

Custom Capabilities

Our Custom Advantage

While stocking over 1,000 standard filters, Andover Corporation has built a worldwide reputation for developing custom, often state-of-the-art, filters and coatings.

With our extensive engineering experience and advanced manufacturing facility, we control the entire production process to ensure that you receive only the highest-quality products, attentive service, and timely delivery.

- Fully automated systems for excellent repeatability and rapid turnaround
- Continuously updated manufacturing processes
- Products that far exceed industry standards for quality

Optical Polishing

Andover's in-house polishing facility can achieve flatness up to $\lambda/10$ wave per inch and parallelism of 10 arc seconds or better, with a surface quality of 40/20.



Specialized Coatings

With our computer-controlled systems, we can quickly produce a variety of high-quality coatings in sizes up to 300mm with excellent repeatability using any process from thermal evaporation to magnetron sputtering.



Machine Fabrication

Andover's 3-axis machining centers allow us to fabricate complex tooling quickly and accurately, greatly reducing the lead time for custom components.



Optical Fabrication

Whether you need a filter that's 5mm or 300mm, Andover has fully automated CNC equipment to fabricate exactly what you want, at the quality you want, and using the optical material of your choice.



Andover Corporation's quality testing starts at the raw material and continues through the finished product.

Total Quality Control

To ensure total quality control, most of our equipment is either custom designed or custom constructed to our exact specifications.

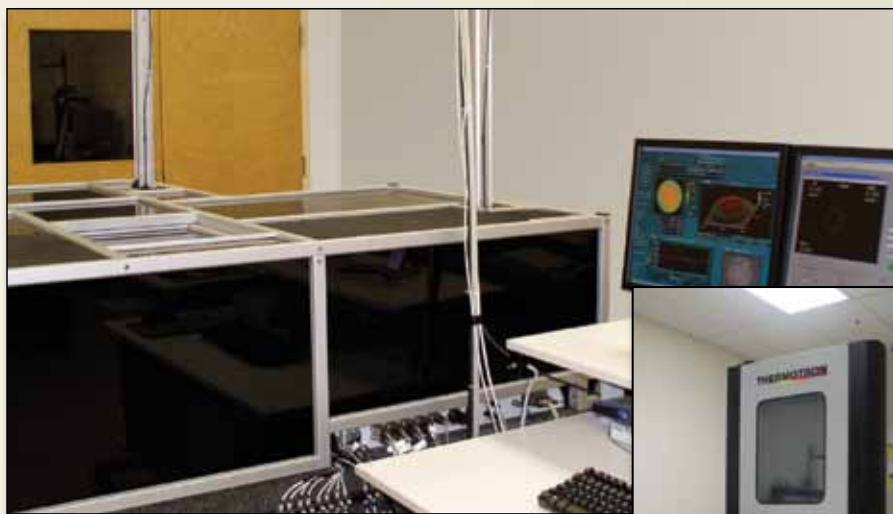


We check all filter glass for striae, bubbles and inclusions using our tunable interferometer and custom-designed inclusion tester. These instruments detect minute defects, even in materials that do not transmit visible light.



State-of-the-Art Testing

Most interferometers rely on laser light to produce interference fringes. Since they do not transmit the laser wavelength, many bandpass filters cannot be measured with these instruments. To solve this problem, we have constructed a computerized, tunable white light interferometer that produces actual transmitted wavefront interferograms of filters at any wavelength in the range of 350nm–1100nm.



Our in-house environmental chambers allow us to perform routine and custom product testing at temperatures from -62°C to over 500°C. This along with the ability to vary humidity levels ensures compliance with your custom specification or MIL standard.

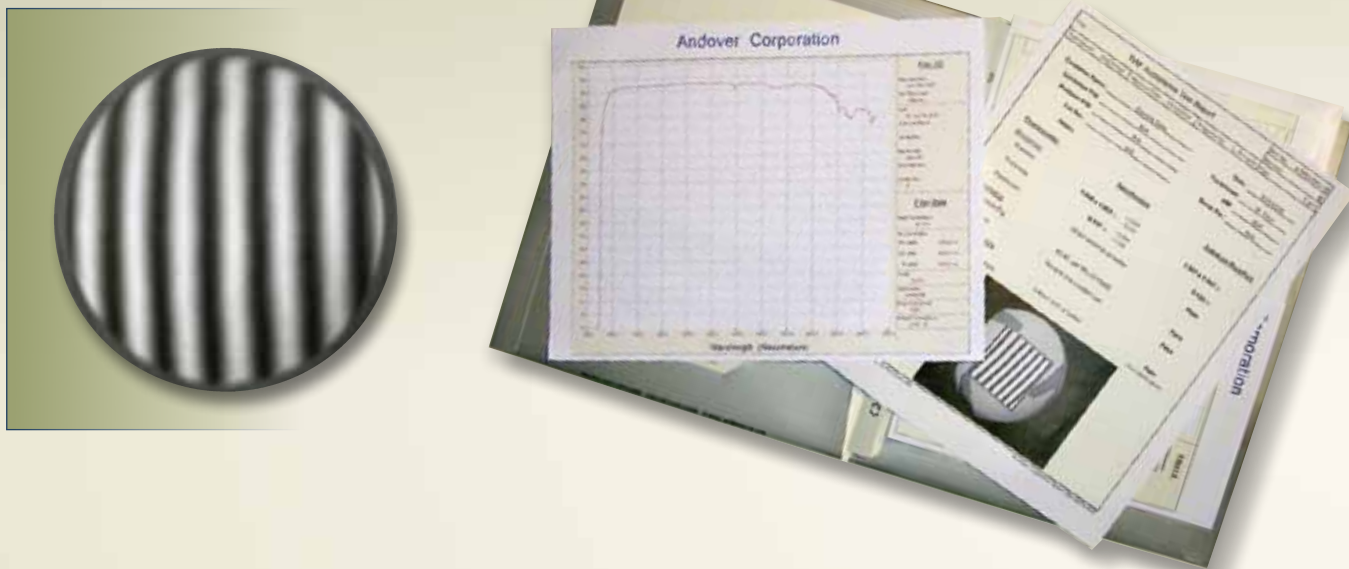


Image Quality Filters

Have demanding custom imaging requirements?

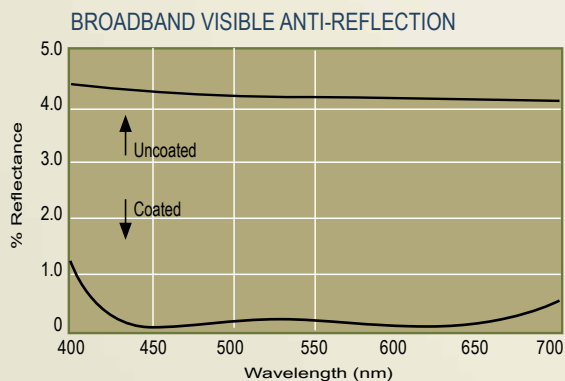
Image quality filters are ideal for applications that require high resolution, such as astronomical observations, video monitoring systems, high-resolution photography, and other imaging applications. To meet these demanding requirements, Andover Corporation has developed a line of custom Image Quality (IQ) filters using high-grade optical material that is both striation and inclusion-free. The surfaces are ground and polished to a transmitted wavefront of $\lambda/4$ per inch and parallel to 30 arc seconds or better. The internal coating positions are optimized and the exterior surfaces anti-reflection coated to eliminate multiple images and fringe patterns, and maximize energy throughput. For very high-resolution applications, we can also provide image quality filters with a transmitted wavefront of $\lambda/10$ and parallelism of 10 arc seconds. While commercial quality filters can have the same spectral characteristics as image quality filters, they are designed for use in instruments rather than imaging applications.

All filters come with test documentation



ANTI-REFLECTIVE COATINGS

Thin-film coatings are an effective way to limit reflections while also improving optimal system performance. Andover Corporation manufactures a variety of anti-reflective coatings designed for high efficiency, mechanical durability, and environmental stability.



Past Projects

A few examples of Andover's achievements

Solar Diameter Imager and Surface Mapper (SODISM) on the PICARD satellite

PICARD is an investigation dedicated to the simultaneous measurement of the absolute total and spectral solar irradiance, the diameter and solar shape, and to the Sun's interior probing by the helioseismology method. These measurements obtained all along the mission will allow the study of their variations as a function of the solar activity.

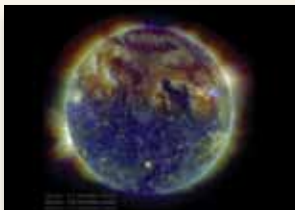
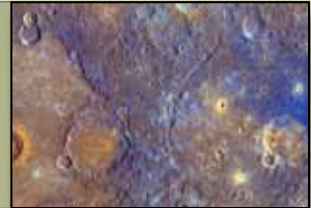


Helioseismic and Magnetic Imager (HMI)

The primary goal of the HMI investigation is to study the origin of solar variability and to characterize and understand the Sun's interior and the various components of magnetic activity. The HMI investigation is based on measurements obtained with the HMI instrument as part of the Solar Dynamics Observatory (SDO) mission.

MERcury Surface, Space ENVIRONMENT, GEochemistry and Ranging (MESSENGER)

MESSENGER launched on August 3, 2004. Its mission is to analyze the surface of Mercury, to better understand our own planet. It carries seven instruments, one of which is the Mercury Dual Imaging System (MDIS), a camera with wide and narrow fields-of-view, for monochrome, color and stereo imaging.

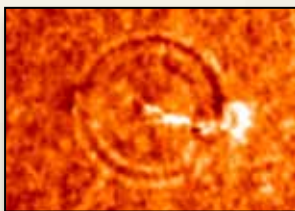


The Atmospheric Imaging Assembly (AIA) for the Solar Dynamics Observatory (SDO)

SDO is designed to provide an unprecedented view of the solar corona, taking images that span at least 1.3 solar diameters in multiple wavelengths nearly simultaneously, at a resolution of about 1 arcsec and at a cadence of 10 seconds or better. These data will significantly improve our understanding of the physics behind the activity displayed by the Sun's atmosphere, which drives space weather in the heliosphere and in planetary environments.

The Cross-track Infrared Sounder (CrIS)

CrIS is a Michelson interferometer infrared sounder that is part of the Cross-track Infrared Microwave Sounding Suite (CrIMSS). The objective of CrIMSS is to provide global three dimensional soundings of atmospheric temperature and moisture as well as provide data on other geophysical parameters.



The Michelson Doppler Imager (MDI)

MDI is part of an international collaboration to study the interior structure and dynamics of the Sun. The MDI team was responsible for the design and fabrication, and now for the operation, of the MDI instrument on board the Solar and Heliospheric Observatory (SOHO) spacecraft.

About Bandpass Filters



Bandpass Filters

The use of bandpass filters is one of the simplest and most economical ways to transmit a well-defined band of light and to reject all other unwanted radiation. Their design is essentially a thin film Fabry-Perot interferometer formed by vacuum deposition, and consists of two reflecting stacks separated by an even-order spacer layer.

Because the Fabry-Perot filter is Lorentzian in shape, the cut-on and cut-off slopes are shallow and the rate of attenuation in the out-of-band blocking range is slow. To improve the slopes and increase the attenuation in the blocking band, we introduce more cavities into the construction of our standard dielectric bandpass filters.

