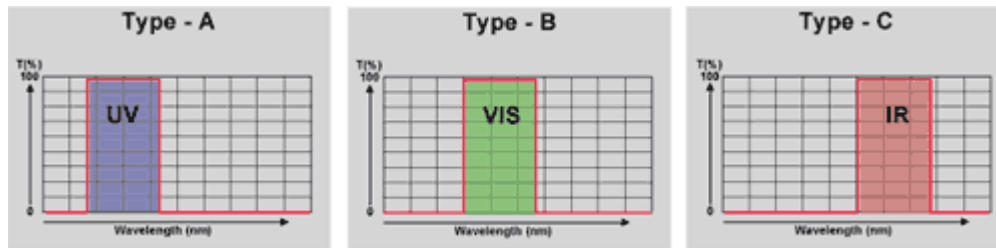


Filters

Short Wavepass Filter

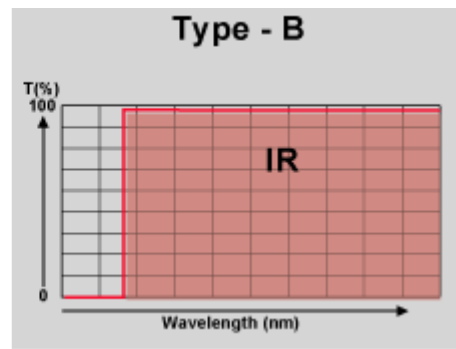
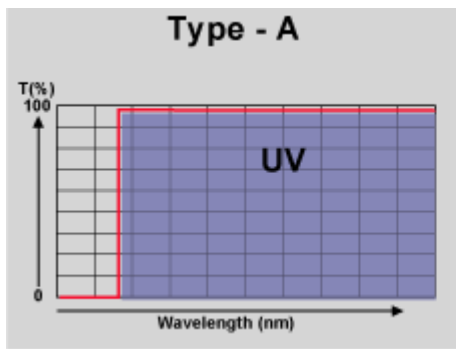
*Shortpass filters are designed to have a sharp transition at each cutoff point. This line can be used for making bandpass filters when you combine with our longpass filter. Substrate material is fused silica which has high durability against heat and high transmittance.



Part No.	Size (mm)	Thickness (mm)	Substrate	Cut/off (nm)
SPF-0250	50*50	1	Fused Silica	250
SPF-X250	25 Dia.	1	Fused Silica	250
SPF-X265	25 Dia.	1	Fused Silica	265
SPF-0265	50*50	1	Fused Silica	265
SPF-X300	25 Dia.	1	Fused Silica	300
SPF-0300	50*50	1	Fused Silica	300
SPF-X325	25 Dia.	1	Fused Silica	325
SPF-0325	50*50	1	Fused Silica	325
SPF-X350	25 Dia.	1	Fused Silica	350
SPF-0350	50*50	1	Fused Silica	350
SPF-X385	25 Dia.	1	Fused Silica	385
SPF-0385	50*50	1	Fused Silica	385
SPF-X400	25 Dia.	1	Fused Silica	400
SPF-0400	50*50	1	Fused Silica	400
SPF-0425	50*50	1	Fused Silica	425
SPF-X425	25 Dia.	1	Fused Silica	425
SPF-0450	50*50	1	Fused Silica	450
SPF-X450	25 Dia.	1	Fused Silica	450
SPF-0460	50*50	1	Fused Silica	460
SPF-X460	25 Dia.	1	Fused Silica	460
SPF-0500	50*50	1	Fused Silica	500
SPF-X500	25 Dia.	1	Fused Silica	500

Long Wavepass Filter

Long bandpass filters are designed to reject energy at all wavelengths shorter than the cut on and to transmit energy over a specified band at wavelengths longer than the cut on. The long wavelength limit of the transmittance band is often determined by the long wavelength limit of the system detector. Long bandpass filters are commonly used as order separators in grating spectrometers, as short wavelength blockers for bandpass filters.



