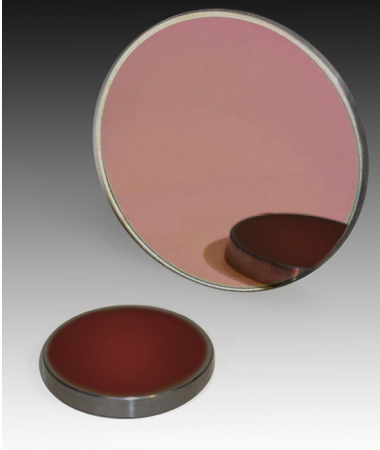


# STANDARD INFRARED BANDPASS FILTERS



## Optimizing Design for Infrared Analysis of Selected Spectral Regions

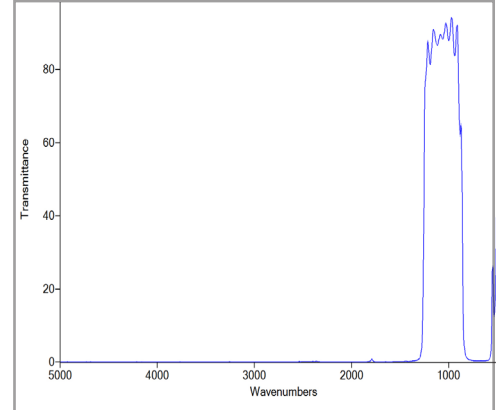
- Isolate infrared spectral region of interest
- Increase signal -to-noise in desired spectral region
- Coatings designed to fully reject unwanted spectral domains

Bandpass Filters are used to selectively transmit a portion of the spectrum while rejecting all other wavelengths. The Spectral Systems Standard Bandpass Filters are designed to provide highest transmission in your spectral region of interest and deep rejection of unwanted energy from adjoining wavelengths.

Our filters are fabricated from hard, durable first-surface dielectric coatings on optical-quality, IR transmitting substrates. These filters will withstand normal cleaning and handling associated typical of optical components.

Optical Bandpass Filters are useful for a variety of applications including fluorescence microscopy, spectroscopy, clinical chemistry and spectral imaging and are typically used in the life science, industrial, or R&D industries.

The Spectral Systems IR Bandpass Filters are available with many bandpass regions of interest. Please contact us for other requirements you have.



FT-IR Spectrum of 10 micron Bandpass Filter

## SPECIFICATIONS

Diameter	25mm
Diameter Tolerance	+0/-0.1mm
Min. Clear Aperture	21mm
Thickness	1.0mm
Thickness Tolerance	± 0.2mm
Transmission (Typical)	60-80%
Blocking	t<0.1% average to 30 μ
24-Hour Humidity	Per MIL-C-48497A
Moderate Abrasion	Per MIL-C-48497A
Adherence	Per MIL-C-48497A

## ORDERING INFORMATION

### Standard Infrared Bandpass Filters

DESCRIPTION	CENTER WAVELENGTH			BANDWIDTH			Short w/l	BLOCKING RANGE		MINIMUM TRANSMISSION	PART NO.
	nm	um	cm <sup>-1</sup>	nm	um	cm <sup>-1</sup>		Long W/L um	Long W/L cm <sup>-1</sup>		
Al <sub>2</sub> O <sub>3</sub> 25mm dia	2700	2.7	3704	120	0.12	165	X-Ray	30	333	75%	FIL-910-2001
Al <sub>2</sub> O <sub>3</sub> 50mm dia	2950	3.0	3390	120	0.12	138	X-Ray	30	333	75%	FIL-910-2002
Al <sub>2</sub> O <sub>3</sub> 25mm dia	3460	3.5	2890	140	0.14	117	X-Ray	30	333	75%	FIL-910-2003
Al <sub>2</sub> O <sub>3</sub> 50mm dia	3600	3.6	2778	140	0.14	108	X-Ray	30	333	75%	FIL-910-2004
Si 25mm dia	4000	4.0	2500	2000	2.0	1333	X-Ray	7	1429	80%	FIL-960-2001
Al <sub>2</sub> O <sub>3</sub> 50mm dia	4260	4.3	2347	120	0.12	66	X-Ray	30	333	75%	FIL-910-2005
Al <sub>2</sub> O <sub>3</sub> 25mm dia	4670	4.7	2141	150	0.15	69	X-Ray	30	333	75%	FIL-910-2006
Al <sub>2</sub> O <sub>3</sub> 50mm dia	5300	5.3	1887	420	0.42	150	X-Ray	30	333	70%	FIL-910-2007
Ge 25mm dia	10000	10	1000	4000	4.0	417	X-Ray	16.5	606	80%	FIL-940-2001
Ge 50mm dia	10600	10.6	943	1500	1.5	134	X-Ray	17	588	80%	FIL-940-2002

**Notes: The blocking range for some filters does not reach the full long wavelength region of the mid-IR spectral region. We recommend in these cases the use of an additional optical element such as CaF<sub>2</sub> available from Spectral Systems**