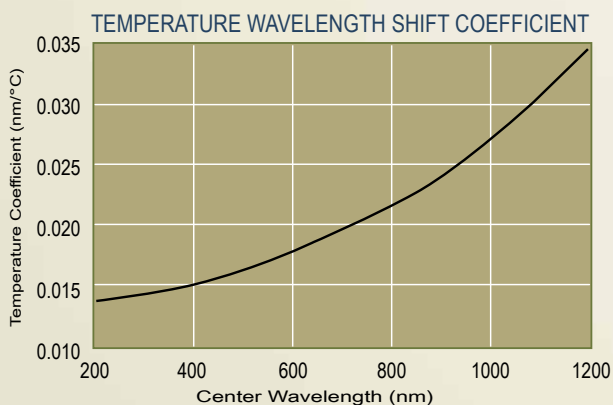
Environmental Considerations

Ambient temperature and optical path geometry are important factors to consider in selecting or specifying bandpass filters.

Ambient Temperature

The center wavelength of a bandpass filter shifts linearly with changes in ambient temperature—up with a positive change and down with a negative change. The temperature coefficient chart below gives a good approximation of the shift in wavelength for a given temperature change.

To counter these effects, Andover has developed temperature controllers that help to maintain the ambient temperature of bandpass filters. (For more information, see page 66).



Angle of Incidence

The central wavelength of the all-dielectric Fabry-Perot filter shifts lower with an increase in the incident angle. The amount of shift depends upon the incident angle and the filter's effective index (N^*). This feature can be very useful in tuning a filter to the desired central wavelength. Use the formula below to determine the wavelength shift of a filter in collimated light with incident angles up to 15° .

$$\lambda_\theta = \lambda_0 \left[1 - \left(\frac{N_e}{N^*} \right)^2 \sin^2 \theta \right]^{\frac{1}{2}}$$

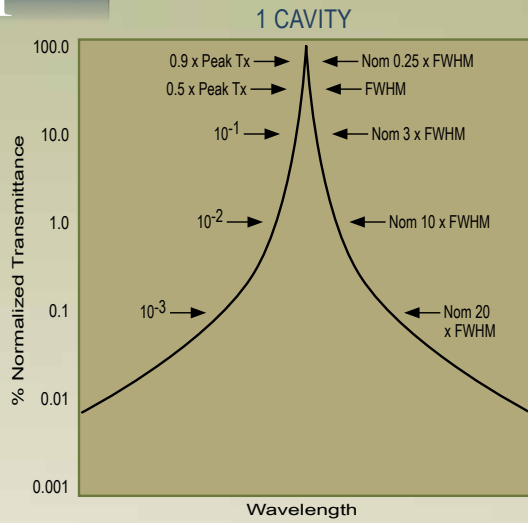
Where:

- λ_θ = Wavelength at angle of incidence
- λ_0 = Wavelength at normal incidence
- N_e = Refractive index of external medium
- N^* = Effective refractive index of the filter
- θ = Angle of incidence

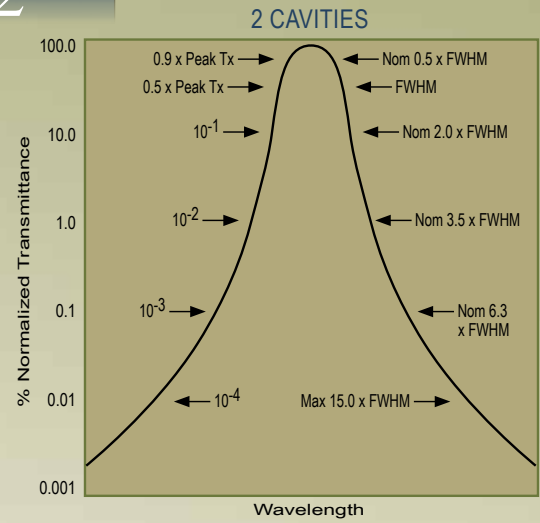
When using a filter with non-collimated light, the wavelength shift will appear somewhat less than that of collimated light at the same angle. In a cone of light, only the central ray is normal to the surface while all others are increasingly off-angle. To approximate this shift, use this same formula and divide the results by two. (This approach works in systems where the full cone angle is up to 20°).

Spectral Profiles for Andover's 10 Basic Filter Types

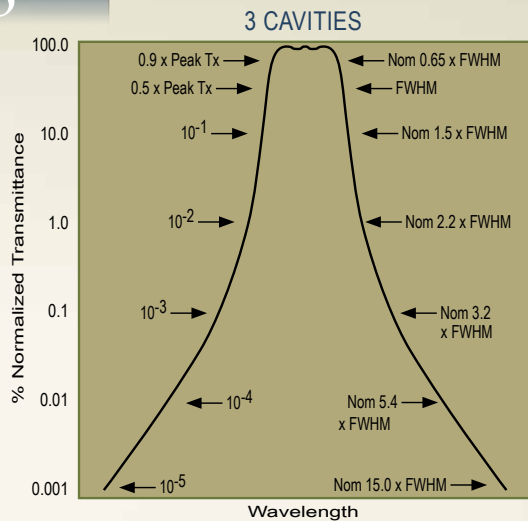
1 Type



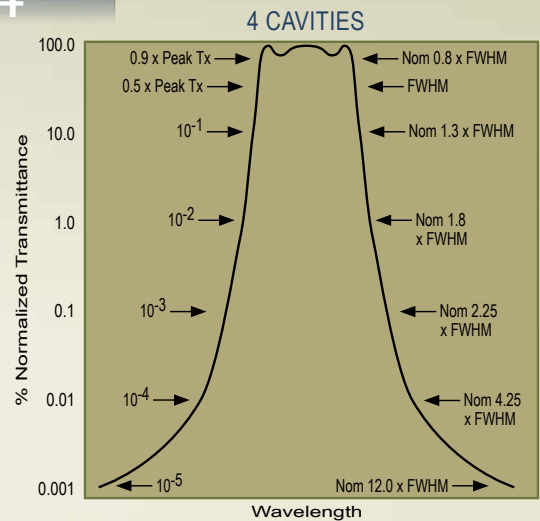
2 Type



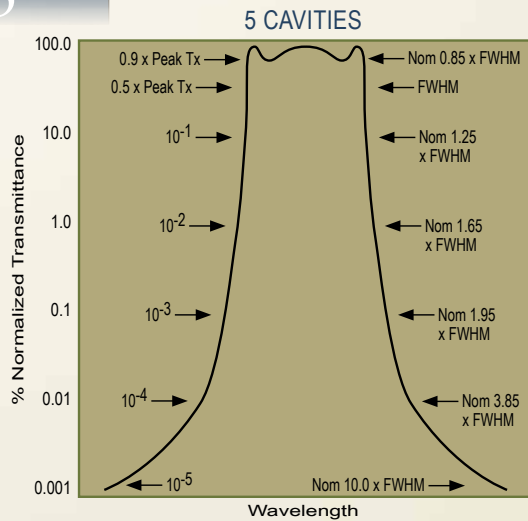
3 Type



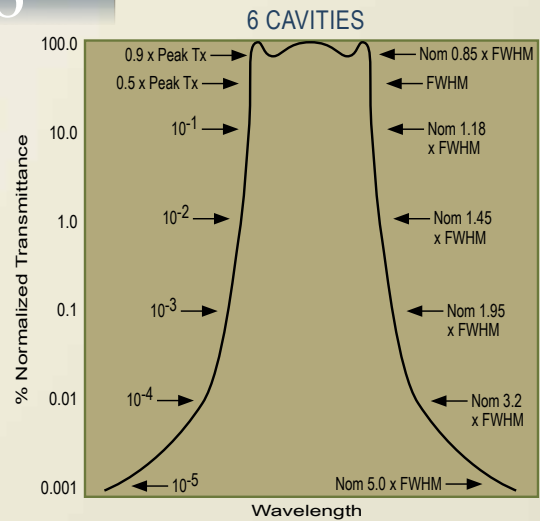
4 Type



5 Type



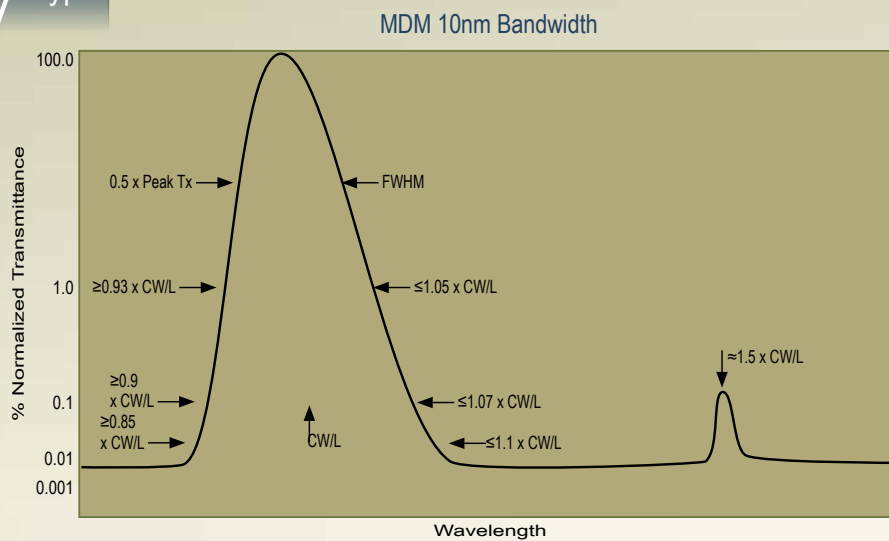
6 Type



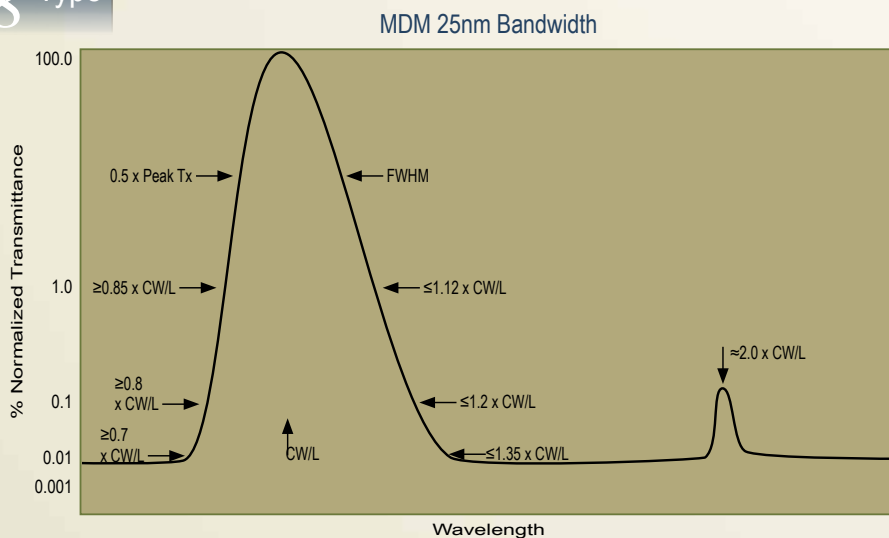
Filter types 1-6 represent unblocked filter profiles. Bandshape may vary depending upon level of additional blocking.