Part No.	Size (mm)	Thickness (mm)	Substrate	Cut/On (nm)
LPF-0250	50*50	1.0	Fused Silica	250
LPF-X250	25 Dia.	1.0	Fused Silica	250
LPF-X275	25 Dia.	1.0	Fused Silica	275
LPF-0275	50*50	1.0	Fused Silica	275
LPF-X300	25 Dia.	1.0	Fused Silica	300
LPF-0300	50*50	1.0	Fused Silica	300
LPF-X325	25 Dia.	1.0	Fused Silica	325
LPF-0325	50*50	1.0	Fused Silica	325
LPF-0350	50*50	1.0	Fused Silica	350
LPF-X350	25 Dia.	1.0	Fused Silica	350
LPF-0385	50*50	1.0	Fused Silica	385
LPF-X385	25 Dia.	1.0	Fused Silica	385
LPF-X400	25 Dia.	1.0	Fused Silica	400
LPF-0400	50*50	1.0	Fused Silica	400
LPF-0422	50*50	1.0	Fused Silica	422
LPF-X422	25 Dia.	1.0	Fused Silica	422

Laser Line Interference Filters

Laser line interference filters controls the spectral composition of transmitted energy partially by the effects of interference. Frequently, these filters are made up of thin layers of metals and dielectrics, resulting in high transmission over narrow spectral bands.

Specifications

Ring Diameter (f): f25.4mm±0.2mm

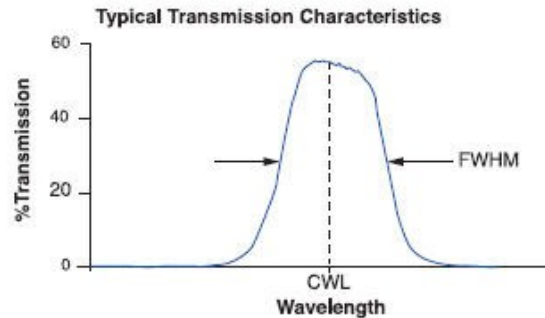
Ring Thickness (t): 6mm

Clear Aperture: >f20

FWHM: 10 nm

Block: 0.01% (±10nm from the peak)

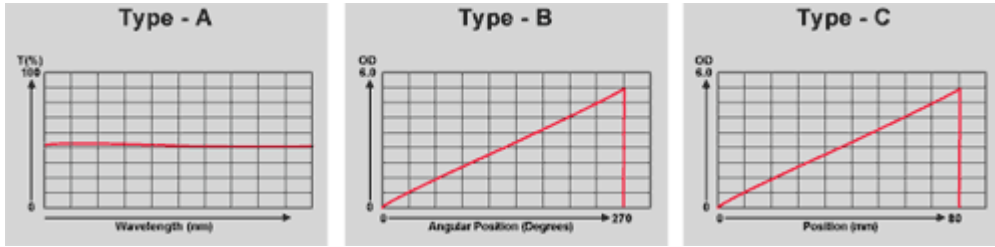
Mounted Material: Black anodized aluminum



