

Optimizing Spectral Analysis Regions

- Useful for isolating broad spectral regions
- Enhance signal-to-noise ratio of analysis region
- Blocks high frequency signals
- Constructed of hard, durable first-surface coatings
- Coatings designed to maximize throughput of analysis region

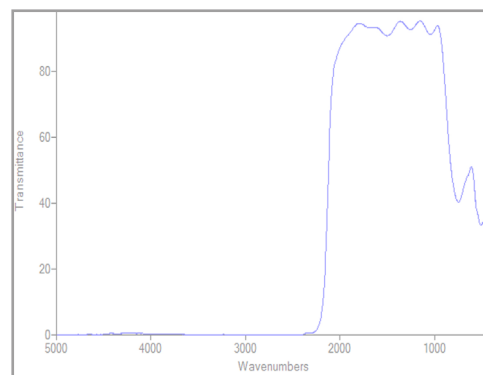
The Spectral Systems Standard Long Wave Pass Filters provide a sharp cutoff below a particular wavelength. Often used for optimizing the infrared spectral analysis region, they isolate broad regions of the spectrum, simultaneously providing high transmission of desired energy and deep rejection of unwanted energy. Constructed of hard, durable first-surface dielectric coatings on optical-quality IR-transmitting substrates, these filters will withstand normal cleaning and handling associated with any high-quality optical component. For your sampling design requirements, we offer the filters in three standard sizes: 12.5, 25 mm and 50 mm diameter.

Long Wave Pass Filters are designed to transmit wavelengths greater than the cut-on wavelength of the filter. Long Wave Pass Filters are used to isolate portions of the spectrum in a variety of industrial or life sciences applications including microscopy or fluorescence instrumentation. Certain Long Wave Pass Filters can also be used as cold mirrors to minimize the heat buildup often caused by infrared radiation.

Please contact us for other requirements.

SPECIFICATIONS

Filter Thickness	1.0 +/- 0.2mm
Diameter Tolerance	+/-0.1mm
Min. Clear Aperture	90% of outside dimension
Substrate Material	Silicon or Germanium
Flatness	3-5 waves at cut-on W/L
24-Hour Humidity	per MIL-C-48497A
Operating Temp	-62°C to +71°C
Parallelism	<10 arc minutes
Transmission (Ave)	>85% from 1.05 x cut-on to 2.0 x cut-on
Rejection (Ave)	<0.1%
Slope	<7% (12% for 1.05 µm filter)



FT-IR Spectrum of 4.5 micron Long Wave Pass Filter

ORDERING INFORMATION

Silicon Long Wave Pass Filters

DESCRIPTION	CUT ON WAVELENGTH (cm⁻¹, microns)	PART NO
12.5mm dia, min 90%T	9524, 1.05	FIL-960-0001
25mm dia, min 90%T	9524, 1.05	FIL-960-0002
50mm dia, min 90%T	9524, 1.05	FIL-960-0003
12.5mm dia, min 85%T	6061, 1.65	FIL-960-0004
25mm dia, min 80%T	6061, 1.65	FIL-960-0005
50mm dia, min 80%T	6061, 1.65	FIL-960-0006

Germanium Long Wave Pass Filters

DESCRIPTION	CUT ON WAVELENGTH (cm⁻¹, microns)	PART NO
12.5mm dia, min 85%T	4167, 2.40	FIL-940-0001
25mm dia, min 80%T	4167, 2.40	FIL-940-0002
50mm dia, min 80%T	4167, 2.40	FIL-940-0003
12.5mm dia, min 85%T	2778, 3.60	FIL-940-0004
25mm dia, min 80%T	2778, 3.60	FIL-940-0005
50mm dia, min 80%T	2778, 3.60	FIL-940-0006
12.5mm dia, min 85%T	2222, 4.50	FIL-940-0007
25mm dia, min 80%T	2222, 4.50	FIL-940-0008
50mm dia, min 80%T	2222, 4.50	FIL-940-0009
12.5mm dia, min 85%T	1370, 7.30	FIL-940-0010
25mm dia, min 80%T	1370, 7.30	FIL-940-0011
50mm dia, min 80%T	1370, 7.30	FIL-940-0012