Normalized Transmittance of Peak (%)	Full Bandwidth Multiplier (Nominal)					
	1 Cavity	2 Cavities	3 Cavities	4 Cavities	5 Cavities	6 Cavities
90.0	0.25 nom.	0.5 nom.	0.65–0.70	0.8–0.9	0.85–0.90	0.85–0.90
10.0	2.5–3.0	1.6–2.0	1.2–1.5	1.1–1.3	1.1–1.25	1.1–1.25
1.0	8.0–10.0	2.8–3.5	1.9–2.2	1.5–1.8	1.5–1.65	1.5–1.65
0.1	15.0–20.0	5.5–6.3	2.9–3.2	2.0–2.25	2.0–2.25	2.0–2.25
0.01	undefined	10.0–15.0	4.9–5.4	3.5–4.25	3.1–3.85	2.9–3.2
0.001	undefined	undefined	10.0–15.0	9.0–12.0	8.0–10.0	4.0–5.0

7 Type

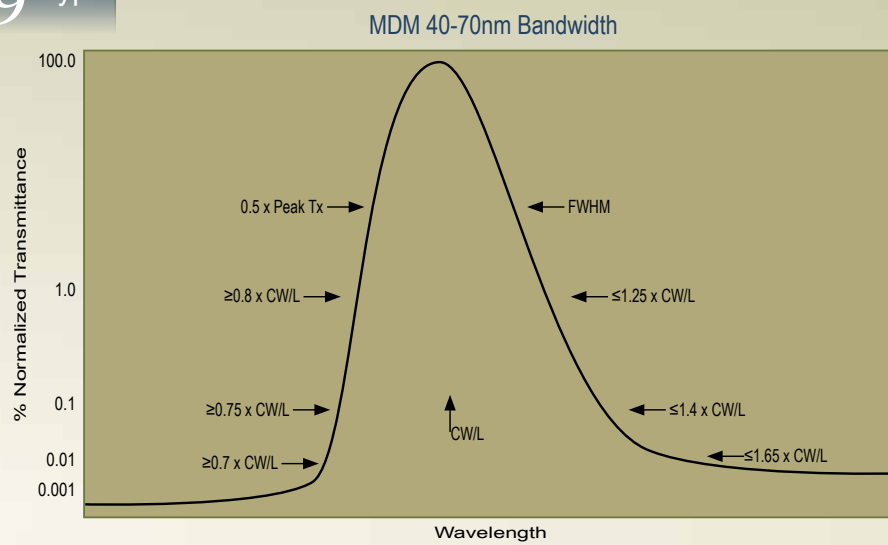


8 Type

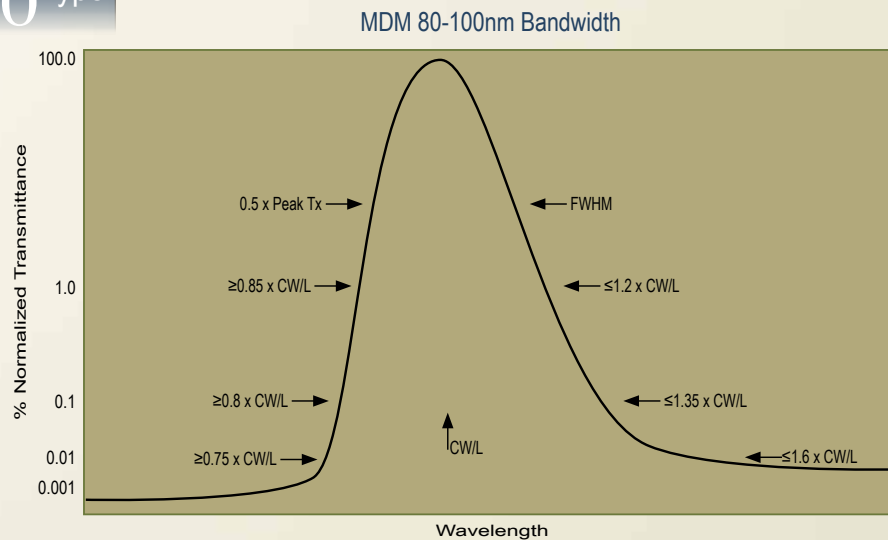


MDM filters are a special type of bandpass filter utilizing dielectric layers (D) surrounded by metallic layers (M). They provide excellent throughput over a wide spectral range, while providing good out-of-band blocking.

9 Type



10 Type



Standard Bandpass Filters

Standard Bandpass Filters

Andover offers one of the most extensive selections of bandpass filters in the industry, including many of the primary laser, mercury, biomedical, and analytical spectral lines.

We use a proprietary method to stabilize our products to prevent drift of peak wavelength with age and hermetically seal each filter for maximum protection against humidity. Each filter is mounted in a black anodized aluminum ring, adding further protection against chipping, scratching, and moisture penetration.

- Wavelengths from the ultraviolet through the infrared
- Stabilized to prevent drift of peak wavelength over time
- Hermetically sealed and protected by an anodized aluminum ring

Applications

Spectral Radiometry
Medical Diagnostics
Chemical Analysis
Colorimetry



GENERAL SPECIFICATIONS

Diameter Tolerance	+0/-.25mm	
Usable Aperture	<u>Filter Size</u>	<u>Usable Aperture</u>
	12.5mm Ø	9.0mm Ø
	25.0mm Ø	21.0mm Ø
	50.0mm Ø	45.0mm Ø
Surface Quality	80–50 (Per MIL-PRF-13830B)	
Optical Quality	Commercial instrumentation grade	
Out-of-Band Blocking	1 x 10 ⁻⁴ avg. from X-ray to FIR	
Specification Temperature	+23°C	
Max. Survival Temp Range	CW/L 214–380nm	-50°C to +50°C
	CW/L 380.1–2400nm	-50°C to +70°C
Humidity Resistance	Per MIL-C-48497A	
Mechanical	Mounted in an anodized aluminum ring	

Optional: Mounted in threaded ring - see pg 57 for thread sizes

Standard Bandpass Sets

If you're looking to purchase more than just a few filters, may we suggest Building Your Own Set and SAVE! All filter sets are favorably discounted and include a complete spectral curve data sheet for each filter. They also come with a quality hardwood case for secure storage.



Sets	Size, Shape & Part Number		
	12.5mm Ø ○	25mm Ø ○	50mm Ø ○
6-Piece Set	000FS06-12.5	000FS06-25	000FS06-50
8-Piece Set	000FS08-12.5	000FS08-25	000FS08-50
12-Piece Set	000FS12-12.5	000FS12-25	000FS12-50



Choose from the following Part Numbers to build your own 6, 8 or 12 piece set. In making your selections, please keep in mind that each set you create must contain the same size filters to qualify as a set.

STANDARD BANDPASS FILTERS

Line	CWL (nm)	FWHM	Cavities/ Filter Type	Min. T (%)	n*	Nominal Thickness (mm)	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
-	193.0 ±2.5	15 ±3	MDM/7	12	-	4.0	193FS15-12.5	193FS15-25	193FS15-50
-	200.0 +3/-0	10 ±2	MDM/7	12	-	4.0	200FS10-12.5	200FS10-25	200FS10-50
Zn	214.0 +3/-0	10 ±2	MDM/7	12	-	4.0	214FS10-12.5	214FS10-25	214FS10-50
Zn	214.0 ±3	22 ±4	MDM/8	20	-	4.0	214FS22-12.5	214FS22-25	214FS22-50
-	220.0 +3/-0	10 ±2	MDM/7	12	-	4.0	220FS10-12.5	220FS10-25	220FS10-50
Cd	228.0 +3/-0	10 ±2	MDM/7	15	-	4.0	228FS10-12.5	228FS10-25	228FS10-50
Cd	228.0 ±3	25 ±5	MDM/8	20	-	4.0	228FS25-12.5	228FS25-25	228FS25-50
Ni	232.0 +3/-0	10 ±2	MDM/7	15	-	4.0	232FS10-12.5	232FS10-25	232FS10-50
Co	239.0 +3/-0	10 ±2	MDM/7	15	-	4.0	239FS10-12.5	239FS10-25	239FS10-50
Co	239.0 ±3	25 ±5	MDM/8	20	-	4.0	239FS25-12.5	239FS25-25	239FS25-50
HeCd	248.0 +3	10 ±2	MDM/7	12	-	4.0	248FS10-12.5	248FS10-25	248FS10-50
Hg	253.7 +3/-0	10 ±2	MDM/7	12	-	4.0	254FS10-12.5	254FS10-25	254FS10-50
Hg	253.7 ±3	25 ±5	MDM/8	18	-	4.0	254FS25-12.5	254FS25-25	254FS25-50
Hg	253.7 +10-0	40 ±8	MDM/9	20	-	4.0	254FS40-12.5	254FS40-25	254FS40-50

MDM= Metal-Dielectric-Metal

STANDARD BANDPASS FILTERS

Line	CWL (nm)	FWHM	Cavities/ Filter Type	Min. T (%)	n*	Nominal Thickness (mm)	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
-	260.0 +3/-0	10 ±2	MDM/7	12	-	4.0	260FS10-12.5	260FS10-25	260FS10-50
Hg	265.0 +3/-0	10 ±2	MDM/7	12	-	4.0	265FS10-12.5	265FS10-25	265FS10-50
Hg	265.0 ±3	25 ±5	MDM/8	20	-	4.0	265FS25-12.5	265FS25-25	265FS25-50
Hg	270.0 +3/-0	10 ±2	MDM/7	12	-	4.0	270FS10-12.5	270FS10-25	270FS10-50
Hg	275.0+3/-0	10 ±2	MDM/7	12	-	4.0	275FS10-12.5	275FS10-25	275FS10-50
Hg	280.0 +3/-0	10 ±2	MDM/7	12	-	4.0	280FS10-12.5	280FS10-25	280FS10-50
Hg	280.0 ±3	25 ±5	MDM/8	20	-	4.0	280FS25-12.5	280FS25-25	280FS25-50
Hg	289.0 +3/-0	10 ±2	MDM/7	15	-	4.0	289FS10-12.5	289FS10-25	289FS10-50
Hg	296.7 +3/-0	10 ±2	MDM/7	15	-	4.0	297FS10-12.5	297FS10-25	297FS10-50
-	300.0 +3/-0	10 ±2	MDM/7	15	-	4.0	300FS10-12.5	300FS10-25	300FS10-50
-	300.0 ±3	25 ±5	MDM/8	20	-	4.0	300FS25-12.5	300FS25-25	300FS25-50
-	300.0 +10/-0	40 ±8	MDM/9	20	-	4.0	300FS40-12.5	300FS40-25	300FS40-50
Zn	307.1 +3/-0	10 ±2	MDM/7	15	-	4.0	307FS10-12.5	307FS10-25	307FS10-50
Zn	307.1 ±3	25 ±5	MDM/8	20	-	4.0	307FS25-12.5	307FS25-25	307FS25-50
-	310.0 +3/-0	10 ±2	MDM/7	15	-	4.0	310FS10-12.5	310FS10-25	310FS10-50
Hg	313.0 +3/-0	10 ±2	MDM/7	15	-	4.0	313FS10-12.5	313FS10-25	313FS10-50
Hg	313.0 ±3	25 ±5	MDM/8	20	-	4.0	313FS25-12.5	313FS25-25	313FS25-50
-	320.0 +3/-0	10 ±2	3/3	25	1.45	8.0	320FS10-12.5	320FS10-25	320FS10-50
Cd	326.1 +0.5/-0	3 ±0.5	2/2	15	1.45	8.0	326FS03-12.5	326FS03-25	326FS03-50
Cd	326.1 +2/-0	10 ±2	3/3	25	1.45	8.0	326FS10-12.5	326FS10-25	326FS10-50
Cd	326.1 ±3	25 ±5	3/3	25	1.45	8.0	326FS25-12.5	326FS25-25	326FS25-50
-	330.0 +3/-0	10 ±2	3/3	25	1.45	8.0	330FS10-12.5	330FS10-25	330FS10-50
Hg	334.0 +2/-0	10 ±2	3/3	25	1.45	8.0	334FS10-12.5	334FS10-25	334FS10-50
N ₂ Laser	337.1 +0.5/-0	3 ±0.5	2/2	20	1.45	7.0	337FS03-12.5	337FS03-25	337FS03-50
N ₂ Laser	337.1 +2/-0	10 ±2	3/3	25	1.45	8.0	337FS10-12.5	337FS10-25	337FS10-50
biomed	340.0 +2/-0	8 ±2	3/3	35	1.45	8.0	340FS08-12.5	340FS08-25	340FS08-50
biomed	340.0 +3/-0	10 ±2	3/3	25	1.45	8.0	340FS10-12.5	340FS10-25	340FS10-50
biomed	340.0 ±3	25 ±5	3/3	25	1.45	7.0	340FS25-12.5	340FS25-25	340FS25-50
Nd/YAG Laser	350.0 +3/-0	10 ±2	3/3	25	1.45	8.0	350FS10-12.5	350FS10-25	350FS10-50
-	350.0 ±3	25 ±5	3/3	25	1.45	7.0	350FS25-12.5	350FS25-25	350FS25-50
-	350.0 +10/-0	40 ±8	3/3	25	1.45	7.0	350FS40-12.5	350FS40-25	350FS40-50
-	355.0 +2/-0	10 ±2	3/3	25	1.45	7.0	355FS10-12.5	355FS10-25	355FS10-50
-	360.0 +3/-0	10 ±2	3/3	25	1.45	7.0	360FS10-12.5	360FS10-25	360FS10-50
Hg	365.0 +1/-0	5 ±1	2/2	20	1.45	7.0	365FS05-12.5	365FS05-25	365FS05-50
Hg	365.0 +2/-0	10 ±2	3/3	25	1.45	7.0	365FS10-12.5	365FS10-25	365FS10-50
Hg	365.0 ±3	25 ±5	3/3	25	1.45	7.0	365FS25-12.5	365FS25-25	365FS25-50
Ni	370.0 +3/-0	10 ±2	3/3	25	1.45	7.0	370FS10-12.5	370FS10-25	370FS10-50
-	380.0 +3/-0	10 ±2	3/3	25	1.45	7.0	380FS10-12.5	380FS10-25	380FS10-50
-	390.0 +3/-0	10 ±2	3/3	35	1.45	7.0	390FS10-12.5	390FS10-25	390FS10-50
-	400.0 +3/-0	10 ±2	3/3	45	1.45	7.0	400FS10-12.5	400FS10-25	400FS10-50
-	400.0 ±2	20 ±4	3/3	45	1.45	7.0	400FS20-12.5	400FS20-25	400FS20-50
-	400.0 +10/-0	40 ±8	3/3	45	1.45	7.0	400FS40-12.5	400FS40-25	400FS40-50
-	400.0 +20/-10	70 ±16	MDM/10	60	-	7.0	400FS70-12.5	400FS70-25	400FS70-50

