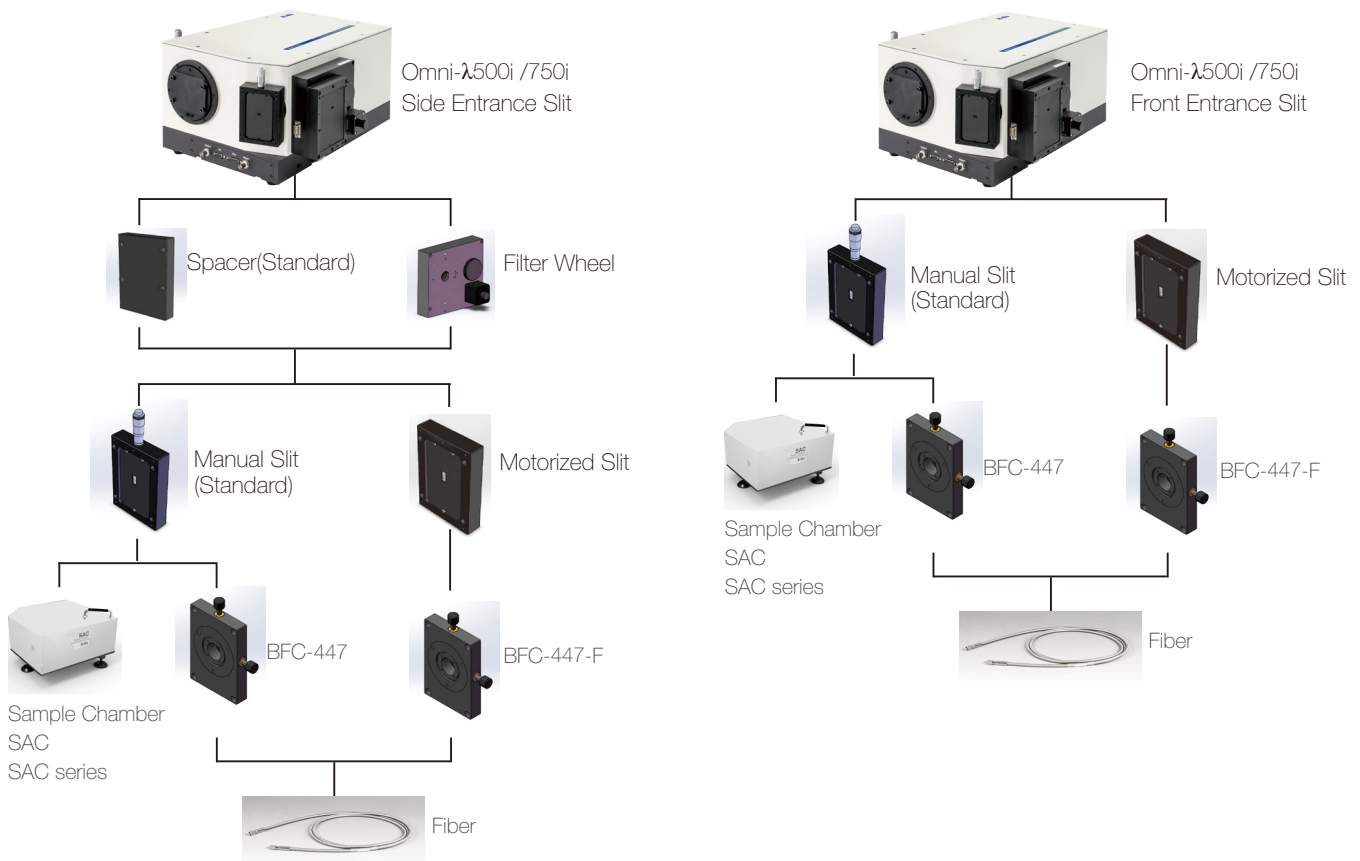


Spectroscopy Instruments

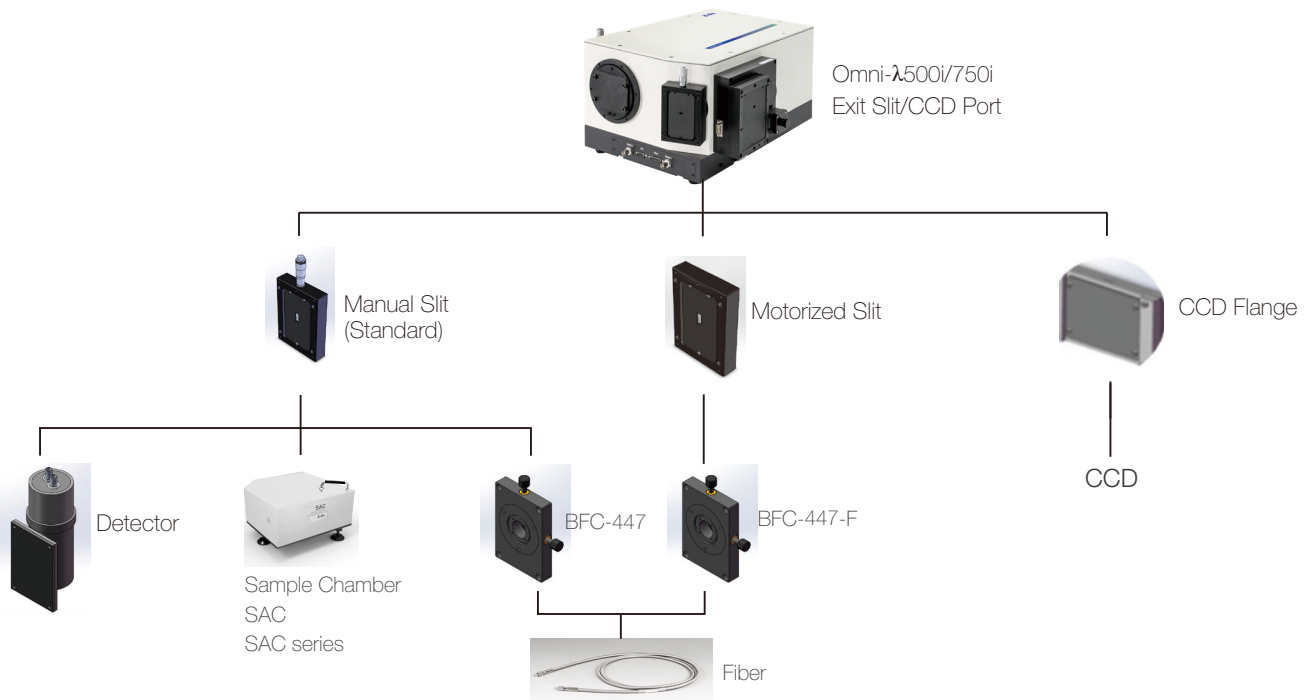
Omni-λ300i Output Port



Omni-λ500i/750i Input Port

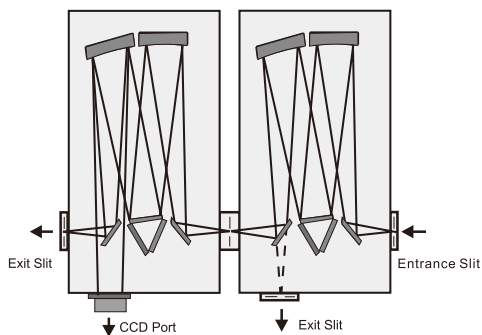


Omni-λ500i/750i Output Port



Omni-λxx x x Di(MS)-(A) Double Monochromators/Spectrographs

The Double Monochromators/Spectrographs include two monochromators which are with fine alignment. Double Monochromator can operate as either an additive or subtractive dispersion mode. As the additive dispersion mode, the double monochromator/spectrograph spectral resolution double boost, suitable for high resolution measurement. As the subtractive dispersion mode, the double monochromator/spectrograph stray light can be reduced effectively, suitable for weaker signal detection, such as Raman spectra measurement.



Omni-λxx x x Di(MS)-(A)

- A: Additive Dispersion Mode
Null: Subtractive Dispersion Mode
- MS: Motorized Slit Null: Manual Slit
- 2: CCD Side Exit
- 3: CCD Side Exit, Slit Front Exit
- 4: Dual CCD Exits
- 5: Slit Front Exit
- 6: CCD Front Exit
- 7: Dual Slit Exits
- 8: CCD Front Exit, Slit Side Exit
- 9: Slit Side Exit

- 0: Standard (Side Entrance, Protected Al Coated Grating and Mirror)
- 1: IR (Side Entrance, Protected Gold Coated)
- 2: Dual Slit Entrances
- 3: IR & Dual Slit Entrances
- 4: UV
- 5: UV & Dual Slit Entrances
- 6: Protected Silver Coated
- 7: Protected Silver Coated & Dual Slit Entrances

- 18: 180 mm Focal Length
- 30: 320 mm Focal Length
- 50: 500 mm Focal Length

Spectroscopy Instruments