Part No.	Laser	Center Wave-length(nm)	Band Width(nm)	Peak Transmittance(%)
FLL-337-11	N2	337.1	11.0	30.0
FLL-352-12	XeF	352.0	12.0	40.0
FLL-441-10	Cd	441.6	10.0	50.0
FLL-488-10	Ar	488.0	10.0	50.0
FLL-488-3	Ar	488.0	3.0	35.0
FLL-514-3	Ar	514.5	3.0	40.0
FLL-514-10	Ar	514.5	10.0	50.0
FLL-532-3	Nd-YAG	532.0	3.0	40.0
FLL-532-10	Nd-YAG	532.0	10.0	50.0
FLL-632-3	HeNe	632.8	3.0	50.0
FLL-632-10	HeNe	632.8	10.0	50.0
FLL-647-10	Kr	647.1	10.0	50.0
FLL-670-10	GaAlAs	670.0	10.0	50.0
FLL-694-10	RuBy	694.3	10.0	50.0
FLL-730-11	GaAlAs	730.0	11.0	55.0
FLL-750-11	GaAlAs	750.0	11.0	55.0
FLL-780-11	GaAlAs	780.0	11.0	55.0
FLL-830-12	GaAlAs	830.0	12.0	55.0
FLL-850-12	GaAlAs	850.0	12.0	55.0
FLL-880-12	GaAlAs	880.0	12.0	55.0
FLL-905-12	GaAlAs	905.0	12.5	55.0
FLL-940-13	GaAlAs	940.0	13.2	55.0
FLL-1060-10	Nd Yag	1060.0	10.0	55.0
FLL-1064-10	Nd Yag	1064.0	10.0	55.0
FLL-1152-11	HeNe IR	1152.0	11.0	55.0
FLL-1310-12	InGaAsP	1310.0	12.0	55.0
FLL-1320-12	Nd Yag	1320.0	12.0	55.0
FLL-1523-10	HeNe IR	1523.0	10.0	55.0
FLL-1550-10	InGaAsP	1550.0	10.0	55.0

Neutral Density Filters

Neutral density filters are used to reduce the amount of light that can pass through the lens.



Part No.	Size (mm)	Thickness (mm)	CWL (nm)	Transmission (%)	FWHM (nm)
NBF-X254	25 Dia.	6.5	254.0	20.0	10.0
NBF-Z254	50*50	6.5	254.0	20.0	10.0
NBF-Y254	50Dia.	6.5	254.0	20.0	10.0
NBF-X260	25 Dia.	6.5	260.0	20.0	10.0
NBF-Y260	50Dia.	6.5	260.0	20.0	10.0
NBF-Z260	50*50	6.5	260.0	20.0	10.0
NBF-Y270	50 Dia.	6.5	270.0	20.0	10.0
NBF-Z270	50x50	6.5	270.0	20.0	10.0
NBF-X270	25 Dia.	6.5	270.0	20.0	10.0
NBF-Y280	50 Dia.	6.5	280.0	20.0	10.0
NBF-Z280	50x50	6.5	280.0	60.0	10.0
NBF-X280	25 Dia.	6.5	280.0	20.0	10.0
NBF-Z290	50x50	6.5	290.0	20.0	10.0
NBF-X290	25 Dia.	6.5	290.0	20.0	10.0
NBF-Y290	50 Dia.	6.5	290.0	20.0	10.0
NBF-Y300	50 Dia.	6.5	300.0	30.0	10.0
NBF-Z300	50x50	6.5	300.0	30.0	10.0
NBF-X300	25 Dia.	6.5	300.0	30.0	10.0
NBF-Z310	50x50	6.5	310.0	35.0	10.0
NBF-Y310	50 Dia.	6.5	310.0	35.0	10.0
NBF-X310	25 Dia.	6.5	310.0	35.0	10.0
NBF-Y313	50 Dia.	6.5	313.0	35.0	10.0
NBF-Z313	50x50	6.5	313.0	35.0	10.0
NBF-X313	25 Dia.	6.5	313.0	35.0	10.0
NBF-Z320	50x50	6.5	320.0	45.0	10.0
NBF-X320	25 Dia.	6.5	320.0	45.0	10.0
NBF-Y320	50 Dia.	6.5	320.0	45.0	10.0

Bandpass Filter

UV-VIS-VIR Narrow Bandpass Filter

Specifications

Central Wavelength Tolerance: $\pm 20\%$ of Nominal Bandwidth

Bandwidth Tolerance: $\pm 20\%$ max

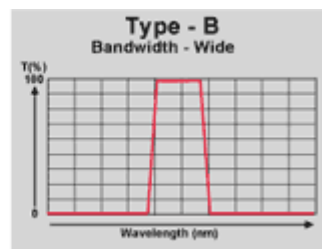
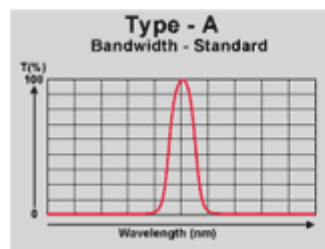
Blocking: $< 0.01\%$