MDM= Metal-Dielectric-Metal

STANDARD BANDPASS FILTERS

Line	CWL (nm)	FWHM	Cavities/ Filter Type	Min. T (%)	n*	Nominal Thickness (mm)	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
Hg	404.7 +1/-0	5 ±1	2/2	35	1.45	7.0	405FS05-12.5	405FS05-25	405FS05-50
Hg	404.7 +2/-0	10 ±2	3/3	45	1.45	7.0	405FS10-12.5	405FS10-25	405FS10-50
-	410.0 +3/-0	10 ±2	3/3	45	1.45	7.0	410FS10-12.5	410FS10-25	410FS10-50
-	415.0 +2/-0	10 ±2	3/3	45	1.45	7.0	415FS10-12.5	415FS10-25	415FS10-50
-	420.0 +3/-0	10 ±2	3/3	45	1.45	7.0	420FS10-12.5	420FS10-25	420FS10-50
-	430.0 +3/-0	10 ±2	3/3	45	1.45	7.0	430FS10-12.5	430FS10-25	430FS10-50
Hg	435.8 +1/-0	5 ±1	2/2	45	1.45	7.0	436FS05-12.5	436FS05-25	436FS05-50
Hg	435.8 +2/-0	10 ±2	3/3	45	1.45	7.0	436FS10-12.5	436FS10-25	436FS10-50
-	440.0 +3/-0	10 ±2	3/3	45	1.45	7.0	440FS10-12.5	440FS10-25	440FS10-50
He/Cd Laser	441.6 +0.2/-0	1 ±0.2	2/2	35	1.45	8.5	442FS02-12.5	442FS02-25	442FS02-50
He/Cd Laser	441.6 +0.5/-0	3 ±0.5	2/2	40	1.45	8.5	442FS03-12.5	442FS03-25	442FS03-50
He/Cd Laser	441.6 +2/-0	10 ±2	3/3	45	1.45	7.0	442FS10-12.5	442FS10-25	442FS10-50
-	450.0 +3/-0	10 ±2	3/3	45	1.45	7.0	450FS10-12.5	450FS10-25	450FS10-50
-	450.0 ±2	20 ±4	3/3	55	1.45	7.0	450FS20-12.5	450FS20-25	450FS20-50
-	450.0 +10/-0	40 ±8	3/3	55	1.45	7.0	450FS40-12.5	450FS40-25	450FS40-50
-	450.0 +20/-10	80 ±16	MDM/9	65	-	7.0	450FS80-12.5	450FS80-25	450FS80-50
Cs	455.5 +2/-0	10 ±2	3/3	50	1.45	7.0	456FS10-12.5	456FS10-25	456FS10-50
Ar/Ion Laser	457.9 +0.2/-0	1 ±0.2	2/2	40	1.45	8.5	458FS02-12.5	458FS02-25	458FS02-50
Ar/Ion Laser	457.9 +0.5/-0	3 ±0.5	2/2	45	1.45	8.5	458FS03-12.5	458FS03-25	458FS03-50
Ar/Ion Laser	457.9 +2/-0	10 ±2	3/3	50	1.45	7.0	458FS10-12.5	458FS10-25	458FS10-50
-	460.0 +3/-0	10 ±2	3/3	50	1.45	7.0	460FS10-12.5	460FS10-25	460FS10-50
-	470.0 +3/-0	10 ±2	3/3	50	2.05	7.0	470FS10-12.5	470FS10-25	470FS10-50
-	480.0 +3/-0	10 ±2	3/3	50	2.05	7.0	480FS10-12.5	480FS10-25	480FS10-50
Hb	486.1 +2/-0	10 ±2	3/3	50	2.05	7.0	486FS10-12.5	486FS10-25	486FS10-50
Ar/Ion Laser	488.0 +2/-0	1 ±0.2	2/2	45	2.05	8.5	488FS02-12.5	488FS02-25	488FS02-50
Ar/Ion Laser	488.0 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	488FS03-12.5	488FS03-25	488FS03-50
Ar/Ion Laser	488.0 +2/-0	10 ±2	3/3	55	2.05	7.0	488FS10-12.5	488FS10-25	488FS10-50
-	490.0 +3/-0	10 ±2	3/3	55	2.05	7.0	490FS10-12.5	490FS10-25	490FS10-50
-	500.0 +3/-0	10 ±2	3/3	55	2.05	7.0	500FS10-12.5	500FS10-25	500FS10-50
-	500.0 ±2	20 ±4	3/3	55	2.05	7.0	500FS20-12.5	500FS20-25	500FS20-50
-	500.0 +10/-0	40 ±8	3/3	55	2.05	7.0	500FS40-12.5	500FS40-25	500FS40-50
-	500.0 +20/-10	80 ±16	MDM/9	70	-	7.0	500FS80-12.5	500FS80-25	500FS80-50
Cd	508.5 +2/-0	10 ±2	3/3	55	2.05	7.0	508FS10-12.5	508FS10-25	508FS10-50
-	510.0 +3/-0	10 ±2	3/3	55	2.05	7.0	510FS10-12.5	510FS10-25	510FS10-50
Ar/Ion Laser	514.5 +0.2/-0	1 ±0.2	2/2	45	2.05	8.5	515FS02-12.5	515FS02-25	515FS02-50
Ar/Ion Laser	514.5 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	515FS03-12.5	515FS03-25	515FS03-50
Ar/Ion Laser	514.5 +2/-0	10 ±2	3/3	55	2.05	7.0	515FS10-12.5	515FS10-25	515FS10-50
-	520.0 +3/-0	10 ±2	3/3	55	2.05	7.0	520FS10-12.5	520FS10-25	520FS10-50
-	523.0 +2/-0	10 ±2	3/3	55	2.05	7.0	523FS10-12.5	523FS10-25	523FS10-50
-	530.0 +3/-0	10 ±2	3/3	55	2.05	7.0	530FS10-12.5	530FS10-25	530FS10-50
Nd/YAG Laser	532.0 +0.2/-0	1 ±0.2	2/2	45	2.05	8.5	532FS02-12.5	532FS02-25	532FS02-50
Nd/YAG Laser	532.0 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	532FS03-12.5	532FS03-25	532FS03-50
Nd/YAG Laser	532.0 +2/-0	10 ±2	3/3	55	2.05	7.0	532FS10-12.5	532FS10-25	532FS10-50