Diameter Sizes(mm): 12, 12.7, 15.0, 25.0, 25.4

Clear Apertures(mm): 8.0, 8.0, 10.5, 20.5, 20.5

Thickness(mm): 8.5 max

Temperature Limits: -50°C to 80°C



Part No.	Center Wavelength (nm)	Band Width (nm)	Peak Transmittance (%)
FBP-214-12	214.0	12.0	10.0
FBP-228-12	228.0	12.0	10.0
FBP-232-12	232.0	12.0	10.0
FBP-253-12	253.7	12.0	12.0
FBP-265-12	265.2	12.0	12.0
FBP-280-12	280.0	12.0	12.0
FBP-289-12	289.4	12.0	12.0
FBP-296-12	296.8	12.0	12.0
FBP-307-12	307.0	12.0	15.0
FBP-312-12	312.6	12.0	15.0
FBP-326-12	326.1	12.0	15.0
FBP-337-11	337.1	11.0	35.0
FBP-340-11	340.0	11.0	40.0
FBP-352-12	352.0	12.0	35.0
FBP-365-12	365.0	12.0	35.0
FBP-380-12	380.0	12.0	35.0
FBP-404-10	404.7	10.0	35.0
FBP-415-10	415.0	10.0	40.0
FBP-435-10	435.8	10.0	35.0
FBP-450-10	450.0	10.0	50.0
FBP-486-10	486.1	10.0	50.0
FBP-488-3	488.0	3.0	50.0
FBP-492-10	492.0	10.0	50.0
FBP-505-10	505.0	10.0	50.0



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RONAR-SMITH® Laser Optics & IR Imaging



Introduction

RONAR-SMITH® Laser Optics

Optics for Medical Laser System

Optics for Semiconductor Spectroscopy Biomedical Application Laser

Optical Material

Laser Accessories Components

Part No.	Center Wavelength (nm)	Band Width (nm)	Peak Transmittance (%)
FBP-508-10	508.5	10.0	50.0
FBP-510-10	510.0	10.0	50.0
FBP-514-3	514.5	3.0	40.0
FBP-535-10	535.0	10.0	50.0
FBP-540-10	540.0	10.0	50.0
FBP-546-10	546.1	10.0	50.0
FBP-550-10	550.0	10.0	50.0
FBP-570-10	570.0	10.0	50.0
FBP-577-10	577.0	10.0	50.0
FBP-578-10	578.0	10.0	50.0
FBP-590-10	590.0	10.0	50.0
FBP-600-10	600.0	10.0	50.0
FBP-620-10	620.0	10.0	50.0
FBP-632-3	632.8	3.0	40.0
FBP-647-11	647.1	11.0	50.0
FBP-650-11	650.0	11.0	50.0
FBP-670-11	670.0	11.0	50.0
FBP-671-11	670.8	11.0	50.0
FBP-694-11	694.3	11.0	50.0
FBP-706-11	706.5	11.0	50.0
FBP-730-11	730.0	11.0	45.0
FBP-766-11	766.5	11.0	45.0
FBP-780-11	780.0	11.0	45.0
FBP-794-11	794.7	11.0	45.0
FBP-830-11	830.0	11.0	45.0
FBP-850-11	850.0	11.0	45.0
FBP-880-11	880.0	11.0	45.0
FBP-905-11	905.0	11.0	45.0
FBP-940-13	940.0	13.0	45.0
FBP-1060-10	1060.0	10.0	45.0
FBP-1152-11	1152.0	11.0	45.0
FBP-1310-12	1310.0	12.0	45.0
FBP-1320-12	1320.0	12.0	45.0
FBP-1523-10	1523.0	10.0	45.0
FBP-1550-10	1550.0	10.0	45.0

- UV: Center Wavelength <=380nm
- VIS: Center Wavelength from 404.7nm to 730nm
- VIR: Center Wavelength >=766.5nm