MDM= Metal-Dielectric-Metal

STANDARD BANDPASS FILTERS

Line	CWL (nm)	FWHM (nm)	Cavities/ Filter Type	Min. T (%)	n*	Nominal Thickness (mm)	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
Ti	535.0 +2/-0	10 ±2	3/3	55	2.05	7.0	535FS10-12.5	535FS10-25	535FS10-50
-	540.0 +3/-0	10 ±2	3/3	55	2.05	7.0	540FS10-12.5	540FS10-25	540FS10-50
-	543.5 +2/-0	10 ±2	3/3	55	2.05	7.0	544FS10-12.5	544FS10-25	544FS10-50
Hg	546.1 +1/-0	5 ±1	2/2	55	1.45	7.0	546FS05-12.5	546FS05-25	546FS05-50
Zn	546.1 +2/-0	10 ±2	3/3	55	2.05	7.0	546FS10-12.5	546FS10-25	546FS10-50
-	550.0 +3/-0	10 ±2	3/3	55	2.05	7.0	550FS10-12.5	550FS10-25	550FS10-50
-	550.0 ±2	20 ±4	3/3	55	1.45	7.0	550FS20-12.5	550FS20-25	550FS20-50
-	550.0 +10/-0	40 ±8	3/3	55	2.05	7.0	550FS40-12.5	550FS40-25	550FS40-50
-	550.0 +20/-10	80 ±16	MDM/9	70	-	7.0	550FS80-12.5	550FS80-25	550FS80-50
-	560.0 +3/-0	10 ±2	3/3	55	2.05	7.0	560FS10-12.5	560FS10-25	560FS10-50
-	570.0 +3/-0	10 ±2	3/3	55	2.05	7.0	570FS10-12.5	570FS10-25	570FS10-50
Hg	577.0 +1/-0	5 ±1	2/2	50	1.45	7.0	577FS05-12.5	577FS05-25	577FS05-50
Hg	577.0 +2/-0	10 ±2	3/3	55	2.05	7.0	577FS10-12.5	577FS10-25	577FS10-50
-	580.0 +3/-0	10 ±2	3/3	55	2.05	7.0	580FS10-12.5	580FS10-25	580FS10-50
Na	589.3 +2/-0	10 ±2	3/3	55	2.05	7.0	589FS10-12.5	589FS10-25	589FS10-50
-	590.0 +3/-0	10 ±2	3/3	55	2.05	7.0	590FS10-12.5	590FS10-25	590FS10-50
-	600.0 +3/-0	10 ±2	2/2	55	2.05	7.0	600FS10-12.5	600FS10-25	600FS10-50
-	600.0 ±2	20 ±4	2/2	55	1.45	7.0	600FS20-12.5	600FS20-25	600FS20-50
-	600.0 +10/-0	40 ±8	3/3	55	2.05	7.0	600FS40-12.5	600FS40-25	600FS40-50
-	600.0 +20/-10	80 ±16	MDM/9	70	-	7.0	600FS80-12.5	600FS80-25	600FS80-50
-	610.0 +3/-0	10 ±2	3/3	55	2.05	7.0	610FS10-12.5	610FS10-25	610FS10-50
-	620.0 +3/-0	10 ±2	3/3	55	2.05	7.0	620FS10-12.5	620FS10-25	620FS10-50
-	630.0 +3/-0	10 ±2	3/3	55	2.05	7.0	630FS10-12.5	630FS10-25	630FS10-50
HeNe Laser	632.8 +0.2/-0	1 ±0.2	2/2	50	2.05	8.5	633FS02-12.5	633FS02-25	633FS02-50
HeNe Laser	632.8 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	633FS03-12.5	633FS03-25	633FS03-50
HeNe Laser	632.8 +2/-0	10 ±2	3/3	55	2.05	7.0	633FS10-12.5	633FS10-25	633FS10-50
Zn	636.2 +2/-0	10 ±2	3/3	60	2.05	7.0	636FS10-12.5	636FS10-25	636FS10-50
-	640.0 +3/-0	10 ±2	3/3	60	2.05	7.0	640FS10-12.5	640FS10-25	640FS10-50
Kr Laser	647.1 +0.2/-0	1 ±0.2	2/2	50	2.05	8.5	647FS02-12.5	647FS02-25	647FS02-50
Kr Laser	647.1 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	647FS03-12.5	647FS03-25	647FS03-50
Kr Laser	647.1 +2/-0	10 ±2	3/3	60	2.05	7.0	647FS10-12.5	647FS10-25	647FS10-50
-	650.0 +3/-0	10 ±2	3/3	55	2.05	7.0	650FS10-12.5	650FS10-25	650FS10-50
-	650.0 ±2	20 ±4	3/3	55	2.05	7.0	650FS20-12.5	650FS20-25	650FS20-50
-	650.0 +10/-0	40 ±8	3/3	50	2.05	7.0	650FS40-12.5	650FS40-25	650FS40-50
-	650.0 +20/-10	80 ±16	MDM/9	70	-	7.0	650FS80-12.5	650FS80-25	650FS80-50
Ha	656.3 +0.2/-0	1 ±0.2	2/2	45	2.05	8.5	656FS02-12.5	656FS02-25	656FS02-50
Ha	656.3 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	656FS03-12.5	656FS03-25	656FS03-50
Ha	656.3 +2/-0	10 ±2	3/3	55	2.05	7.0	656FS10-12.5	656FS10-25	656FS10-50
-	660.0 +3/-0	10 ±2	3/3	55	2.05	7.0	660FS10-12.5	660FS10-25	660FS10-50
Li	670.0 +3/-0	10 ±2	3/3	55	2.05	7.0	670FS10-12.5	670FS10-25	670FS10-50
Laser Diode	670.8 +2/-0	10 ±2	3/3	55	2.05	7.0	671FS10-12.5	671FS10-25	671FS10-50
-	675.8 +2/-0	10 ±2	3/3	55	2.05	7.0	675FS10-12.5	675FS10-25	675FS10-50
-	675.0 ±2	20 ±4	3/3	55	2.05	7.0	675FS20-12.5	675FS20-25	675FS20-50

MDM= Metal-Dielectric-Metal

STANDARD BANDPASS FILTERS

Line	CWL (nm)	FWHM (nm)	Cavities/ Filter Type	Min. T (%)	n*	Nominal Thickness (mm)	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
-	680.0 +3/-0	10 ±2	3/3	55	2.05	7.0	680FS10-12.5	680FS10-25	680FS10-50
-	690.0 +3/-0	10 ±2	3/3	55	2.05	7.0	690FS10-12.5	690FS10-25	690FS10-50
Ruby Laser	694.3 +0.2/-0	1 ±0.2	2/2	45	2.05	8.5	694FS02-12.5	694FS02-25	694FS02-50
Ruby Laser	694.3 +0.5/-0	3 ±0.5	2/2	50	2.05	8.5	694FS03-12.5	694FS03-25	694FS03-50
Ruby Laser	694.3 +2/-0	10 ±2	3/3	55	2.05	7.0	694FS10-12.5	694FS10-25	694FS10-50
-	700.0 +3/-0	10 ±2	3/3	55	2.05	7.0	700FS10-12.5	700FS10-25	700FS10-50
-	700.0 ±2	20 ±4	3/3	55	2.05	7.0	700FS20-12.5	700FS20-25	700FS20-50
-	700.0 +10/-0	40 ±8	3/3	50	2.05	7.0	700FS40-12.5	700FS40-25	700FS40-50
-	700.0 +20/-10	80 ±16	MDM/9	65	-	7.0	700FS80-12.5	700FS80-25	700FS80-50
-	710.0 +3/-0	10 ±2	3/3	55	2.05	7.0	710FS10-12.5	710FS10-25	710FS10-50
-	720.0 +3/-0	10 ±2	3/3	55	2.05	7.0	720FS10-12.5	720FS10-25	720FS10-50
-	730.0 +3/-0	10 ±2	3/3	50	2.05	7.0	730FS10-12.5	730FS10-25	730FS10-50
-	740.0 +3/-0	10 ±2	3/3	50	2.05	7.0	740FS10-12.5	740FS10-25	740FS10-50
-	750.0 +3/-0	10 ±2	3/3	50	2.05	7.0	750FS10-12.5	750FS10-25	750FS10-50
-	750.0 ±2	20 ±4	3/3	50	2.05	7.0	750FS20-12.5	750FS20-25	750FS20-50
-	750.0 +10/-0	40 ±8	3/3	40	2.05	7.0	750FS40-12.5	750FS40-25	750FS40-50
-	750.0 +20/-10	100 ±20	MDM/9	65	-	7.0	750FS00-12.5	750FS00-25	750FS00-50
-	760.0 +3/-0	10 ±2	3/3	50	2.05	7.0	760FS10-12.5	760FS10-25	760FS10-50
K	766.5 +2/-0	10 ±2	3/3	50	2.05	7.0	766FS10-12.5	766FS10-25	766FS10-50
-	770.0 +3/-0	10 ±2	3/3	50	2.05	7.0	770FS10-12.5	770FS10-25	770FS10-50
Rb	780.0 +3/-0	10 ±2	3/3	50	2.05	7.0	780FS10-12.5	780FS10-25	780FS10-50
Laser Diode	780.0 ±2	20 ±4	3/3	50	2.05	7.0	780FS20-12.5	780FS20-25	780FS20-50
-	790.0 +3/-0	10 ±2	3/3	50	2.05	7.0	790FS10-12.5	790FS10-25	790FS10-50
Rb	794.7 +2/-0	10 ±2	3/3	50	2.05	7.0	795FS10-12.5	795FS10-25	795FS10-50
-	800.0 +3/-0	10 ±2	3/3	50	2.05	7.0	800FS10-12.5	800FS10-25	800FS10-50
-	800.0 ±2	20 ±4	3/3	50	2.05	7.0	800FS20-12.5	800FS20-25	800FS20-50
-	800.0 +10/-0	40 ±8	3/3	50	2.05	7.0	800FS40-12.5	800FS40-25	800FS40-50
-	800.0 +20/-10	100 ±20	MDM/9	65	-	7.0	800FS00-12.5	800FS00-25	800FS00-50
Laser Diode	810.0 +3/-0	10 ±2	3/3	50	2.05	7.0	810FS10-12.5	810FS10-25	810FS10-50
Laser Diode	810.0 ±2	20 ±4	3/3	50	2.05	7.0	810FS20-12.5	810FS20-25	810FS20-50
-	820.0 +3/-0	10 ±2	3/3	50	2.05	7.0	820FS10-12.5	820FS10-25	820FS10-50
GaAlAs Laser	830.0 +3/-0	10 ±2	3/3	50	2.05	7.0	830FS10-12.5	830FS10-25	830FS10-50
Laser Diode	830.0 ±2	20 ±4	3/3	50	2.05	7.0	830FS20-12.5	830FS20-25	830FS20-50
-	840.0 +3/-0	10 ±2	3/3	50	2.05	7.0	840FS10-12.5	840FS10-25	840FS10-50
-	850.0 +3/-0	10 ±2	3/3	50	2.05	7.0	850FS10-12.5	850FS10-25	850FS10-50
-	850.0 ±2	20 ±4	3/3	50	2.05	7.0	850FS20-12.5	850FS20-25	850FS20-50
-	850.0 +10/-0	40 ±8	3/3	50	2.05	7.0	850FS40-12.5	850FS40-25	850FS40-50
-	850.0 +20/-10	100 ±20	MDM/9	65	-	7.0	850FS00-12.5	850FS00-25	850FS00-50
-	860.0 +3/-0	10 ±2	3/3	50	2.05	7.0	860FS10-12.5	860FS10-25	860FS10-50
-	870.0 +3/-0	10 ±2	3/3	50	2.05	7.0	870FS10-12.5	870FS10-25	870FS10-50
-	880.0 +3/-0	10 ±2	3/3	50	2.05	7.0	880FS10-12.5	880FS10-25	880FS10-50
-	890.0 +3/-0	10 ±2	3/3	50	2.05	7.0	890FS10-12.5	890FS10-25	890FS10-50
-	900.0 +3/-0	10 ±2	3/3	50	2.05	7.0	900FS10-12.5	900FS10-25	900FS10-50

MDM= Metal-Dielectric-Metal

STANDARD BANDPASS FILTERS

Line	CWL (nm)	FWHM (nm)	Cavities/ Filter Type	Min. T (%)	n*	Nominal Thickness (mm)	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
-	900.0 ±2	20 ±4	3/3	50	2.05	7.0	900FS20-12.5	900FS20-25	900FS20-50
-	900.0 +10/-0	40 ±8	3/3	50	2.05	7.0	900FS40-12.5	900FS40-25	900FS40-50
-	900.0 +20/-10	100 ±20	MDM/9	60	-	7.0	900FS00-12.5	900FS00-25	900FS00-50
GaAs	905.0 +0.2/-0	1 ±0.2	2/2	45	2.05	8.5	905FS02-12.5	905FS02-25	905FS02-50
GaAs	905.0 +0.5/-0	3 ±0.5	2/2	45	2.05	8.5	905FS03-12.5	905FS03-25	905FS03-50
GaAs	905.0 +2/-0	10 ±0.2	3/3	50	2.05	7.0	905FS10-12.5	905FS10-25	905FS10-50
-	910.0 +3/-0	10 ±2	3/3	50	2.05	7.0	910FS10-12.5	910FS10-25	910FS10-50
-	920.0 +3/-0	10 ±2	3/3	50	2.05	7.0	920FS10-12.5	920FS10-25	920FS10-50
-	930.0 +3/-0	10 ±2	3/3	50	2.05	7.0	930FS10-12.5	930FS10-25	930FS10-50
-	940.0 +3/-0	10 ±2	3/3	50	2.05	7.0	940FS10-12.5	940FS10-25	940FS10-50
-	950.0 +3/-0	10 ±2	3/3	50	2.05	7.0	950FS10-12.5	950FS10-25	950FS10-50
-	950.0 ±2	20 ±4	3/3	50	2.05	7.0	950FS20-12.5	950FS20-25	950FS20-50
-	950.0 +10/-0	40 ±8	3/3	50	1.45	7.0	950FS40-12.5	950FS40-25	950FS40-50
-	950.0 +20/-10	100 ±20	MDM/9	60	-	7.0	950FS00-12.5	950FS00-25	950FS00-50
-	960.0 +3/-0	10 ±2	3/3	50	2.05	7.0	960FS10-12.5	960FS10-25	960FS10-50
-	970.0 +3/-0	10 ±2	3/3	50	2.05	7.0	970FS10-12.5	970FS10-25	970FS10-50
-	980.0 +3/-0	10 ±2	3/3	50	2.05	7.0	980FS10-12.5	980FS10-25	980FS10-50
-	990.0 +3/-0	10 ±2	3/3	50	2.05	7.0	990FS10-12.5	990FS10-25	990FS10-50
-	1000.0 +3/-0	10 ±2	3/3	45	2.05	8.5	100FS10-12.5	100FS10-25	100FS10-50
-	1000.0 ±2	20 ±4	3/3	45	2.05	8.5	100FS20-12.5	100FS20-25	100FS20-50
-	1000.0 +10/-0	40 ±8	3/3	45	1.45	8.5	100FS40-12.5	100FS40-25	100FS40-50
-	1000.0 +20/-10	100 ±20	MDM/9	60	-	8.5	100FS00-12.5	100FS00-25	100FS00-50
Hg	1014.0 +2/-0	10 ±2	3/3	45	2.05	8.5	014FS10-12.5	014FS10-25	014FS10-50
-	1046.0 +2/-0	10 ±2	3/3	45	2.05	8.5	046FS10-12.5	046FS10-25	046FS10-50
-	1050.0 +3/-0	10 ±2	3/3	45	2.05	8.5	050FS10-12.5	050FS10-25	050FS10-50
Nd Laser	1064.0 +0.2/-0	1 ±0.2	2/2	40	2.05	8.5	064FS02-12.5	064FS02-25	064FS02-50
Nd/YAG	1064.0 +0.5/-0	3 ±0.5	2/2	45	2.05	8.5	064FS03-12.5	064FS03-25	064FS03-50
Nd/YAG	1064.0 +2/-0	10 ±2	3/3	40	2.05	8.5	064FS10-12.5	064FS10-25	064FS10-50
-	1100.0 +3/-0	10 ±2	3/3	40	2.05	8.5	110FS10-12.5	110FS10-25	110FS10-50
-	1150.0 +3/-0	10 ±2	3/3	40	2.05	8.5	115FS10-12.5	115FS10-25	115FS10-50
-	1200.0 +3/-0	10 ±2	2/2	35	2.05	8.5	120FS10-12.5	120FS10-25	120FS10-50
-	1250.0 +3/-0	10 ±2	2/2	35	2.05	8.5	125FS10-12.5	125FS10-25	125FS10-50
-	1300.0 +3/-0	10 ±2	2/2	35	2.05	8.5	130FS10-12.5	130FS10-25	130FS10-50
-	1300.0 ±3	20 ±5	3/3	35	2.05	8.5	130FS20-12.5	130FS20-25	130FS20-50
-	1350.0 +3/-0	10 ±2	2/2	35	2.05	8.5	135FS10-12.5	135FS10-25	135FS10-50
-	1400.0 +3/-0	10 ±2	2/2	30	2.05	8.5	140FS10-12.5	140FS10-25	140FS10-50
-	1450.0 +3/-0	10 ±2	2/2	30	2.05	8.5	145FS10-12.5	145FS10-25	145FS10-50
-	1500.0 +3/-0	10 ±2	2/2	30	2.05	8.5	150FS10-12.5	150FS10-25	150FS10-50
-	1500.0 ±3	20 ±5	3/3	30	2.05	8.5	150FS20-12.5	150FS20-25	150FS20-50
-	1550.0 +3/-0	10 ±2	2/2	30	2.05	8.5	155FS10-12.5	155FS10-25	155FS10-50
-	1550.0 ±3	20 ±5	3/3	30	2.05	8.5	155FS20-12.5	155FS20-25	155FS20-50
Methane	1665.0 +3/-0	10 ±2	2/2	30	2.05	8.5	167FS10-12.5	167FS10-25	167FS10-50
-	1665.0 ±3	20 ±5	3/3	30	2.05	8.5	167FS20-12.5	167FS20-25	167FS20-50

MDM= Metal-Dielectric-Metal

H High-Transmitting Bandpass Filters

- Min. transmission as high as 80%
- Wavelengths from 438 to 1500nm
- Sealed and stabilized for longevity

High-Transmittance Filters

Andover now offers a high-transmittance variant of its standard bandpass filter selection. By tailoring the blocking range to match the detector, we can provide maximum possible throughput while maintaining good blocking to meet the customer's needs. Wavelengths include all popular laser, mercury biomedical and analytical spectral lines.

All filters are constructed using the same high-quality materials and methods as our standard bandpass filters, thus providing a highly stable, long-lasting filter. Please refer to the General Specifications section on page 12 for mechanical and environmental specifications.

HIGH-TRANSMITTING BANDPASS FILTERS

Element	W/L	B/W	Tx (%)	n*	Nominal Thickness (mm)	Blocked from UV to (nm)	Typical Spectra	Size, Shape & Part Number		
								12.5mm Ø ○	25mm Ø ○	50mm Ø ○
Hg	435.8	10	70	1.45	5.9	800	csv file	436FSX10-12.5	436FSX10-25	436FSX10-50
He/Cd Laser	441.6	10	75	1.45	5.9	800	csv file	442FSX10-12.5	442FSX10-25	442FSX10-50
-	450.0	10	75	1.45	5.9	800	csv file	450FSX10-12.5	450FSX10-25	450FSX10-50
-	450.0	20	75	1.45	5.9	800	csv file	450FSX20-12.5	450FSX20-25	450FSX20-50
-	450.0	40	75	1.45	5.9	800	csv file	450FSX40-12.5	450FSX40-25	450FSX40-50
Ar/Ion Laser	457.9	10	75	1.45	5.9	800	csv file	458FSX10-12.5	458FSX10-25	458FSX10-50
H-beta	486.1	10	75	2.05	5.9	800	csv file	486FSX10-12.5	486FSX10-25	486FSX10-50
Ar/Ion Laser	488.0	10	75	2.05	5.9	800	csv file	488FSX10-12.5	488FSX10-25	488FSX10-50
-	500.0	10	75	2.05	5.9	800	csv file	500FSX10-12.5	500FSX10-25	500FSX10-50
-	500.0	20	75	2.05	5.9	800	csv file	500FSX20-12.5	500FSX20-25	500FSX20-50
-	500.0	40	75	2.05	5.9	800	csv file	500FSX40-12.5	500FSX40-25	500FSX40-50
Ar/Ion Laser	514.5	10	75	2.05	5.9	1000	csv file	515FSX10-12.5	515FSX10-25	515FSX10-50
Nd/YAG	532.0	10	75	2.05	5.9	1000	csv file	532FSX10-12.5	532FSX10-25	532FSX10-50
Hg	546.1	10	75	2.05	5.9	1000	csv file	546FSX10-12.5	546FSX10-25	546FSX10-50
-	550.0	10	75	2.05	5.9	1000	csv file	550FSX10-12.5	550FSX10-25	550FSX10-50
-	550.0	20	75	2.05	5.9	1000	csv file	550FSX20-12.5	550FSX20-25	550FSX20-50
-	550.0	40	80	1.45	5.9	1000	csv file	550FSX40-12.5	550FSX40-25	550FSX40-50
Hg	577.0	10	80	2.05	5.9	1000	csv file	570FSX10-12.5	570FSX10-25	570FSX10-50
Na	589.3	10	80	2.05	5.9	1000	csv file	589FSX10-12.5	589FSX10-25	589FSX10-50
-	600.0	10	80	2.05	5.9	1000	csv file	600FSX10-12.5	600FSX10-25	600FSX10-50
-	600.0	20	80	2.05	5.9	1000	csv file	600FSX20-12.5	600FSX20-25	600FSX20-50
-	600.0	40	80	2.05	5.9	1000	csv file	600FSX40-12.5	600FSX40-25	600FSX40-50
HeNe Laser	632.8	10	80	2.05	5.9	1000	csv file	633FSX10-12.5	633FSX10-25	633FSX10-50

HIGH-TRANSMITTING BANDPASS FILTERS

Element	W/L	B/W	Tx (%)	n*	Nominal Thickness (mm)	Blocked from UV to (nm)	Typical Spectra	Size, Shape & Part Number		
								12.5mm Ø ○	25mm Ø ○	50mm Ø ○
Zn	636.2	10	80	2.05	5.9	1000	csv file	636FSX10-12.5	636FSX10-25	636FSX10-50
Kr Laser	647.1	10	80	2.05	5.9	1000	csv file	647FSX10-12.5	647FSX10-25	647FSX10-50
-	650.0	10	80	2.05	5.9	1000	csv file	650FSX10-12.5	650FSX10-25	650FSX10-50
-	650.0	20	80	2.05	5.9	1000	csv file	650FSX20-12.5	650FSX20-25	650FSX20-50
-	650.0	40	80	2.05	5.9	1000	csv file	650FSX40-12.5	650FSX40-25	650FSX40-50
H-alpha	656.3	10	80	2.05	5.9	1000	csv file	656FSX10-12.5	656FSX10-25	656FSX10-50
-	660.0	10	80	2.05	5.9	1000	csv file	660FSX10-12.5	660FSX10-25	660FSX10-50
Li	670.8	10	80	2.05	5.9	1000	csv file	671FSX10-12.5	671FSX10-25	671FSX10-50
Rudy Laser	694.3	10	80	2.05	5.9	1000	csv file	694FSX10-12.5	694FSX10-25	694FSX10-50
-	700.0	10	80	2.05	5.9	1000	csv file	700FSX10-12.5	700FSX10-25	700FSX10-50
-	700.0	20	80	2.05	5.9	1000	csv file	700FSX20-12.5	700FSX20-25	700FSX20-50
-	700.0	40	80	2.05	5.9	1000	csv file	700FSX40-12.5	700FSX40-25	700FSX40-50
-	750.0	10	80	2.05	5.9	1000	csv file	750FSX10-12.5	750FSX10-25	750FSX10-50
-	750.0	20	80	2.05	5.9	1000	csv file	750FSX20-12.5	750FSX20-25	750FSX20-50
-	750.0	40	80	2.05	5.9	1000	csv file	750FSX40-12.5	750FSX40-25	750FSX40-50
K	766.5	10	80	2.05	5.9	1000	csv file	766FSX10-12.5	766FSX10-25	766FSX10-50
Rb	780.0	10	80	2.05	5.9	1000	csv file	780FSX10-12.5	780FSX10-25	780FSX10-50
Rb	794.7	10	80	2.05	5.9	1000	csv file	795FSX10-12.5	795FSX10-25	795FSX10-50
-	800.0	10	80	2.05	5.9	1200	csv file	800FSX10-12.5	800FSX10-25	800FSX10-50
Laser Diode	800.0	20	80	2.05	5.9	1200	csv file	800FSX20-12.5	800FSX20-25	800FSX20-50
-	800.0	40	80	2.05	5.9	1200	csv file	800FSX40-12.5	800FSX40-25	800FSX40-50
-	810.0	10	80	2.05	5.9	1200	csv file	810FSX10-12.5	810FSX10-25	810FSX10-50
Laser Diode	810.0	20	80	2.05	5.9	1200	csv file	810FSX20-12.5	810FSX20-25	810FSX20-50
GaAlAs Laser	830.0	10	80	2.05	5.9	1200	csv file	830FSX10-12.5	830FSX10-25	830FSX10-50
Laser Diode	830.0	20	80	2.05	5.9	1200	csv file	830FSX20-12.5	830FSX20-25	830FSX20-50
-	850.0	10	80	2.05	5.9	1200	csv file	850FSX10-12.5	850FSX10-25	850FSX10-50
-	850.0	20	80	2.05	5.9	1200	csv file	850FSX20-12.5	850FSX20-25	850FSX20-50
-	850.0	40	80	2.05	5.9	1200	csv file	850FSX40-12.5	850FSX40-25	850FSX40-50
-	900.0	10	80	2.05	5.9	1200	csv file	900FSX10-12.5	900FSX10-25	900FSX10-50
-	900.0	20	80	2.05	5.9	1200	csv file	900FSX20-12.5	900FSX20-25	900FSX20-50
-	900.0	40	80	2.05	5.9	1200	csv file	900FSX40-12.5	900FSX40-25	900FSX40-50
GaAs	905.0	10	80	2.05	5.9	1200	csv file	905FSX10-12.5	905FSX10-25	905FSX10-50
-	950.0	10	80	2.05	5.9	1200	csv file	950FSX10-12.5	950FSX10-25	950FSX10-50
-	950.0	20	80	2.05	5.9	1200	csv file	950FSX20-12.5	950FSX20-25	950FSX20-50
-	950.0	40	80	2.05	5.9	1200	csv file	950FSX40-12.5	950FSX40-25	950FSX40-50
-	1000.0	10	80	2.05	5.9	1300	csv file	100FSX10-12.5	100FSX10-25	100FSX10-50
-	1000.0	20	80	2.05	5.9	1300	csv file	100FSX20-12.5	100FSX20-25	100FSX20-50
-	1000.0	40	80	2.05	5.9	1300	csv file	100FSX40-12.5	100FSX40-25	100FSX40-50
Nd/YAG	1064.0	10	75	2.05	6.9	1300	csv file	064FSX10-12.5	064FSX10-25	064FSX10-50
Laser Diode	1500.0	10	70	2.05	7.9	2400	csv file	150FSX10-12.5	150FSX10-25	150FSX10-50
Laser Diode	1500.0	20	70	2.05	7.9	2400	csv file	150FSX20-12.5	150FSX20-25	150FSX20-50
Laser Diode	1500.0	10	70	2.05	7.9	2400	csv file	155FSX10-12.5	155FSX10-25	155FSX10-50
Laser Diode	1500.0	20	70	2.05	7.9	2400	csv file	155FSX20-12.5	155FSX20-25	155FSX20-50

Semi-Custom Bandpass Filters

Semi-Custom

Thanks to a large inventory of components, Andover Corporation can fabricate and deliver higher-performance commercial quality bandpass filters to your specifications as soon as 5-10 days from receipt of order. To specify your semi-custom filter, all you have to do is follow three quick steps:

- Wavelengths from the ultraviolet through infrared
- Bandwidths from 0.15nm to 80nm
- Short lead time
- See page 12 for general specifications

1. Select the desired bandwidth, filter type, and center wavelength from the range listed.
2. Select the blocking range.
3. Select the size and corresponding part number.

All other features are predetermined by these three choices. The out-of-band blocking of these filters is 1×10^{-4} within the defined spectral range. Optional threaded rings are available, and image quality versions are also available. Please call for pricing and delivery.

SELECT 1

SELECT 2

SELECT 3

Bandwidth (FWHM) (nm)	Cavities/ Filter Type	CW/L Range (nm)	CW/L Tolerance (nm)	Min. T (%)		n*	Size, Shape & Part Number		
				When Blocked To 1μ	FIR		12.5mm Ø ○	25mm Ø ○	50mm Ø ○
0.15 ± 0.05	1/1	450.0–550.0	+0.1/-0	40	30	1.45	001FC10-12.5	001FC10-25	001FC10-50
	1/1	550.1–750.0	+0.1/-0	45	40	1.45	001FC12-12.5	001FC12-25	001FC12-50
0.20 ± 0.05	1/1	450.0–550.0	+0.1/-0	45	35	1.45/2.05	002FC10-12.5	002FC10-25	002FC10-50
	1/1	550.1–750.0	+0.1/-0	45	35	2.05	002FC12-12.5	002FC12-25	002FC12-50
0.30 ± 0.10	2/2	450.0–550.0	+0.1/-0	35	25	1.45	003FC10-12.5	003FC10-25	003FC10-50
	2/2	550.1–750.0	+0.1/-0	40	35	2.05	003FC12-12.5	003FC12-25	003FC12-50
0.30 ± 0.40	3/3	550.0–750.0	+0.1/-0	35	30	2.05	004FC12-12.5	004FC12-25	004FC12-50
0.50 ± 0.10	2/2	450.0–550.0	+0.1/-0	40	30	1.45/2.05	005FC10-12.5	005FC10-25	005FC10-50
	2/2	550.1–750.0	+0.1/-0	45	35	2.05	005FC12-12.5	005FC12-25	005FC12-50
0.60 ± 0.10	2/2	430.0–480.0	±0.1	40	35	1.45	006FC08-12.5	006FC08-25	006FC08-50
	2/2	480.1–550.0	±0.1	45	35	2.05	006FC10-12.5	006FC10-25	006FC10-50
	2/2	550.1–750.0	±0.1	45	25	2.05	006FC12-12.5	006FC12-25	006FC10-50
0.50 to 0.80	3/3	480.0–550.0	±0.1	40	30	2.05	007FC10-12.5	007FC10-25	007FC10-50
	3/3	550.1–750.0	±0.1	45	35	2.05	007FC12-12.5	007FC12-25	007FC12-50
	3/3	750.1–950.0	±0.1	45	35	2.05	007FC14-12.5	007FC14-25	007FC14-50
0.80 ± 0.20	2/2	430.0–480.0	+0.2/-0	45	40	1.45	008FC08-12.5	008FC08-25	008FC08-50
	2/2	480.1–550.0	+0.2/-0	45	40	2.05	008FC10-12.5	008FC10-25	008FC10-50
	2/2	550.1–750.0	+0.2/-0	50	45	2.05	008FC12-12.5	008FC12-25	008FC12-50
	2/2	750.1–950.0	+0.2/-0	50	45	2.05	008FC14-12.5	008FC14-25	008FC14-50
	2/2	950.1–1100.0	+0.2/-0	50	40	2.05	008FC16-12.5	008FC16-25	008FC16-50

SEMI-CUSTOM BANDPASS FILTERS

SELECT 1			SELECT 2			SELECT 3			
Bandwidth (FWHM) (nm)	Cavities/ Filter Type	CW/L Range (nm)	CW/L Tolerance (nm)	Min. T (%) When Blocked To 1μ FIR		n*	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
1.0 ± 0.2	2/2	340.0–385.0	+0.2/-0	-	8	1.45	010FC04-12.5	010FC04-25	010FC04-50
	2/2	385.1–395.0	+0.2/-0	15	10	1.45	010FC05-12.5	010FC05-25	010FC05-50
	2/2	395.1–430.0	+0.2/-0	20	15	1.45	010FC06-12.5	010FC06-25	010FC06-50
	2/2	430.1–480.0	+0.2/-0	40	35	1.45/2.05	010FC08-12.5	010FC08-25	010FC08-50
	2/2	480.1–550.0	+0.2/-0	50	40	2.05	010FC10-12.5	010FC10-25	010FC10-50
	2/2	550.1–750.0	+0.2/-0	55	45	2.05	010FC12-12.5	010FC12-25	010FC12-50
	2/2	750.1–950.0	+0.2/-0	55	45	2.05	010FC14-12.5	010FC14-25	010FC14-50
	2/2	950.1–1100.0	+0.2/-0	55	40	2.05	010FC16-12.5	010FC16-25	010FC16-50
1.0 ± 0.2	3/3	480.0–550.0	+0.2/-0	50	35	1.45/2.05	010FC35-12.5	010FC35-25	010FC35-50
	3/3	550.1–750.0	+0.2/-0	55	40	2.05	010FC36-12.5	010FC36-25	010FC36-50
	3/3	750.1–950.0	+0.2/-0	55	40	2.05	010FC37-12.5	010FC37-25	010FC37-50
	3/3	950.1–1100.0	+0.2/-0	50	35	2.05	010FC38-12.5	010FC38-25	010FC38-50
1.5 ± 0.3	2/2	250.0–320.0	+0.3/-0	-	6	1.45	015FC02-12.5	015FC02-25	015FC02-50
	2/2	320.1–387.0	+0.3/-0	-	10	1.45	015FC04-12.5	015FC04-25	015FC04-50
	2/2	387.1–430.0	+0.3/-0	20	10	1.45	015FC06-12.5	015FC06-25	015FC06-50
	2/2	430.1–480.0	+0.3/-0	40	30	1.45/2.05	015FC08-12.5	015FC08-25	015FC08-50
	2/2	480.1–550.0	+0.3/-0	55	50	2.05	015FC10-12.5	015FC10-25	015FC10-50
	2/2	550.1–750.0	+0.3/-0	55	50	2.05	015FC12-12.5	015FC12-25	015FC12-50
	2/2	750.1–950.0	+0.3/-0	55	50	2.05	015FC14-12.5	015FC14-25	015FC14-50
	2/2	950.1–1100.0	+0.3/-0	65	50	2.05	015FC16-12.5	015FC16-25	015FC16-50
2.0 ± 0.5	2/2	240.0–320.0	+0.5/-0	-	6	1.45	020FC02-12.5	020FC02-25	020FC02-50
	2/2	320.1–387.0	+0.5/-0	-	10	1.45	020FC04-12.5	020FC04-25	020FC04-50
	2/2	387.1–430.0	+0.4/-0	30	25	1.45	020FC06-12.5	020FC06-25	020FC06-50
	2/2	430.1–480.0	+0.4/-0	50	45	1.45/2.05	020FC08-12.5	020FC08-25	020FC08-50
	2/2	480.1–550.0	+0.4/-0	55	50	2.05	020FC10-12.5	020FC10-25	020FC10-50
	2/2	550.1–750.0	+0.4/-0	55	50	2.05	020FC12-12.5	020FC12-25	020FC12-50
	2/2	750.1–950.0	+0.4/-0	65	50	2.05	020FC14-12.5	020FC14-25	020FC14-50
	2/2	950.1–1100.0	+0.4/-0	55	45	2.05	020FC16-12.5	020FC16-25	020FC16-50
2.0 ± 0.5	3/3	430.0–480.0	+0.4/-0	50	40	1.45/2.05	020FC34-12.5	020FC34-25	020FC34-50
	3/3	480.1–550.0	+0.4/-0	55	45	2.05	020FC35-12.5	020FC35-25	020FC35-50
	3/3	550.1–750.0	+0.4/-0	55	45	2.05	020FC36-12.5	020FC36-25	020FC36-50
	3/3	750.1–950.0	+0.4/-0	60	50	2.05	020FC37-12.5	020FC37-25	020FC37-50
	3/3	950.1–1100.0	+0.4/-0	65	45	2.05	020FC38-12.5	020FC38-25	020FC38-50
3.0 ± 0.5	2/2	240.0–320.0	+0.5/-0	-	8	1.45	030FC02-12.5	030FC02-25	030FC02-50
	2/2	320.1–387.0	+0.5/-0	-	10	1.45	030FC04-12.5	030FC04-25	030FC04-50
	2/2	387.1–430.0	+0.5/-0	40	25	1.45	030FC06-12.5	030FC06-25	030FC06-50
	2/2	430.1–480.0	+0.5/-0	45	35	1.45/2.05	030FC08-12.5	030FC08-25	030FC08-50
	2/2	480.1–550.0	+0.5/-0	55	50	2.05	030FC10-12.5	030FC10-25	030FC10-50
	2/2	550.1–750.0	+0.5/-0	55	50	2.05	030FC12-12.5	030FC12-25	030FC12-50
	2/2	750.1–950.0	+0.5/-0	55	50	2.05	030FC14-12.5	030FC14-25	030FC14-50
	2/2	950.1–1100.0	+0.5/-0	65	50	2.05	030FC16-12.5	030FC16-25	030FC16-50

SEMI-CUSTOM BANDPASS FILTERS

SELECT 1			SELECT 2			SELECT 3			
Bandwidth (FWHM) (nm)	Cavities/ Filter Type	CW/L Range (nm)	CW/L Tolerance (nm)	Min. T (%) When Blocked To 1μ FIR		n*	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
3.0 ± 0.5	3/3	430.0–480.0	+0.5/-0	50	40	145/2.05	030FC34-12.5	030FC34-25	030FC34-50
	3/3	480.1–550.0	+0.5/-0	55	45	2.05	030FC35-12.5	030FC35-25	030FC35-50
	3/3	550.1–750.0	+0.5/-0	55	45	2.05	030FC36-12.5	030FC36-25	030FC36-50
	3/3	750.1–950.0	+0.5/-0	60	50	2.05	030FC37-12.5	030FC37-25	030FC37-50
	3/3	950.1–1100.0	+0.5/-0	55	45	2.05	030FC38-12.5	030FC38-25	030FC38-50
5.0 ± 1.0	2/2	240.0–320.0	+1/-0	-	8	1.45	050FC02-12.5	050FC02-25	050FC02-50
	2/2	320.1–385.0	+1/-0	-	25	1.45	050FC04-12.5	050FC04-25	050FC04-50
	2/2	385.1–480.0	+1/-0	45	35	145/2.05	050FC06-12.5	050FC06-25	050FC06-50
	2/2	480.1–550.0	+1/-0	55	50	2.05	050FC10-12.5	050FC10-25	050FC10-50
	2/2	550.1–750.0	+1/-0	55	50	2.05	050FC12-12.5	050FC12-25	050FC12-50
	2/2	750.1–950.0	+1/-0	60 ^a	45	2.05	050FC14-12.5	050FC14-25	050FC14-50
	2/2	950.1–1100.0	+1/-0	65 ^b	45	2.05	050FC16-12.5	050FC16-25	050FC16-50
	2/2	1100.1–1300.0	+1/-0	55 ^c	40	2.05	050FC18-12.5	050FC18-25	050FC18-50
	2/2	1300.1–1550.0	+1/-0	50 ^d	35	2.05	050FC19-12.5	050FC19-25	050FC19-50
5.0 ± 1.0	3/3	400.0–430.0	+1/-0	45	40	1.45	050FC33-12.5	050FC33-25	050FC33-50
	3/3	430.1–460.0	+1/-0	55	40	1.45	050FC34-12.5	050FC34-25	050FC34-50
	3/3	460.1–550.0	+1/-0	55	45	145/2.05	050FC35-12.5	050FC35-25	050FC35-50
	3/3	550.1–750.0	+1/-0	55	45	2.05	050FC36-12.5	050FC36-25	050FC36-50
	3/3	750.1–950.0	+1/-0	60 ^a	45	2.05	050FC37-12.5	050FC37-25	050FC37-50
	3/3	950.1–1100.0	+1/-0	55 ^b	40	2.05	050FC38-12.5	050FC38-25	050FC38-50
	3/3	1100.1–1300.0	+1/-0	50 ^c	35	2.05	050FC39-12.5	050FC39-25	050FC39-50
	3/3	1300.1–1550.0	+1/-0	50 ^d	35	2.05	050FC40-12.5	050FC40-25	050FC40-50
5.0 ± 1.0	4/4	460.0–550.0	+1/-0	60	50	145/2.05	050FC45-12.5	050FC45-25	050FC45-50
	4/4	550.1–750.0	+1/-0	60	50	2.05	050FC46-12.5	050FC46-25	050FC46-50
	4/4	750.1–950.0	+1/-0	55 ^a	45	2.05	050FC47-12.5	050FC47-25	050FC47-50
	4/4	950.1–1100.0	+1/-0	55 ^b	40	2.05	050FC48-12.5	050FC48-25	050FC48-50
10.0 ± 2.0	MDM/7	214.0–250.0	+2/-0	-	12	--	100FC00-12.5	100FC00-25	100FC00-50
	MDM/7	250.1–320.0	+2/-0	-	15	--	100FC02-12.5	100FC02-25	100FC02-50
	3/3	320.1–385.0	+2/-0	-	25	--	100FC32-12.5	100FC32-25	100FC32-50
	3/3	385.1–430.0	+2/-0	50	40	1.45	100FC33-12.5	100FC33-25	100FC33-50
	3/3	430.1–480.0	+2/-0	60	50	145/2.05	100FC34-12.5	100FC34-25	100FC34-50
	3/3	480.1–550.0	+2/-0	70	55	2.05	100FC35-12.5	100FC35-25	100FC35-50
	3/3	550.1–750.0	+2/-0	70	55	2.05	100FC36-12.5	100FC36-25	100FC36-50
	3/3	750.1–950.0	+2/-0	70 ^a	45	2.05	100FC37-12.5	100FC37-25	100FC37-50
	3/3	950.1–1100.0	+2/-0	70 ^b	45	2.05	100FC38-12.5	100FC38-25	100FC38-50
	3/3	1100.1–1300.0	+2/-0	70 ^c	35	2.05	100FC39-12.5	100FC39-25	100FC39-50
	2/2	1300.1–1550.0	+2/-0	70 ^d	35	2.05	100FC40-12.5	100FC40-25	100FC40-50
	2/2	1550.1–2400.0	+2/-0	60 ^e	-	2.05	100FC41-12.5	100FC41-25	100FC41-50
	2/2	2400.1–3200.0	+2/-0	60 ^e	-	2.05	100FC42-12.5	100FC42-25	100FC42-50

a= Blocking to 1200nm b= Blocking to 1300nm c= Blocking to 1550nm d= Blocking to 2400nm e= Blocking to 3200nm

SEMI-CUSTOM BANDPASS FILTERS

SELECT 1			SELECT 2			SELECT 3			
Bandwidth (FWHM) (nm)	Cavities/ Filter Type	CW/L Range (nm)	CW/L Tolerance (nm)	Min. T (%) When Blocked To 1μ FIR		n*	Size, Shape & Part Number		
							12.5mm Ø ○	25mm Ø ○	50mm Ø ○
10.0 ± 2.0	4/4	460.0–550.0	+2/-0	60	45	1.45/2.05	100FC45-12.5	100FC45-25	100FC45-50
	4/4	550.1–750.0	+2/-0	60	45	2.05	100FC46-12.5	100FC46-25	100FC46-50
	4/4	750.1–950.0	+2/-0	70 ^a	50	2.05	100FC47-12.5	100FC47-25	100FC47-50
	4/4	950.1–1100.0	+2/-0	70 ^b	45	2.05	100FC48-12.5	100FC48-25	100FC48-50
	4/4	1100.1–1300.0	+2/-0	70 ^c	30	2.05	100FC49-12.5	100FC49-25	100FC49-50
20.0 ± 4.0	MDM/8	214.0–250.0	±2.5	–	12	–	200FC00-12.5	200FC00-25	200FC00-50
	MDM/8	250.1–320.0	±2.5	–	15	–	200FC02-12.5	200FC02-25	200FC02-50
	5/5	320.1–400.0	±2.5	–	30	1.45	200FC32-12.5	200FC32-25	200FC32-50
20.0 ± 4.0	3/3	400.1–480.0	±2.0	50	45	1.45	200FC33-12.5	200FC33-25	200FC33-50
	3/3	480.1–550.0	±2.0	65	50	1.45	200FC35-12.5	200FC35-25	200FC35-50
	3/3	550.1–750.0	±2.0	70	50	1.45/2.05	200FC36-12.5	200FC36-25	200FC36-50
	3/3	750.1–950.0	±2.0	70 ^a	50	2.05	200FC37-12.5	200FC37-25	200FC37-50
	3/3	950.1–1100.0	±2.0	70 ^b	50	2.05	200FC38-12.5	200FC38-25	200FC38-50
	3/3	1100.1–1300.0	±2.0	70 ^c	30	2.05	200FC39-12.5	200FC39-25	200FC39-50
	3/3	1300.1–1550.0	±2.0	70 ^d	30	2.05	200FC40-12.5	200FC40-25	200FC40-50
	3/3	1550.1–2400.0	±2.0	60 ^e	30	2.05	200FC41-12.5	200FC41-25	200FC41-50
20.0 ± 4.0	4/4	480.0–550.0	±2.0	65	45	1.45	200FC45-12.5	200FC45-25	200FC45-50
	4/4	550.1–750.0	±2.0	70	50	1.45/2.05	200FC46-12.5	200FC46-25	200FC46-50
	4/4	750.1–950.0	±2.0	70 ^a	50	2.05	200FC47-12.5	200FC47-25	200FC47-50
	4/4	950.1–1100.0	±2.0	70 ^b	40	2.05	200FC48-12.5	200FC48-25	200FC48-50
40.0 ± 10.0	MDM/8	230.0–250.0	±5.0	–	15	–	400FC00-12.5	400FC00-25	400FC00-50
	MDM/8	250.1–320.0	±5.0	–	20	–	400FC02-12.5	400FC02-25	400FC02-50
	5/5	320.1–399.9	±5.0	–	30	1.45	400FC52-12.5	400FC52-25	400FC52-50
50.0 ± 10.0	5/5	400.0–460.0	±5.0	60	45	1.45	500FC53-12.5	500FC53-25	500FC53-50
	5/5	460.1–520.1	±5.0	70	50	1.45	500FC54-12.5	500FC54-25	500FC54-50
	4/4	520.1–750.1	±5.0	70	50	2.05	500FC46-12.5	500FC46-25	500FC46-50
	4/4	750.1–900.0	±5.0	75 ^a	50	2.05	500FC47-12.5	500FC47-25	500FC47-50
	3/3	900.1–1100.0	±5.0	75 ^b	45	2.05	500FC38-12.5	500FC38-25	500FC38-50
	3/3	1100.1–1300.0	±5.0	70 ^c	35	2.05	500FC39-12.5	500FC39-25	500FC39-50
	3/3	1300.1–1550.0	±5.0	70 ^d	30	2.05	500FC40-12.5	500FC40-25	500FC40-50
	3/3	1550.1–2400.0	±5.0	70 ^e	–	2.05	500FC41-12.5	500FC41-25	500FC41-50
60.0 ± 10.0	5/5	340.0–399.0	±6.0	–	30	1.45	600FC52-12.5	600FC52-25	600FC52-50
80.0 ± 20.0	5/5	460.0–750.0	±10.0	75	–	1.45	800FC55-12.5	800FC55-25	800FC55-50
	4/4	750.1–900.0	±10.0	75 ^a	–	1.45	800FC47-12.5	800FC47-25	800FC47-50
	4/4	900.1–1100.0	±10.0	70 ^b	–	2.05	800FC48-12.5	800FC48-25	800FC48-50
	4/4	1100.1–1300.0	±10.0	70 ^c	–	2.05	800FC49-12.5	800FC49-25	800FC49-50
	4/4	1300.1–1550.0	±10.0	70 ^d	–	2.05	800FC50-12.5	800FC50-25	800FC50-50
	4/4	1550.1–2400.0	±10.0	70 ^e	–	2.05	800FC51-12.5	800FC51-25	800FC51-50

a= Blocking to 1200nm b= Blocking to 1300nm c= Blocking to 1550nm d= Blocking to 2400nm e= Blocking to 3200nm